

WORKING CAPITAL MANAGEMENT
MODEL FOR PUBLIC ENTERPRISE
IN BANGLADESH

A STUDY OF JUTE AND COTTON
TEXTILE INDUSTRIES

Ph.D.

MD. MONIRUZZAMAN
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WORKING CAPITAL MANAGEMENT MODEL FOR PUBLIC
ENTERPRISE IN BANGLADSH

A study of Jute and Cotton Textiles
Industries.

By

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ii. The investment in inventories in public enterprises is disproportionately high which creates working capital problem. There was excess inventories of Tk. 2233 lakhs and Tk. 526 lakhs in selected public sector jute and cotton mills respectively compared to our model.

iii. Collection policy of public enterprises is very poor, as a result a huge fund is blocked in accounts receivables, especially in advances. There was excess receivables of Tk. 1866 lakhs and Tk. 242 lakhs in the selected public sector jute and cotton mills compared to our model during the period of study.

iv. It is found that as a result of huge investment of funds in inventories and receivables, cash flow generation is very poor and there was huge shortage of cash amounting to Tk.1195.75 lakhs in jute mills, but an excess cash of Tk.84.06 lakhs was found in the selected cotton mills compared to our model.

v. Low demand of jute goods and serious competition in international market, a huge stock of finished goods is piled up which aggravates working capital problem. It was found that eight months cost of production of finished goods was blocked in godown compared to one month as suggested in our model.

vi. It is found that there is inefficiency and corruption in procurement, storage and usage stages of raw jute in public sector jute mills and both management, union and social leaders are involved in it, which increases the raw jute cost.

vii. Private sector jute mills show higher prices of raw jute cost in order to extract undue concessions from the Government in terms of compensation for loss, to get cheap bank loan and also to evade payment of taxes.

vii. It is found that in public sector cotton textile enterprises a huge stock of finished goods accumulate due to lower purchasing power of the poorer section and clamour for foreign cotton textile goods by the richer section of consumers, which affects working capital;

viii. It is revealed that undue demand of fringe benefits by unions at the instigation of management and social leaders enhances wages and salary costs which also creates working capital management problem.

xi. Cost accounting and cost control system is found inadequate in public enterprises to control over expenditures.

x. Enterprise management under Bangladesh Textile Mills Corporation (BTMC) was found incompetent in understanding economic and diseconomics of raw cotton procurement. Enterprise management want decentralisation, which in the opinion of Corporation is not possible, as raw cotton is imported on grant and barter agreement.

xi. It is found that there is lack of coordination between production and sale in public enterprises which affects working capital management problem.

xii. Inventory turnover ratio is found very low in the public enterprises compared to standard which aggravates working capital management problem.

xiii. It is revealed that there is no basic difference on the level of efficiency between public and private sector enterprises with respect to inventories, receivables and cash components of working capital management and χ^2 test validated this contention.

xiv. It is revealed that, public enterprises are overmanned either by ghost workers/or by surplus managerial people of the disinvested mills and some workers, especially union leaders do not work at all which increases undue wage and salary cost in relations to production effort compared to private enterprises.

The findings presented in this dissertation is an empirical investigation into the working capital management practices of the public sector jute and cotton textile industries in Bangladesh. The fundamental objective of the study was to design an operational model, which is being presented in Chapter seven and the author believes that it will improve the working capital management practice in jute and cotton textile industries in particular, and in public enterprise in general. In addition, this study also provides an insight into the comparative working capital management practices between public and private sector enterprises disinvested after the new industrial policy of 1982. In designing the suggested model, the author has reviewed

ABSTRACT

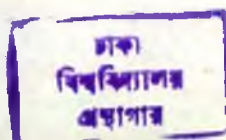
Working capital plays an important role in day to day operations of a business enterprise. The success or failure of an enterprises is very much dependent on its efficient management of working capital. After the liberation of Bangladesh, most of the industries were taken over by the Government by a Nationalisation order of 26th March, 1972 for better supervision, coordination and control and were vested with specialised sector corporations to run those as public enterprises. The performance of these enterprises was, however, extremely disappointing especially in the area of jute and cotton textile industries. Most of the enterprises in jute and cotton textiles became sick due to continuous losses and erosion of equity. The efficiency of public enterprise was a debatable issue between the two group of economists planners, financiers. One group questioned the efficiency of running those enterprises, especially they noted the lack of proper working capital management was one of the major problem. It appears from the annual reports of Bangladesh Jute Mills Corporation (BJMC) and Bangladesh Textile Mills Corporation (BTMC) that most of their enterprises have negative net working capital position. Moreover, most of the respondents in our survey strongly agreed that working capital management is a number one problem in public enterprises, especially in Jute and Cotton textile industries of Bangladesh.

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The present research is based on the analysis of data collected from primary sources and secondary sources data were also used. The data were checked and cross checked by two groups of respondents from both the selected mills and corporations head office and top officials of Bangladesh Bank and Commercial Banks. The major technique of analysis used in this study is "FACT METHOD". This is a financial analysis consultancy technique which was first used in United Kingdom to train the non-financial business executives in financial management (see annexure I - XII). To test the validity of the study on efficiency between Public vs Private enterprises Chi-Square test were also used in the study.

The major findings of the study are summarised as follows:

- i. Management of public sector jute and cotton textile enterprises do not calculate their working capital in an objective manner.



ii. The investment in inventories in public enterprises is disproportionately high which creates working capital problem. There was excess inventories of Tk. 2233 lakhs and Tk. 526 lakhs in selected public sector jute and cotton mills respectively compared to our model.

iii. Collection policy of public enterprises is very poor, as a result a huge fund is blocked in accounts receivables, especially in advances. There was excess receivables of Tk. 1866 lakhs and Tk. 242 lakhs in the selected public sector jute and cotton mills compared to our model during the period of study.

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The findings presented in this dissertation is an empirical investigation into the working capital management practices of the public sector jute and cotton textile industries in Bangladesh. The fundamental objective of the study was to design an operational model, which is being presented in Chapter seven and the author believes that it will improve the working capital management practice in jute and cotton textile industries in particular, and in public enterprise in general. In addition, this study also provides an insight into the comparative working capital management practices between public and private sector enterprises disinvested after the new industrial policy of 1982. In designing the suggested model, the author has reviewed

the existing western models of inventory, cash and receivables components of working capital. The author has also examined the norms of inventory and receivables suggested by Tandon Committee appointed by the Reserve Bank of India for jute and cotton textile industries. The inventory norms suggested by Bangladesh Bank for 250 looms(narrow) jute mills has also been examined.

The author found that Inventory model such as Economic Order Quantity(EOQ) or Miller or Model for Cash management and other models suggested by western scholar are not practically applicable in the environmental constraints of Bangladesh. Similarly the Inventory and receivables norms suggested by the Tandon Committee of the Reserve Bank of India's study are also not valid under the socio-economic conditions of Bangladesh. The norms suggested by Bangladesh Bank for the inventory (250 looms jute mills only) is very rigid and is not applicable for all types of jute mills (big and medium mills). Moreover, this norms is determined for bank credit only. Bangladesh Bank has not suggested any norms for receivables and cash components of working capital. It has also not suggested any guidelines for cotton textile industries.

The model designed by us in chapter seven considered all components of working capital management, i.e. each item of inventory model, cash model and receivables. In order to carry a reasonable level of current assets in relation to production requirements, the maximum permissible limit of bank borrowings(cash credit/overdraft) has been worked out under three innovated methods. The model has been tested by comparing actual figures of inventories, receivables and cash with our planned figures as per model, and it is revealed that there was excessive blockage of fund of Tk. 2229 lakhs, and Tk.1866 lakhs in inventories and receivables respectively in the public sector jute mills during 1982-83 to 1986-87, and the jute mills could save Tk.574 lakhs as interest income only out of the blocked fund. But there was huge cash shortage of Tk. 1196 lakhs in public sector jute mills compared to our model, and the shortage has been made by means of excessive bank borrowings. Only in 1987, the big jute mills had Tk.1171 lakhs excess bank borrowings compared to our model with a heavy interest burden. In cotton textile mills excessive amount of Tk. 526; Tk. 242 and 84 lakhs was found blocked in inventories, receivables and cash respectively, and the three cotton mills could save Tk. 119.29 lakhs as interest income only out of the blocked fund. The impact of our model has been tested on the accumulated net profit/and cashflows of the selected enterprises. The analysis revealed that the accumulated

loss of Tk.1156 lakhs of 3 jute mills over five years could have been reduced by Tk.574 lakhs only out of savings of interest income. Similarly negative cashflows balance of Tk.1195.75 lakhs would have been reduced to only Tk. 622.45 lakhs if our model is adopted. By adopting our model the three cotton mills could earn an excess profit of Tk.119.29 lakhs, and the accumulated balance of negative cashflows would have been reduced to Tk.1454.39 lakhs instead of actual Tk.1573.68 lakhs during the period of study.

The suggested model is a welcome departure from the existing credit appraisal done on the basis of post-mortem analysis of balance sheets historical data. This is a long-term planning model and a future oriented approach production linked credit ensuring element of flexibility. Our model, if adopted will improve the working capital position by strengthening the current ratio in the public sector jute and cotton textile enterprises in particular and public enterprises of Bangladesh in general.

P R E F A C E

The thesis presents an analysis on the problems that account for inefficient management of working capital in the public enterprises of Jute and Cotton textile industries under the administrative control of Bangladesh Jute and Textile Mills Corporations respectively. The study also provides a descriptive operational working capital management model which will enable the policy makers, planners and especially the management of the public enterprises to operate their working capital management more efficiently and effectively under the environmental context of Bangladesh.

The profitability and liquidity position of most of the public sector jute and cotton textile mills are very precarious. The negative or low profitability acts as a stumbling block to the development of such public enterprises. There may be handful of reasons for negative or ,low profitiability in the jute and cotton textiel industries. But the financial experts and analysts are of the opinion that the inefficient management of working capital is one of the principal cause of such eventualities. But, unfortunately the jute and cotton textile enterprises in public sector have failed miserably to achieve the desired level of efficiency since the day of natioalisation(since 26th March, 1972). The thesis endeavours to present a clear and coherent national picture on an important area like working capital management of public enterprises in Bangladesh.

There are many individuals who made useful contribution to this project and I would like to express my gratitude to them. I gratefully remember that this study would not have been initiated without the encouragement and guidance of my most respected teacher Professor Md. Habibullah, Dean of the Faculty of Commerce, University of Dhaka. I am also thankful to him that he agreed to act as a guide of my dissertation inspite of his busy schedules and ill-health. I express also my gratitude to Professor Muzaffar Ahmed, Institute of Business Administration, Dhaka University for his invaluable suggestions in carrying out this study. I also express my sincere thanks to Dr. M. Shamsul Hoque, Associate Professor of Finance, IBA, Dhaka University for going through the Chapter Seven and making valuable suggestions for the improvement of the suggested model. I would like to express my sincere thanks to Professor Herbert Davies, of George Washington University for going through my manuscripts and for his valuable suggestions. I also express my sincere thanks to Mr. Latufur Rahman Sarker, Chief Advisor, Islamic Bank and Mr. Syed Ashraf Ali, General Manager, Banking Control Department, Bangladesh Bank for going through the draft thesis and making valuable suggestions.

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STRUCTURE OF THE THESIS

There are eight chapters in this thesis. Chapter one provides an introduction to the study. The problem to be studied, objectives and hypotheses are outlined. The potential importance of the study is also explained in this chapter.

Chapter two presents a comprehensive review of the literature on working capital management. After reviewing the existing literature, the chapter also enumerates the salient features and gaps of existing knowledge.

Chapter three is also a kind of review of literature focused on financial modelling. It covers a comprehensive conceptual analysis about financial modelling and relevant concepts and definitions relating to working capital management.

The methodology of the research is presented in detail in chapter four. It covers the selection of samples, sources and collection of data. Explanation on designed questionnaire is also given in this chapter.

Chapter five is the first chapter which gives analysis and reports of the findings of the study. It also includes the

detailed analyses and findings of the investigations into the three selected public sector jute mills and three public sector cotton textile mills separately based on time series and cross sectional data.

Chapter six gives a comparative picture between public and private sector jute and cotton textile industries. It also covers detailed analysis and findings based on time series and cross sectional data between public and private enterprises of jute and cotton textiles industries respectively.

Chapter seven presents our innovated research based Model, which was the ultimate objective of the study. The real contribution of this study is our descriptive operational model on working capital management of public enterprises in Bangladesh is portrayed in this chapter.

Finally, a summary of study and conclusions are presented in chapter eight. In addition, this contains discussions on the policy implications of the study as well as suggesting directions for further research in the field.

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CHAPTER- ONE

INTRODUCTION, PROBLEM STATEMENT, OBJECTIVES & HYPOTHESES

1.1 INTRODUCTION

Both the jute and cotton textile industries of Bangladesh are labour intensive in nature export oriented and import substitute respectively. Their importance, background and problems are presented below simultaneously.

1.2 JUTE INDUSTRY1.2.1 Importance

Jute the most significant and agrobased industry of Bangladesh plays an important role in the economy of Bangladesh. About 40 percent of the total foreign exchange of the country is earned by exporting jute and jute goods alone. Started in mid-fifties jute industry grew up in the background of abundance of locally available raw material (i.e. raw jute) and cheap labour to dominate the industrial scene of Bangladesh, though its share in industrial output has declined with expansion of the industrial base. In the year 1987-88 the total actual production of jute goods was 244.2 thousands metric ton in thirty five jute mills under Bangladesh Jute Mills Corporation (BJMC) during the first nine months and estimated production was 333.3 thousands metric ton during the whole year. The third plan production

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1. The Planning Commission, Ministry of Planning, Govt. of Bangladesh, The Third Five Year Plan (1985-90), Table 2, P 77.
 2. Ministry of Finance. Govt. of Bangladesh, Bangladesh Economic Survey, p 97-98.

target has been set at 650 thousand tons of jute goods, but much depends on nature and competition of world demand and internal supply of raw jute and there have consequences with respect to health of the industry.³

The total quantity of jute goods exported was 285 thousands metric tons and value thereof was Tk. 5319 million in 1987-88.⁴

Despite the emphasis on the rapid development of the jute industry in Bangladesh most of the jute mills had incurred heavy operating losses since March, 1972. During the last five year ending June, 1988, total accumulated loss of 77 jute mills both in public and private sector stood at Taka 781.68 crores.⁵ In 1972 the Jute Mills Corporation started with a negative net working capital of Tk. 52.49 million and during 1986-87, total equity stood at negative balance of Tk. 2962.92 million and the erosion of equity was primarily due to these heavy losses.⁶

One of the most serious problems for which the present jute industry has been suffering is the working capital management problem.⁷

3. Ibid, p 239.

4. Ministry of Finance, Govt. of Bangladesh, Bangladesh Economic Survey, 1987-88, p 101.

5. The Daily Bangladesh Observer, 9th August, 1988. / P. 7.

6. Bangladesh Jute Mills Corporation -Annual Report 1986-87

7. S.U. Ahmed, "A critique of Industrial management in Bangladesh" : The Business Review, Vol.2, No.1, Jan.-April, p 69.

1.2.2 THE PROBLEM

Presently jute industry of Bangladesh have been suffering from multifarious problems like inefficient management, corruption, disruptive union and social leaders influence, international competition of jute goods, shortage of spares, electricity failure, non-availability of coasters and burges and working capital management.

Among all the problems of the financial management of jute industry of Bangladesh, the problems of working capital management have probably been recognised as one of the most crucial one. The fact is that working capital is regarded as the life-blood of a business or industry. Just like blood-stream in the human body, working capital always helps a business/industry concern to gain vitality and life strength. Profitability and solvency of a business depend greatly on the proper and efficient management of working capital, while its inefficient management may lead not only to chronic financial crisis, but to an ultimate closure of business. A deeper understanding of the importance of working capital management helps a concern to maximise financial return on the minimum investment. The term Working Capital for the purpose of our study has been defined as the amount of fund which is utilised in financing day to day operations, i.e. gross current assets, such as cash, inventory, accounts receivables, and short-term investments and advances.

Jute industry plays an important and vital role in the economy of Bangladesh as it is the main largest agrobased, labour-intensive and export oriented industry of Bangladesh. By exporting jute goods alone, the country earns foreign exchange about 25% of the total export earnings.⁸ After the liberation of Bangladesh, all the jute mills in Bangladesh were nationalised and brought under the management of Bangladesh Jute Mills Corporation (BJMC) on the 26th March, 1972. since nationalisation, the jute industry is in the grip of serious working capital problem. The problem gradually turned into grave with the incurrance of continuous losses went on increasing and stood at Tk. 360.2 million by the end of Second five year plan.⁹

(i.e. at the end of 1985). The planning commission, Govt. of Bangladesh, in its two year plan mentioned that increased cost of raw jute, higher prices of stores and spares, huge increase in interest on bank borrowings, increase in wages and salary structure were mainly responsible for the heavy losses in the jute mills under BJMC.¹⁰

8. Ministry of Finance, Govt. of Bangladesh, Bangladesh Economic survey, 1987-88 p1 (Calculation of percentage have been made by us.)

9. The Planning Commission, Govt. of Bangladesh, The Two Year Plan, 1978-80.

10. The Planning Commission, Govt. of Bangladesh, The Two Year Plan, 1978-80.

Authorities on financial management are of the opinion that one of causes of losses incurred by an enterprise can be located in its problem of working capital management.¹¹

The report of the liquidity gap committee on jute mills appointed by the Government in 1972-73 showed that there was a negative actual net working capital of Tk. 524.7 million in the jute industry of Bangladesh.¹²

The Annual Reports of BJMC of 1972-73, and 1977-78 mentioned that the jute mills were in difficulty with their liquidity position due to less turnover and heavy operating losses.¹³ The stock-level of the jute industry increased year after year which blocked working capital, thus necessitating the jute mills to seek cash credit from commercial banks as the only means of working capital.¹⁴

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11. Charles W. Gerstemberg, (1962) Financial Organisation and management of business, Bombay, Asia publishing House, P291
 12. Liquidity Gap Committee, Govt. of Bangladesh, Nationalised industries Division, Report on liquidity Gap of nationalised Industries, 1973.
 13. The Annual Reports of BJMC, 1972-73, p47, 1976-77, p29 & 33.
 14. BJMC - Annual Report, 1975 - 76, p1.

The British Mission to Adamjee Jute Mills, while analysing the net working capital suggested that excessive accumulation of finished goods stock should be minimised through better inventory control.¹⁵

Ahmed in his study of the profitability of the jute industry in Bangladesh found that all the jute mills had been incurring substantial losses in the post nationalisation period.¹⁶

Habibullah carried out a study on "Industrial efficiency and profitability of jute mills in Bangladesh (1974) where he mentioned that working capital management was one of the sickening problems of the jute industry of Bangladesh."¹⁷

15. The British Mission to Adamjee Jute Mills, "Balancing Modernisation and Renovation Program" Dhaka, 1968.
16. Qazi Kholiquzzaman Ahmed(1973) "An analysis of the Profitability of the jute industry of Bangladesh in Post-liberation period" BIDS, Vol 10, p4.
17. M. Habibullah,(1974)* Industrial efficiency and profitability of jute mills in Bangladesh, Bureau of Economics Research,Dhaka University, p1.

18 Mozaffar, Zaman, Khan, Hasan, Raquib, Awal, Mandal
25
and Saha, in their respective studies also found the problems of working capital mangement in the public sector jute Mills in Bangladesh. The UN Conference on trade and development emphasised that syntehtic substitutes had led to a world wide decline in the consumption of jute - a plant whose fibre is used mainly in carpeting twine and packing. The expected continuation of this trend threatens to erode export earnings of Bangladesh where 75 percent of the foreign exchange earnings comes from jute industry. The requires a specific indepth analysis. 26

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18. Muzaffar Ahmed, Industrial Finance in Bangladesh, Dhaka University, 1976 p31.
19. M.M.Zaman, Ibid, p89.
20. S.I.Khan, "Financial Problems of jute Industry" Problems of jute sector" BJMC, 1978, p56.
21. M.N.Hasan, The Cost & Management, July 1978, Vol 5, p33.
22. Rakibuddin Ahmed, BIDS, 1978, p3.
23. A.K.Awal, Bangladesh Babostapana, Dhaka, Abu Publication 1980, p85.
24. A.Mandal, Productivity of Jute Mills in the Khulna Zone of BJMC
25. A.C.Saha, (1982) A study of some problems of working capital mangement in the jute mills of Dhaka Zones, Bangladesh, unpublished, Ph.D.Thesis, Baroda, p420.
26. Editorial in Economic Times, Jan. 25, 1981.

Another study established that an average gross return from the export of all jute manufacturers in the year 1969-70 was about 12 percent. Both these calculations included export bonus scheme earnings, but without bonus earnings there would have been considerable losses. The First Five Year Plan of Bangladesh provided that all the jute mills would have to guarantee a fixed return of 7.5 percent on the original investment inclusive of loan and equity.

The planners, the Economists, the top executives of BJMC and finally the Govt. of Bangladesh have underscored the need for Working Capital management problem of the Bangladesh Jute Mills Corporation. The postponement of the solution of Working Capital problems in the jute mills is the postponement of the industrial efficiency and improvement in productivity.

27. Qazi Kholiquzzaman Ahmed, "Was the jute industry profitable in Pre-liberation days?" The Business Review, Vol. 3, No.2, Apr. - June, 1977, p 30.
28. The Planning Commission opcit, p259.
29. Raihan sharif, "some financing and related issues in Bangladesh development context" Industrial finance in Bangladesh, Dhaka University, 1976, p29.

1.3 COTTON TEXTILE INDUSTRY:

1.3.1 IMPORTANCE

Cotton textile industry plays an important role in the economy of Bangladesh. Its role has been felt since the very dawn of civilization and is considered to be unique in human life. Cotton Textile has been historically the pathblazer for industrialisation, starting from the industrial Revolution in 1779 down to the present time. Success story of Japan, Hongkong, South Korea and many other countries in economic development in the Post-World War II period started with the Cotton Textile

³⁰ industry. The Cotton textile industry provides clothing, which is a basic human need ranks next to food only in order of importance. The industry occupies a significant position in the economy of Bangladesh and in terms of value added and employment, cotton textile industry comes only after jute industry. It contributes about onefourth of total GDP and provides employment

³¹ around 700 thousands people. It is one of the most important labour intensive and import substitute industry of Bangladesh.

In the Third Five Year plan, the Government of Bangladesh has stressed much more importance to develop the Cotton textile industry in view of its large contribution to employment and to

30. Planning Commission, Government of Bangladesh, Dhaka: The Third Five Year Plan, 1985-90, p 240.

31. Ibid, p 241.

cloth supply, mainly to rural consumers, and the main focus of the Third Five Year Plan is to ensure harmonious development of the modern textile sector with the handloom sector.

1.3.2 THE PRESENT POSITION OF THE COTTON TEXTILE INDUSTRY OF BANGLADESH

Most of the textile mills in Bangladesh were nationalised on March 26, 1972, under the presidential order No. 27, of 1972. The Bangladesh Textile Mills Corporation (BTMC) came into being on the same date with the initial share capital of Tk. 5 lakh fully paid up by the Government. In 1976, however, a separate ministry for the textiles had been created and the BTMC accordingly been placed under its direct control.

According to the second schedule of the Nationalisation order, in all 64 Textile units were placed at the administrative control of Corporation. Subsequently some more mills were vested under the control of BTMC, increasing the total number of enterprise to 74. subsequently Government divested 10 specialised mills having installed capacity during February, 1977 to November, 1979. Another 4 Textile mills having capacity of 82,440 spindles, and 2046 looms were put under liquidation from February, 1982.

32. Ibid, p 241.

33. BTMC, Annual Report 1984-85, p4

34. Ibid, p4

In pursuance of New Industrial policy, declared by the present Government in June 1982, 24 operating textile mills having spindles of 4,63,816 and 3059 looms were transferred to the former Bangladeshi Shareholders, during 1982-83 to 1984-85.³⁵ BTMC had 34 textile mills and specialised mills in operation as on 30-6-1985. The installed capacity in operation during 1984-85, was 6,61,864 spindles and 3111 looms. Out of two textile mills under construction during 1984-85, Magura Textile mills having installed capacity of 25056 spindles had gone into trial production. The present strength till 1988, there are 41 textile mills under BTMC. The accumulated loss of the Corporation during the year 1987-88 was estimated at Tk. 3000 lakhs.³⁷ In 1986-87 BTMC had a negative net working capital position amounting Tk. 76.90 crore.³⁸

1.3.3 PROBLEM STATEMENT :

Among components of working capital inventories occupy a strategic position in the structure of working capital of BTMC enterprises. The profitability of a concern depends considerably

35. Ibid p 4.
36. BTMC Monthly MIS Report, October, 1988, pp 2-3.
37. Ministry of Finance, Govt. of Bangladesh, Bangladesh Economic Survey 1987-88, p 66.
38. BTMC, Annual Report, 1986-87, p 4.

upon the turnover of the inventories subject to the existence of margin. of all the components of the working capital, the value of the inventories is usually found to be the highest. The selected cotton textile mills the average inventories constituted about 65 percent of the current assets as shown on the Balance Sheet drawn on 30-6-87 (Table 5.5).

The "Daily Ittefaq" in its editorial in 27th september, 1987 reported that there were 17110 bales of Yarn and 11213 bales of cloth had been lying as unsold stock in the stores of 36 Textile mills of BTMC. During the field survey, it has come to our notice, that most of the BTMC enterprises do not follow the standard norms of inventory in practice, as per the guidelines of "Stores Manual" prescribed by BTMC for controlling their various items of inventories, such as, raw materials, work-in-progress, finished goods and stores and spares. It appears, therefore, that management of inventory most effeciently and effectively is the challenging task faced by the public sector textile mills under BTMC. About 39 percent of working capital is blocked in receivables. As a result of blockage of funds in inventories and receivables, there is cash shortage in cotton textile industries. Among all the problems of financial managment, the problems of working capital management have probably been recognised as the most crucial one.

However, the planning Commission, Government of Bangladesh, Ministry of Textiles, World Bank, BTMC Authorities, Mills

Management, all have shown concern to the problems of working capital management of public sector cotton textile mills. Under the context, the present study is an attempt to fill up the gap of knowledge into this end.

1.4 THE SCOPE AND OBJECTIVES OF THE STUDY :

The main purpose of the present study is to examine the problems of Working Capital Management in the 3 (three) selected public sector jute and 3 (three) cotton textile mills under the Bangladesh Jute and Textile Mills Corporations respectively and to design/suggest model which might be helpful in improving the working capital management by way of better planning and control of the same in the public sector jute and cotton textile mills in particular and public enterprises in general.

The findings of this study will be presented in the form of a model. Attempt has also been made to compare the three public sector jute mills with three private sector mills and three public sector cotton textile mills with three private sector mills for the purpose of investigation. However, the following specific objectives are enumerated below:-

- 1) To ascertain the existing system of the working capital management in the public sector jute and cotton textile mills in Bangladesh, so far the management of Working capital is concerned.
- 2) To analyse the efficiency of Working Capital management in the selected jute and cotton textile mills from the period 1982-83 to 1986-87.

- 3) To identify the problem of working capital management in each of its components, i.e. inventory, receivables, and cash.
- 4) The desire to test some of the observations that have been made about the problems of working capital Management by some research scholars, planners and economists.
- 5) To see whether there is any specific policy formulated by the authority for the working capital management of the public sector jute and cotton textile mills in Bangladesh.
- 6) To see whether there are specific factors responsible for the management of working capital for the public sector jute and cotton textile mills as compared to private sector.
- 7) To see whether it is possible to lay down an operational model or norms for the management of working capital for the public sector jute and cotton textile industries in Bangladesh.

1.5 THE HYPOTHESES :

In order ^{to} realise the objectives of the study and our review of literature (Ch. 2). the following specific hypotheses and sub-hypotheses were developed for verification through empirical investigation.

- H₁
1. Investment in inventories is disproportionately high, which, creates working capital management problem in public enterprises.

For proper discussion, the hypothesis has been divided into the following sub-hypotheses:

- i. Unplanned procurement of raw materials eats up a big chunk of working capital of jute mills;

- ii. There is inefficiency and corruption in procurement, storage and usage stages of raw jute in public sector jute mills;
- iii. Enterprise management of cotton mills are weak and incompetent in understanding the economic and dis-economics of raw cotton procurement;
- iv. Low inventory turnover ratio of finished goods is responsible for working capital management crisis to a large extent;
- v. Low demand of jute goods and serious competition in international markets a huge stock of finished goods is piled up;
- vi. In cotton textile enterprises, a huge stock of finished goods accumulates due to lower purchasing power of poorer section and clamour for foreign cotton goods by the richer section of consumers;
- vii. Procurement of stores and spares is more complicated in cotton textile mills compared to jute mills.

W✓ 2. For poor collection policy, a huge fund is blocked in receivables, which creates working capital problem in public enterprises.

For proper discussion, the hypothesis has been divided into the following sub-hypotheses:

- i. For poor collection policy, a huge fund is blocked in trade debtors, which creates receivables management problem;
- ii. Management are reluctant, and in some occasion become helpless in realising advances from employees because of undue Government order under the pressure of union and social leaders, as a result a huge fund is blocked in advances over a long period.

- 43
3. Cash planning is ineffective in public enterprise.
 4. Private sector jute mills show higher prices of raw jute cost in order to extract undue concessions from the Government in terms of compensation for loss, to get cheap bank loan and also to evade payment of taxes.
 5. Undue demand of fringe benefits by unions at the instigation of management and social leaders enhanced undue wage and salary costs.
 6. Cost accounting and cost control system is very inadequate.
 7. Lack of coordination between production and sales affects working capital management problem.
 8. There is no basic difference on the level of efficiency between public and private sector enterprises with respect to inventories, receivables and cash components of working capital management.
 9. Public enterprises are overnamed either by ghost workers/or by surplus management people of the disinvested mills, and some workers, especially union leaders do not work at all, which increases undue wage and salary costs in public enterprises compared to private sector.

1.6 Value of the Research

As has been already stated, the present study attempts to analyse the problems of working capital management in the public enterprises in Bangladesh, especially in jute and cotton textile industries under administrative control of Bangladesh Jute and Cotton Textile Mills Corporations respectively. The study also suggest a model which will be helpful in improving the working capital management by way of better planning and control of the same in the selected public sector jute and cotton textile

enterprises in particular and public enterprises in general. Attempts has also been made to compare the efficiency of working capital management between public and private sector jute and cotton textile enterprises. The findings and recommendations will not only be an original contribution to knowledge, but also implications for the Government, planners, bankers and financiers, various related agencies, jute and textile mills corporations and the management of public enterprises.

The present study provides a more clear and coherent picture of the different components of working capital position, i.e. Inventories, receivables and cash and analyses the problems of each component with suggestive solution in the form of a descriptive model. This study will also have implications for the existing controversy over efficiency between public and private sector industries and will help understand whether private sector enterprise is better in managing their working capital compared to public sector or vice versa, and whether disinvested private enterprises are earning higher profits than public enterprises or vice versa.

CHAPTER- TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of literature review in the area of working capital management of a developing economy like Bangladesh public sector enterprises is to seek academic validity for the present study and indicate its potential contribution.

A handful of studies have been carried out to analyse the economics of public enterprise, especially in jute industries, but only a few research studies have been undertaken on the working capital management of jute and cotton textile industries in Bangladesh.

2.2 JUTE AND COTTON TEXTILE INDUSTRIES:

Rehman & Muzaffar in their book "Public Enterprise in an Intermediate Regime" stated the specific problem to raise adequate working capital by public enterprises to finance running costs in 1972-73 and estimated the liquidity gap of BJMC and BTMC to the tune of Tk.5247 lakh and Tk. 290 lakh respectively.

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1. Rehman Subhan & Muzzafar Ahmed(1978)Public Enterprises in an Intermediate Regime-BIDS/496-498, Table 22.5.

N.B:- 10 lakh = 1 million.

In his study on working capital problems of jute mills during 1975-76 Rahman mentioned that jute mills were facing ²acquate shortage of working capital. He stated that a large portion of the working capital blocked in finished goods due to non-availability of shipping space, coaster and barges and delay in shipment as well as low demand of jute goods in international market due to synthetic products.

Alimullah's study on Inventory Management in 1969 confirmed the hypothesis that the jute industry did not establish the ³minimum stock level of inventory based upon probable needs.

Ahmed's (1976) study on financial structure of jute industry also mentioned that no precise estimate of working capital were ⁴available. There was a liquidity gap in the jute mills of Bangladesh during 1972-73. He mentioned that the total working capital requirements of Bangladesh Jute Mills Corporation were Tk.12505 lakhs and that of net working capital requirements were Tk. 3462 lakhs in 1972-73.

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2. A.H.M. Habibur Rahman (1976) Industrial Finance in Bangladesh Bureau of Business Research, Dhaka University.
 3. Alimullah Miyan (1969) Inventory Management in East Pakistan (Bangladesh) Dhaka: Bureau of Economic Research, Dhaka University, PP 10-31.
 4. Qazi Kholiquzzaman Ahmed (1976) : Jute Manufacturing Industry of Bangladesh published Ph.D. thesis, London School of Economics, pp 175-180.

Habibullah (1974) studied 16 jute mills taking 5 years Annual reports.⁵ His study was not carried out specifically on the working working capital management but mentioned among other things that working capital was the most sickening problems for the jute industry of Bangladesh. He also pointed out that one of the causes of low profitability in the jute mills in Bangladesh was excessive accumulation of current assets in the form of inventory and receivables.

Abdullah's study on six textile mills in Bangladesh during 1975-76, indicated that the slow movement of the inventory greatly affected the liquidity position and created excessive dependence on bank finance for working capital requirements.⁶ He also mentioned irregularities and mis-management in the field of working capital management.

Bangladesh Shilpa Rin Sangstha conducted a sample survey on 16 jute mills in August-September, 1973 to determine the cost structure and showed that loss per ton hessian, sacking and carpet backing were Tk. 400, Tk. 268 and Tk.733 respectively.⁷ The negative margin might have a direct bearing on the liquidity gap and poor management of working capital.

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5. M. Habibullah (1974) Some aspects of industrial efficiency and profitability of the jute mills in Bangladesh. (Bureau of Economic Research, Dhaka University, p1.
 6. A.B.M. Abdullah (1977) "Working Capital Management", The Business Review, Dhaka University, Vol.1, Jan. - March, p 114.
 7. Bangladesh Shilpa Rin Sangstha (1974)- Annual Report 1974-75 Vol.3, No.1, P 11-19.

Battacharjee's study on the accumulation of current assets in the jute industry of Bangladesh during 1976-77 indicated that excessive current assets valuing Tk. 99 crores were accumulated in the jute industry of Bangladesh.

BJMC in its 5th Annual Report mentioned that the corporation started which an accumulated loss of Tk. 14520 lakhs on 1.7.1976 which amount increased to Tk. 19837 lakhs in 1976-77 despite higher production due to uncontrollable factors and high cost of raw jute, higher overhead and low selling price of jute goods in international market.

Alamgir in his study of public sector enterprises of Bangladesh including the problems and prospects of jute industry threw light on the problems of working capital management created as a result of bottleneck in the supply of raw jute, adverse liquidity, lack of internal finance, excessive dependence on the bank borrowings shortage of foreign exchange and higher cost of production. He also suggested cost reduction, so that, the need for export subsidization is minimised at least.

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8. Bureau of Business Research, Current Assets in the jute industry of Bangladesh (1976-77) unpublished Research Study, Dhaka University, PP 20-30.
 9. Bangladesh Jute Mills Corporation (1976-77) Annual Report, p1.
 10. Mohiuddin Alamgir (1974) Nationalised industries in Bangladesh - problems and prospects. The Bangladesh Development Studies (BIDS) Vol.2, No.3, pp 675-679.

Ahmed in another study indicated that the overall financial performance of the jute industry was disastrous, due to power failure, absence of law and order, and inefficient institutional arrangements.¹¹

Khan in a study on inter-firm comparison of the 44 jute mills based on data of 1972-73 only relating to its profitability, solvency liquidity and overall viability indicated that huge stock piling created the shortage of working capital problems.¹²

Ahmed in another study of the First Five Year Plan physical target for the jute industry in Bangladesh mentioned that out of 792000 tons installed capacity 446170 tons were actually produced in 1972-73 which reprocecuted 56.85 percent of the capacity utilisation against 74.13 percent in 1969-70.¹³ The causes of underutilisation of capacity were due to non-availability of spares, frequent failure of power supply, problems of working capital and transport problems.

11. Qazi oliquzzaman Ahmed(1973) A note on the capacity utilisation in the jute manufacturing industry of Bangladesh, Bangladesh Development Studies, Vol. 1, No.1, Jan. pp 103-110.

12. M.Khan(1977) "The use of inter-firm comparison in performance evaluation". The Cost & Management Accountants, Jan.-June, pp 7-16.

13. Qazi Kholiquzzaman Ahmed(1977) "Was the jute manufacturing industry profitable during pre-liberation days. The Business Review, Dhaka University, Vol.3, No.2, April-June, p 30.

Haque's study indicated that the jute industry failed to estimate working capital requirements and inventory policy was poor in most of the mills. Receivables policy appeared to be unsound in most mills.¹⁴ The lack of planning and controlling of working capital resulted adverse on the profitability of all the nationalised enterprises including the jute industry.

Saha carried out the most important research study on the "Problems of working capital management in the jute mills of Dhaka Zone."¹⁵

He indicated that the accumulation of Tk.845.53, Tk.1017.13 lakhs and Tk.1916.81 lakhs in work-in-progress, finished goods and stores and spares respectively for the period under study blocked the working capital.¹⁶

Hossain (1984) carried out an important research study on the Management of working capital in cotton textile industry of Bangladesh.¹⁷ His findings showed that the size of

14. Jahirul Haque(1981) Financial Planning & Control of public sector enterprises in Bangladesh unpublished Ph.D. thesis, Dhaka University.

15. A.C. Saha(1982) "Problems of working capital management of jute mills of Dhaka Zone" - Bangladesh, an unpublished Ph.D. thesis, M.S. University of Baroda, India, p2.

16. Ibid p 420-42p-421.

17. A.T.M. Tofazzal Hossain(1984) "Management of working capital in cotton textile industry of Bangladesh" unpublished Ph.D. thesis, University of Kalayani Bengal, India P 75-76.

working capital for the studied period varies from year to year in all the selected units. The turnover is very low, inefficient handling of the individual units has resulted in losses in most of the selected units.

S.M. Hussain in a study in 1983 on the "Depreciation cost in Bangladesh jute industry" mentioned among other things the problems of working capital management for which the jute industry is suffering. 18

Sharma carried out research study on Financial planning in the Indian public sector from 1961-62 to 1970-71. 19 The study although not directly related to working capital management, but his findings among other things indicated that size of the working capital grew in public enterprises because of the huge increase in current assets and mainly because of excessive accumulation of inventories.

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18. S.M. Hussain(1983)"Depreciation Cost in Bangladesh Jute Industry-A case study with special reference to price-level changes,unpublished Ph.D. thesis, Banaras Hindua University.
 19. B.B. Sharma(1971) Financial planning in the public sector - A management approach, Delhi, Vikas publishing House, p 127-128.

N.B. 10 million = 1 crore

Sataynarayan made a notable study on the financing of public enterprises of Tamil Nadu. The analysis of data was for 1976-77 only.²⁰ His findings revealed that increase debt level led to losses or reduction in net profit and shortage of working capital. He, however, suggested for converting long term loan to equity and issue of additional share capital for increased volume of working capital.

Chowdhury carried out on inventory accumulation and productivity in public enterprises in India during 1961-75 and mentioned that excessive investment in inventory in public enterprises had resulted in blocking up of huge amount of working capital.²¹ He showed that yearly value of surplus inventory was Rs.673 crores and mentioned that the cost of carrying excess inventory during the last 15 years amounted Rs. 1215 crores.

Shing's study of the inventory investment in public enterprises of India during 1960-61 to 1972-73 indicated that about 90 percent of the working capital of most of the public enterprises was blocked in inventories as against 30 percent in industrially advanced countries.²²

20. Satyanarayan(1979) Finances of Public Enterprises, Delhi, The Chartered Accountant, Vol.28, No.1, pp 49-56.

21. R.K.Chowdhury(1978) 'Inventory accumulation and productivity in the public enterprises of India, in K.R. Gupta(ed) Organisation and management of public enterprises, New Delhi, Atlantic publishers, Vol.1, pp 206-212.

22. A Singh(1978) Inventory investment in public enterprise, Ibid R.K Gupta (ed), Organisation and Management, New Delhi, Atlantic Publishers and Distributors, Vol I, pp 106-110.

Ramamoorthy made a study on the position of working capital in the 159 companies including basic industry, chemical, pharmaceuticals, rubber and vegetables industries in India. His findings showed that working capital was excessive, in inventories compared to the working capital norms of Tandon study group.

Mishra carried out a research study on the "Problems of working capital with reference to selected public undertakings in India. His findings showed that excessive inventory resulted low profitability of public enterprises and the total inventory of the selected public sector undertakings was equal to 10 months cost of production during 1967-68.

Agarwal carried out an important study on the management of working capital in India. On the basis of response by 34 companies. The study revealed that most of the Indian industries did not seem to have a comfortable position as shown by current and quick ratios.

23. V.E.Ramamoorthy(1978) Working Capital Management, Madras, Institute of Financial Management, pp 223-229.

24. Mishra, opcit pp 200-214.1

25. Agarwal opcit pp 256-270.

Sharma carried out study on working capital management in Aditya mills, Rajasthan. The study was based on the analysis of Annual Balance Sheet and income statements of the cotton textile mills during 1963-78. The study mentioned that the entire working capital was blocked in inventory. This adversely affected the liquidity position as a result of lower current and quick ratio.

Rao's study was based on the problems of inventory management in India. His study estimated Tk.15000 crores invested in inventory in Indian industries. Inventory constituted more than 90 percent in current assets. He suggested better inventory control system.

Desai made a research study on the financial structure of cotton textile mills of Ahmadabad for a period of 10 years and observed that the mills depended heavily on bank credit for working capital.

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26. K.R. Sharma(1980) Analytical view of working capital management in Aditya Mills, Rajasthan (Paper presented in the 8th annual conference of accounting association held at Warrangal, A.P. on 22nd/23rd March.
 27. Rao(1971) Inventory Management in public sector enterprises in India in R.K. Nigam(ed) Management of public sector undertakings, Vora and Co. Ltd., p 180.
 28. Desai(1980) Financial structure of the cotton textile mills Ahmadabad, unpublished Oh. D. thesis, Sardar paddumi, p 75.

Mehta carried out a study on the inventory accumulation in public sectors undertakings of India during 1961-62 to 1968-69. His study revealed that there was heavy inventory accumulation in the public sector compared with that of private sector. He suggested that effective inventory management would improve the financial performance of the mills thereby reducing the pressure on bank credit as a means of working capital.

2.3 SALIENT FEATURES AND GAP

A review of the existing literature on the subject has shown that there are gaps in our knowledge in the existing enterprises in Bangladesh. One of the objectives of this study would be to fill up the gaps by presenting factual information based on objective analysis for enabling policy formulators to make correct decisions about the use of working capital.

The present study has identified gaps in our knowledge about the working capital management in the following areas:-

1. Any study has rarely been conducted so far on the designing an operational model or norms of working capital management for public enterprises in Bangladesh, particularly for jute and cotton textile industries.

29. Mehta(1970) "Inventory Accumulation in Public Sector Undertakings of India", in N.K. Paraj(ed) Performance of Public Enterprises, Bombay: Popular Prakashan,p 37.

2. A comparative position of working capital management for public and private sector jute and cotton textile industries have not been done so far after disinvesting 36 jute and 27 cotton mills from nationalised sector to private sector as per the new industrial policy of 1982 of the Government of Bangladesh.
3. In previous studies, effective cost control and cost reduction system have not been incorporated.
4. Studies have rarely been carried out with an objective to prepare a profile on finance managers competence.
5. No study have been done so far on capital structure of public sector jute & cotton mills in Bangladesh and its impact on working capital.
6. Study on working capital management using FACT Method of financial analysis is also not done so far.

CHAPTER-THREE

FINANCIAL MODELLING AND RESEARCH FRAMEWORK

3.1 INTRODUCTION.

The objective of this chapter is to present a comprehensive conceptual analysis about financial modelling and relevant concepts and definitions relating to working capital management. It will help to analyse the working capital management and to develop a descriptive operational working capital management model which is a major objective of the thesis.

3.2 THE NATURE OF MODELLING

A financial model is a set of descriptive or mathematical statements that expresses the system of relations and links between the firm's environment, its decisions and actions, and its objectives. Webster define a model as "a small copy or imitation of an existing object; or a preliminary representation of something, serving as a plan which the final object is to be constructed. However, in a financial modelling the real object of modelling is the set of interrelationships and linkages between

1. James R. Morris (1987) Financial Modeling, Dow Jones Irwin, p 81.
2. Ibid, p 80.

the firm's objectives. A financial model may be a set of descriptive or mathematical statements expressing the system of relations and linkages between the enterprise's environment, its decisions, actions and objectives.

A financial model of an Organisation is helpful and sometimes essential because of complexity of the relationships between the firm's financial variables. To analyse short-term, day to day operating decisions a detailed analytical model is necessary which shows how individual operating decisions affect the position of an organisation. A model is mainly intended for analysis of decisions concerned with broader policy that affects the firm's over a longer planning horizon would show only the broadest detail about an Organisation.

Financial Models serve the needs of management. It is helpful and sometimes essential because of the complexity of the relationships between the firm's financial variables. For some problems it may be possible to formulate the general direction of the result of a decision, but because of complex relationships, it may be impossible to assess the magnitude of the effect without the help of a model. However, a properly structured model can portray the links between the management decisions, and the firm's objectives in as much detail as is necessary to analyse a decision alternative. For some problems it may be necessary to develop a very detailed descriptive model; but in some cases too much detail may be confusing and unnecessary.

3.2.1 THE IMPORTANCE OF MODEL

The importance of modelling is enumerated below:

- (1) It enables management to try out its decisions on this small copy of the firm without subjecting the firm itself to management by trial and error.
- (2) It forces the modeler and manager to systematize their thought.
- (3) Financial models can show the linkages, between the firm's operating environment, management decisions and potential results of the decisions.
- (4) It allows management to analyse more carefully and to explore how their decisions relate to their overall objectives.
- (5) The modeling process itself is beneficial to management as it tends to force the planner to consider systematically the interrelationships between a segment of a firm and those between environment, decisions and results.
- (6) The process of building the model forces one to think carefully about the complex relationships between decisions and financial variables that constitute a firm.
- (7) The financial planning model provides the framework for systematically tracing out the result of a decision.
- (8) Finally it helps the managers to use their talents more effectively for the broader issues concerning themselves.

3.2.2 THE APPLICATION OF MODELS IN FINANCIAL MANAGEMENT

There are two General approaches to financial modeling (1) Simulation and (2) Optimization.

Simulation models show the result of decision or action, while Optimization models solve for the decision that is best.

3.2.3 SIMULATION

Simulation is a process of imputation of the firm so that the consequences of alternative decisions, actions and strategies can be analysed. It enables the management to evaluate the consequences for implementing a decision. The simulation model is the link between the prospective decision and the hypothetical results. The simulation approach does not try to tell the user which decision is best. Rather it allows the user to specify a decision.³ For example, suppose the decision being considered is whether to finance a new investment project with equity by issuing new common stock, or to finance it with debt by borrowing from the bank. The typical simulation would trace through the consequences of each of these alternatives and present the users with sets of financial statements so that he can evaluate the results of decisions in terms of the financial status of firm.⁴ The simulation approaches of modelling have been used by Brown (1973), Bryant (1982), Bramer & Miller (1973), Davis (1973), Gershefski (1969), Gordon (1973), Hadley & Whiten (1963), Lifson and Blackman (1973), Liacascio (1972), Meyer (1977), Miller and Modigliani (1961), Miller & ORR (1966), Naylor (1973), Norton (1972), Orgler (1969), Robenson (1973), Schrieber (1970), Smith & Keith (1964), John Wiley & Sons (1985), etc.

3. Ibid p 99

3.2.4 Optimization

An optimization model usually consists of an equation that expresses the objective or goal of the decision, and a set of equations and inequalities that represent the constraints. The decision variables would be the variables in the model that represent choices available to decisions maker. For example, the decision variables might include the amount to be borrowed to finance an inventory, the number of shares to be sold, and the level of investment in inventory. The purpose of optimization model would be to find the values of these three decision variables that would maximize the value of the common stock.

3.3. A LINEAR PROGRAMMING (LP) MODEL FOR THE PLANNING AND MANAGEMENT OF CURRENT ASSETS AND LIABILITIES:

One of the task of a financial manager is to develop and execute plans for managing current assets and current liabilities.

The essential features of linear programming model for financial management planning include the decision variables that represent the amounts or levels of the different decisions that the planner must make, the objective function that expresses mathematically the decisions and the objective, and the

4. Ibid p 100

5. Ibid p 102

constraints that express the various limitations on our decisions.⁶ The main limitation of optimization (LP) Model that if there are too many constraints, there may be no solution that could simultaneously satisfy all the constraints.

3.3.1 LIMITATION OF LP MODEL

If too many constraints are imposed on model, the problem may not be feasible.⁷ That is there may be no solution that could simultaneously satisfy all the constraints. In fact, the modeler should make every effort to keep the model as simple as possible with a minimum number of constraints and decision variable.⁸

As such, many individual model to deal with each element of working capital has been developed. Such as inventory model, cash model and receivables model. Moreover, a separate model is developed for each component of inventory, i.e. ABC model for stores items, Economic order quantity (EOQ) for finished goods and raw material inventory and so on. Similarly, various models are used for managing cash, such as operating cycle model; EOQ model; stochastic model, cash budget model etc. For accounts receivables different descriptive credit policies have been developed.

6. Ibid p 370

7. Ibid p 370

8. Ibid p 370

A brief description of individual models are given below:-

3.4 INVENTORY MODEL

3.4.1 ABC Model

Many firms find it useful to divide materials, parts, supplies, and finished goods into sub classification for purposes of inventory control. ¹¹ Herbert J. Richmond designed this plan of concentration of the important items as control by importance and exception. The idea of ABC analysis lies in the recognition of the principles that all the items of inventories are not equally significant. ABC analysis is an inventory control techniques, which is an adaptation of Pareto's law and under the system, the various stores items of inventories are classified under the broad categories of A, B, and C. The criteria of categorising the various items ultimately differ from industry to industry and enterprise to enterprise. However, approximately "A" category of items constitutes only 5 to 10 percent of the total number of items but it accounts for 80 percent of the total value of the inventories, "B" class items constitutes 20 to 30 percent accounting for 15 percent of the

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9. Bhabatosh Banarjee (1987) Financial and Management Accounting, Sree Sarda printing, Calcutta, p 149. ✓

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The World Press Pvt. Ltd.

total value and the rest 60 to 70 percent which comprises only 5 to 10 percent value have been classed as "C". The above selective inventory control method is typically branded ABC Model of inventory management. The ABC concept is to be implemented by Controlling A- items "Morethighly", than "B" items, and so on.

3.4.2 EOQ Model

The determination of economic order quantity is one of the main factors of inventory policy. If materials are purchased in large quantity the number of orders reduced resulting in lower ordering costs. But maintenance cost per year increases due to the larger volume of average inventory. The Economic Order Quantity (EOQ) balances the cost of maintaining inventory against the cost of ordering. Setting up of this level saves the task of re-calculating the quantities to be purchased each time. The Model is represented by following formula:-

$$\text{Fig. I } \text{EOQ} = \sqrt{\frac{2AP}{i}}$$

Where A = Annual quantity to be used in units.

P = Cost of Placing per order.

i = Cost of carrying one unit of inventory for the whole year.

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The Model is used by Baumol and others.

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10. W.J. Baumol (1977) Economic Theory and Operations Analysis. Prentice Hall of India, 4th edition, p.9.

3.5 CASH MANAGEMENT MODEL

Cash is the common purchasing power or medium of exchange. As such, it forms the most important component of working capital. Cash under the present context includes cash in hand and in bank deposits with drawable by cheques on demand and other securities that can readily be converted into cash. There are three motives for holding cash, viz (i) Transactions motives, (ii) Precautionary motives and (iii) Speculative motives. Holding of Cash balance should be optimum, it should not be too shortage not too excessive. The level of cash balance should be maintained in such a way that the firm does not face difficulty in meeting its day to day commitments, and at the same time there should not be excessive cash which impairs the return on investment.

Various models used for determining self-imposed cash balance are as follows:-

- (a) Operating or Cash Cycle model;
- (b) Inventory model (EOQ model);
- (c) Stochastic model (Miller-Orr model);
- (d) Probability model;
- (e) The cash budget model;
- (f) Cash flow statement model;
- (g) Fund flow statement model.

3.5.2 Miller-orr-Model:

If the failure is not known with certainty, application of EOQ model does not become effective. As such, attempt has been made to use other models to determine is stochastic and unknown in advance. The miller-orr-model is one of the application of control theory and specifies two control limits— h as an upper bound and zero amount as a lower bound.¹¹ The Model is presented in fig.2

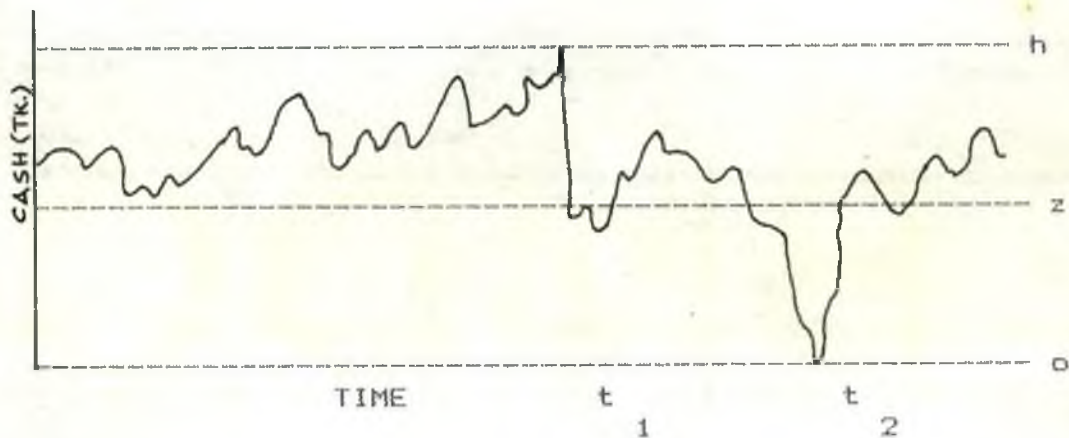


Fig.2 Miller-orr-Model.

In the figure, the firm's working cash balance fluctuates randomly in response to random inflows and outflows. At time t_1 , the balance reaches the upper control limit ' h '. At that point $h-z$ amount of cash is transferred to marketable securities. The balance continues to fluctuate, falling to zero at t_2 , at which time z amount of marketable securities are sold or loan taken to

11. M.H. Miller and Orr, Daniel (1966) "A Model of the Demand for money by firms" Quarterly Journal of Economics, Vol.80 pp 413-35.

augment the working cash balance. In the model, the minimum amount has been set at zero. But accordingly it should be higher than zero. In that case 'h' and 'z' would move up in the figure. The control limit model thus gives an answer in terms of maximum and minimum balances and provides a decision rule.¹² The greater the variability, the higher the minimum balance. The optimum value of 'z', the return to point, for security transactions, is:

$$z = \sqrt[3]{\frac{3b \cdot 2}{4}}$$

where b = fixed costs associated with security transactions

2 = Variance of daily net Cash flow

i = interest rate per day on marketable securities.

With the control limits the Miller-Orr-Model will minimise the total costs—fixed and opportunity costs of cash management.

Probability Model

It may be stated that the EOQ assumes predicible cash flows, while the stochastic model is based on random cash flows. But in practical context, cash flows are neither completely predicible nor stochastic. They are rather predicible within a range. In that cash, probability distributions may be used for a range of possible outcomes and optimum cash balance may be accordingly ascertained.

12. Bhabotosh Banarjee, op. cit, p. 194.

3.5.3 Cash Budget Model

A Cash budget model is a projected cash receipts and cash payments over a period of years. It starts with a given 'Cash balance' which may be either big or small. But the said balance is, in any case, desired to be the 'optimum balance'.

Therefore efficient cash management through effective cash budgeting supported by relevant and timely forecasts of cash may help :

- i) aiding in securing added working capital for smooth and unhindered running of the operations and planning for payments to creditors and shareholders ;
- ii) easing strains of a cash shortage ;
- iii) facilitation temporary investment of cash;
- iv) improving the rate of return on assets; and
- v) providing funds for growth.

The cash budget is usually prepared as part of the overall annual firm budget, i.e. sales production, material, labour and overhead budgets. Hence, a cash budget may be prepared to show the level of bank loans which is necessary to support profit plan.

3.5.4 Cash Flow Statement Model

A cash flow statement shows changes in the financial position of a firm on cash basis. It, however, shows the net

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13. R.K. Jaccioke R.T. Sprouse, Accounting Flows, Income, funds and cash, Prentice Hall Inc, Englewood cliffs, N.J.1965, p 109.

effects of the various transactions of a firm during a period on cash basis and explains the causes of changes in cash position of a firm between two balance sheets dates. This statement is called cash flow statement because it shows the various sources and applications of cash during a period and their net impact of cash balance. The fund flow model was pioneered in United States in the late 1940's and early 1950's and was taken up in the early 1960's following the Radcliffe Report's call for more detailed monetary statistics.¹⁴

3.5.5 Fund Flow Statement Model

Fund flow statement model is the 'statement of sources and application of funds' over two balance sheets period. This is also called 'statement of sources and uses of working capital'. In the words of Foulke, funds, in this particular type of statement, are what might be termed working capital funds as distinguished from actual cash funds.¹⁵

14. M. Shamsul Haque, Prices Policy, Accounting Methodology and corporate Financial Viability. published by IBA, Dhaka University, Ph.D. thesis, 1983, p 137.
15. R.A. Foulke(1957) Practical Financial Statement Analysis, New York, Mcgro Hill, p473.

The fund flow statement model helps to see--

- (i) the growth of the firm;
- (ii) its resulting financial needs, and
- (iii) the best way to finance these needs.

In fund flow statement actual cash flow while compared with the estimated cashflow acts as a tool for control of cash in the firm.

3.6 Control of Accounts Receivables

For accounts receivables management, mathematical models are very difficult to develop. The control of receivables has a significant impact on the effectiveness of credit and collection policy and the control of working capital, complete information regarding, the performance of each control techniques or procedure is absolutely essential.

According to Walker, the various ways of controlling the receivables are as follows:-

- (i) Receivables turn over ratio;
- (ii) Average collection period;
- (iii) Report of aging schedule of accounts;
- (iv) Percentage of collection reports;
- (v) Report of bad debts; and
- (vi) Report of deliuent accounts.

16. J.C.Van Horne(1985) Financial Management & Policy,Prentice Hall of India pvt. Ltd., p700..

17. E.R.Walker & W.H. Baughn(1961) Financial Planning and Policy. New York, Harper & Row Inc. p 80.

Haque in his doctoral study also used the average collection period technique to judge efficiency of receivables management. ¹⁸

3.7 FACT METHOD MODEL AND RATIO ANALYSIS

The literal meaning of 'FACT' is the financial analysis consultancy techniques. It comprises of two formation (i) calculation sheet and (ii) summary sheet (See Annexure-I). Calculation sheet format has two portion—one for recording the profit and loss account information and the other for recording balance sheet information. The summary sheet contains the background and general information about the Company, as well as derivation of 24 important financial and operating ratios under the groups of General ratio, managerial performance ratio, Financial Performance ratio, Rating as an investment ratio, and cost breakdown ratio. Among the 24 selected ratios calculated under FACT Method, the most important ratios for working capital management are (a) turnover of working capital (sales/working capital), (b) current ratio (current assets/current liabilities), (c) Liquid ratio (liquid assets/current liabilities), (d) ratio of current debt to net worth, cost breakdown ratio, inventory turnover ratio (cost of sales/stock) etc.

18. Jahirul Haque (1981) Financial Planning and Control in public sector industries in Bangladesh. Unpublished Ph.D. thesis. Dhaka University, pp 250-268.

Financial ratios are widely used at the international level under the auspices of the United Nations Organisation for the purpose of compiling and distributing information covering significant ratios within different industry groups.¹⁹ Countries, such as West Germany, France, Holland, U.K., Norway, Canada and U.S.A. are all doing work on inter-firm Comparisons on a fairly large scale using financial and operating ratios.²⁰

3.8. CONCEPTUAL FRAMEWORK OF WORKING CAPITAL MANAGEMENT

Working Capital Management involves the deciding upon the amount and composition of current assets and how to finance these assets.²¹ These decisions involve trade off between risk and profitability. Resolution of the trade-off between risk and profitability with respect to the decisions depends upon the risk preferences of the management. Some western scholars define working capital management which involves all aspects of administration of current assets and current liabilities.²² It

19. Cole, op. cit., p 201.

20. Ibid.

21. S.C. Kuchhal (1982) Financial Management, An analytical and conceptual approach, Eight (ed) chartanya publishing house, Allahabad, India, p 154.

22. Weston & Brigham, Managerial Finance, 4th (ed) Holt International publication, pp 520-523.

generally depends on the determination of the requirements of working capital, financing the requirements and efficient utilisation of the components of working capital. Ramamoorthy provides an indepth definition and describes working capital management as

- (i) a selection of the appropriate sources for financing the current assets;
- (ii) preparedness to meet current obligations as and when they matures;
- (iii) decision on the volume and composition of current assets; and
- (iv) efficient management of the different categories of current assets and current liabilities.

The present study aims at developing an optimum working capital management model/norm for the public enterprises in jute and cotton textile mills in Bangladesh. An optimal working capital policy is one that sets the mix of current assets and current liabilities that maximizes return on investment or equity and strengthens it as well as ensures the solvency of the business.

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23. V.E. Ramamoorthy (1978) "Working Capital Management, (Madras Institute of financial management and research), p 15.

No such
discussion
in 1978 Ed. Book.

3.8.1 Determinants of working capital

The factors like the nature of business, production policies, manufacturing process, turnover of circulating capital, growth and expansion of business, business cycle fluctuations, terms of purchase and sales, dividend policy, credit policy and production and distribution policy greatly affect the size and amount of working capital.

3.8.2 Cost Consideration of Working Capital

The financial executive has to keep a watch on the balance of working capital and cost differentials of various alternatives to maintain it at a certain level, although some of the costs are beyond his control. The costs, requiring proper balancing on his part, may consists of : (i) the cost of close synchronisation of expenditure and receipts on income account, (ii) the cost of having trade credit, (iii) the cost of extending liberal credit terms to debtors, (iv) the cost of letting or allowing cash discount, (v) the cost of managing cash in off-periods, and (vi) the cost of borrowing money from lender or lending institutions and (vii) the holding cost of inventory beyond the normal period.

3.9 Planing and Control of Working Capital

Working capital planning depends upon its sources, such as (a) net profit from operations, (b) sale of fixed assets, (c) raising long-term debt, (d) additional issue of shares and (e) retirement of current liabilities below book value.

However, provision for depreciation can provide funds only if gross profit is sufficient to cover the depreciation charge.

3.10. Related Definitions

3.10.1 i) Working Capital

For the purpose of this study working capital means a firm's total investment in short-term assets, i.e. in total current assets mainly, inventories, accounts receivables, short-term investment in securities and advances and cash. Or in other words, it refers to the concept of gross working capital, the amount of funds which an organisation is to finance in its day to day operations.

ii) Net Working Capital

Net working capital is the difference between the current assets and current liabilities. Or in other words it is also termed as excess of current assets over current liabilities.

iii) Optimal Working Capital Policy

An optimal working policy is one that sets the mix of current assets and current liabilities and that maximises the rate of return on equity and at the same time ensures the

liquidity and solvency of the business. However, the objectives of working capital management is to manage each of the firms current assets i.e. inventory, short-term, investments and advances, accounts receivables and cash as well as the current liabilities so that an acceptable level of net working capital is maintained and at the sametime it maximises profitability and optimizes solvency of the business.

iv. Permanent working capital

Permanent working captial is that kind of current assets which never leaves the business i.e. like temporary working capital it transform from cash to inventory and invnetory to receivables and back to cash but this type of current assets never dropped to zero. It transpries the view that a minimum cash balance, inventory receivables and advances and investment must be maintained in smooth operation of an organisational activity.

v. Temporary or variable working capital

A temporary working capital is that type of current assets which leaves the business process although it fluctuates from one form to another like permanent working captial.

vi. Turnover of working capital

It is the ratio between the sales to working capital. Low rate indicates poor use of working capital, and too high rate

indicate overtrading. A proper standard ratio should be maintained for better management of working capital. The higher the turnover of working capital, higher would be its profitability indicating a better efficiency in the uses of working capital subject to good margin.

3.10.2 Public Enterprises

Public enterprises in Bangladesh are the agents of the government created for the purpose of discharging government obligations to the public in the industrial & commercial field, service-cum-development and financing and Banking field. Public enterprises should achieve both commercial profitability and social benefit.

For the purpose of this study, public enterprises have been referred to as jute and cotton textile industries under the administrative control of Bangladesh Jute Mills Corporation (BJMC) and the Bangladesh Textile Mills Corporation (BTMC).

3.10.3 Current Assets

Current assets are those assets which can be converted into cash within in accounting year. These are represented mainly by cash balances, accounts receivables, loans and advances, and inventories of raw materials, work-in-progress, finished goods and stores and spares and miscellaneous goods in the jute and cotton textile industries in Bangladesh.

3.10.4 Gross Profit/Loss

It is the difference between the net sales revenue after stock adjustment and the cost of production or cost of goods sold before charging any administration, selling and financial expenses.

3.10.5 Net Profit/Loss

It is the difference between total revenue and total expenses subject to tax.

3.10.6 Operating Profit

It is the profit generated out of the main business operations excluding other income i.e. income from interest on Bank deposits.

3.10.7 Retained Earnings/Profit.

It is the surplus net profit kept in the business operations after meeting the commitment of dividend, provisions for income tax and reserves, etc.

3.10.8 Current Liabilities

Current liabilities are the claims of the outsiders which are expected to mature for payment within an accounting year. These are trade creditors, short-term loans from commercial bank, provision for tax and other short-term dues.

3.10.9 Working Finance/Liquidity Gap

It means current assets minus current liabilities and provisions but excluding short-term bank borrowings. Ramamoorthy calls as " Liquidity Gap " ²⁴.

3.11 SUMMARY

From the different financial models described in this chapter, it appears that the subject can be approached from different angles. An insights into the literature provides us necessary theoretical perspective which will enable us to design a descriptive operational working capital management model/norms applicable to the public enterprises in Bangladesh in general and more specifically to the Jute and Cotton Textile Industries.

24. V.E. Ramamoorthy, Opcit., p 15.

CHAPTER - FOUR

RESEARCH METHODOLOGY

4.1 Introduction

The objective of this chapter is to present a discussion on the methodology of the present research. This chapter deals with the selection of samples, sources and collection of data, methods of data collection. It also explains the designed questionnaire for collecting cross sectional data from the respondents.

Since the present study focuses on both Jute and Cotton textile industries, discussion on methodology on Jute and Cotton textile industries are presented below simultaneously.

4.2 JUTE INDUSTRY

4.2.1 Selection of Samples

There are 11 jute mills in Dhaka Zones under the Bangladesh Jute Mills Corporation. These 11 jute mills comprise our population having total installed and operable looms of 4830 and 4637 respectively (Table 4.1). We categorised these mills into three classes, namely, big, medium and small. Jute mills having the capacity of 250 to 450 looms were classed as small, those having capacity 450-650 looms were treated as medium and those having more than 650 looms were classified as big jute mill. Table 4.1 shows the relative position of these three classes of the mills.

Table 4.1 - Samples of Jute Mills.

class	No. of mills	Percentage of total	No. of looms	Percentage of total
Big	2	18%	1838	38%
Medium	4	36%	1998	41%
Small	5	46%	994	21%
Total	11	100%	4830	100%

Source: Quarterly Jute Goods Statistics, 1987-88 of BJMC.

Out of these three groups, three jute mills were selected having one from each class on random basis for our study. The sample therefore covers one big mill, one medium and one small mills out of 2,4 and 5 big, medium and small mills respectively, under Dhaka Zone of the Bangladesh Jute Mills Corporation. These three mills had a total 1600 looms representing 33 percent of total installed capacity of the Dhaka Zones of BJMC. The sample covering 1/3rd of total installed looms of the jute mills of Dhaka Zone and as such there is reason to believe that the sample is representative in terms of the characteristics studied.

4.2.2 Sources and Collection of Data for Jute Industry

Various sources and techniques of data collection have been used in present study. The factual data for the study were collected from the published annual reports of the selected jute mills. But the study is primarily based on the analysis and:

interpretation as well as restructrisation of data contained in the Annual Audited Balance Sheet and Profit and Loss Accounts of the three jute mills of Dhaka Zone of BJMC. Data also have been collected from the various publications of BJMC head office, such as monthly MIS report and quarterly Jute Goods Statistics and other statements and reports. The data used in the study are mainly two types - Primary data and Secondary data.

Relevant primary data relating to production, sales, inventory policy, pricing policy, receivable policy, liquidity and working capital policy, etc. which were not available in the annual audited Balance Sheets and Profit and Loss accounts were collected from the record files and by interviewing relevant executives through a desigened questionnaire (see annexure-XV). Their contents, validity and objectivity have been duly taken care of. The questionnaire were designed on the various problems of working capital management and more specifically on the different components of Working Capital, such as Inventory, receivables, cash management. The areas constitute the problems studied in the investigation. The respondents were Finance Director, Production Director, General Managers, Chief/Deputy Chief Accountants, Production Managers, Marketing Managers, Purchase Officers, Store Officers and other financial executives of the selected jute mills and the Bangladesh Jute Mills Corporation.

Data relating to the development of industry itself were collected from the First, Second and the Third Five Year Plans published by the Planning Commission, Government of the People's Republic of Bangladesh. Related Data on the position of Indian Jute Mills were collected from jute goods statistics of BJMC and other reports published by the Bureau of Public Enterprises of India.

4.2.3 Sources and Collection of data from Private Sector Jute Mills

For Comperative study, Data have also been collected from the three private sector jute mills categoriwise as mentioned in the para 4.1.1 for the selection of sample of the Dhaka Zone of Bangladesh Jute Mills Corporation(BJMC). One big, one medium and one small jute mills from private sector have been selected on the basis of the availability of data. The factual data for the study were collected from the published Annual Audited Balance Sheet, and Profit & Loss Accounts of the slected jute mills. Relevant primary data relating to Production, sales, inventory policy, pricing policy, liquidity and working capital policy were not available in the annual audited Balance Sheets and Profit & Loss Accounts, were collected by interviewing the relevant executives through a designed questionnaire and through personal interview. Their contents, validity and objectivity have been duly taken care of. The respondents were Managing Director, Finance Directoy, General Managers and Chief Accountants, etc.

4.3 COTTON TEXTILE INDUSTRY

D₂ P. 94-99

4.3.1 Selection of Samples

There are six textile mills in Tongi Zone under the Bangladesh Textile Mills Corporation (BTMC). Out of the six mills three mills are Spinning and three are Composite mills. These six Cotton Textile Mills comprise our population having total installed and operable spindles of 128500 and 83826 respectively (Table 4.2). Out of the six mills three Spinning mills were selected for comparable study. They are Monno Textiles (old), Quaderia Textiles and Satrang Textiles.

Table 4.2 - Samples of Cotton Mills.

Sl. No.	Name of the Textile mills	No. of Installed capacity	%	No. of Spindles operable capacity	%
1. a.	Monno Textiles (old)	15744		10615	
b.	Monno Textile (new)	12500		7191	
2.	Meghna Textiles	15120		11570	
3.	Olympia "	32736		21920	
4.	Satrang "	12000		11476	
5.	Zeenat "	25200		14840	
6.	Quaderia "	15200		12531	
Total N=6 Population		128500	100%	90163	100%
Total N=3 Sample Mills		42944	33.4%	34622	38%

Source : Monthly MIS Report of BTMC, October, 1988.
(Percentage have been calculated by us).

The sample covers 1/3rd (33.4%) of the total installed spindles and 38% of the total operable spindles of all the textile mills under Tongi Zone of BTMC. As such there is reason to believe that the sample is representative in terms of the characteristics studies.

4.3.2 Sources and Collection of Data for Cotton Textile Industry.

Various sources and techniques of data collection have been used in present study. The factual data for the study were collected from the Annual Store Inventory Ledger, of the selected spinning mills of Tongi Zone under BTMC and the published Annual Reports of BTMC and Annual Audited Balance Sheet & Profit & Loss Accounts of the selected textile mills during the period from 1982-1987. Data have also been collected from the monthly Management Information Systems (MIS) Reports of BTMC. The data used in the study are mainly two types - Primary data and Secondary data.

Relevant primary data relating to production, sales, inventory, pricing policy, liquidity policy, etc. which were not available in the Annual Reports, Audit Reports and Inventory ledger, were collected from relevant report files of the respective mills and corporations and by interviewing relevant executive through a designed questionnaire. Their contents, validity and objectively have been duly taken care of.

The Respondents were Chief/Deputy Chief Accountants, sales managers, production managers, purchase and stores officers of the selected textile mills and the Bangladesh Textile Mills Corporation. Data relating to the development of industry itself were collected from the First, Second and Third Five Year Plan published by Planning Commission, Government of the People's Republic of Bangladesh. Related data on the position of Indian textile mills were collected from the published Reports of Bureau of Public Enterprises and Reserve Bank of India and other published Research Reports of different Scholars in this field.

4.3.3 Sources and Collection of data from the private sector cotton textile mills.

For Comparative study data have also been collected from the three private sector spinning mills of similar size which were disinvested to private sector by BTMC after 1982. Since there was only one Cotton textile (Spinning mills in the private sector from Tongi Zone of Dhaka, (Ashraf Textile mills Ltd.), two other spinning mills were selected from other areas.

Secondary data have been collected from the published audited annual reports and other recorded statistics, while the primary data have been collected through predesigned questionnaire and personal interview.

4.3.4 Methods of Data Collection

Data Collection methods were confined to:

- i. Library work;
- ii. Interview Method; and
- iii. Observation Method.

A brief description of the above methods is as follows:-

i) Library work

In this method, different journal, periodicals, books, Government Publication, Annual Reports, MIS reports, Audit reports published by BTMC and the Annual Balance Sheet and Profit and loss a/c of the selected Jute and Textile mills have been very helpful in obtaining relevant data and information.

ii) Interview Method

Interview method has been used through predesigned questionnaire for the purpose of our study. The reason is obviously to enable us to establish personal contact with the personnel to be interviewed. It ensures centpercent responses

from the respondents. This method also offers an opportunity to the researcher to explain the interview schedules wherever they are necessary and thus ensures to obtain correct replies. It also gives the researcher an opportunity to discuss informally with the interviewees.

iii) Observation Method

This method consists of a collection of facts and figures through a purposive venture. The techniques adopted are (a) Free story-Interview and (b) Maintenance of a Diary. Personnel connected directly or indirectly with the management of individual Jute and Textile mills were discussed at their leisure time in ascertaining the real picture and truth for the investigation by means of free story-interview.

Maintenance of a Diary is more useful by recording special information which may be omitted in the reports and interview method.

All the three methods helped us to acquaint ourselves with the various aspects of working capital management in the selected Jute and Textile mills of Bangladesh Jute Mills Corporation, Bangladesh Textile Mills Corporation and all the selected private sector jute and cotton textile mills undertaken for this study.

4.4 Selection of the Industry

Any study on the problems affecting working capital management should cover at least the major industry of the country in order to be representative of the whole economy. But such a study covering the major industries involves an amount of field work and resources which were beyond our means. It was therefore decided to take two major industries for our investigation. Bangladesh have several industries, namely, Jute, Cotton, Steel & Engineering, Sugar & Food, Chemical, Garments leather, etc. Selection of two industries out of these so many was a problem in itself. It was, therefore, adopted the following criteria for the purpose of selecting specific industry for our study.

- i. The industry should be one which is able to give us a picture of good segment of the modern section of the Country's economy.
- ii. The industry should be one in which both the Government and the Public are vitally interested.
- iii. The industry should be one which is export oriented and as a means for earning foreign exchange to meet the country's huge deficit balance of payments.
- iv. The industry should be one which is import-substitute.
- v. The industry should be one using modern technology as well as labour-intensive oriented.

The jute and cotton textile industries of Bangladesh satisfy all these criteria. Jute industry is essentially an export oriented industry earning more than 25% foreign exchange, and it employs

directly more than 200000 two hundred thousands workforce of the country. So, the roles of Bangladesh Jute Mills Corporation (BJMC) and the Bangladesh Textile Mills Corporation (BTMC) and the recently disinvested jute and textile mills play a dominant position in the economy of the country. But unfortunately, the jute and cotton textile industries as a whole are suffering from low productive efficiency and low/negative profitability. Their financial soundness is also questioned by the Government, financier and Banker and even by the general public. Under the circumstances, a through investigation is a must in a financial side especially in the area of Working Capital Management. An attempt has, therefore, been made here to make an indepth study in the area of the Working Capital Management of Jute and Cotton Textile Industries under the Dhaka Zone of BJMC and Tongi Zone of BTMC.

4.5 Questionnaire Explained

The questionnaire in the Annexure-XV contains four sections, Schedule I involves General information about the respondents, information regarding the existing system of the different components of inventories, raw materials, work-in-progress, finished goods and stores and spares management, Modern techniques of inventory control i.e. ABC method, EOQ model, perpetual inventory system, standardisation and variety reduction, are prevalent or not. The methods of inventory

financing, inventory management and blockage of Working Capital, and optimum level of efficiency of inventory receivables and cash management have also been incorporated in the presigned questionnaire appended in schedule-I, II, III, & IV respectively.

4.6 DATA ANALYSIS

The basic approach in analytical and interpretative in nature. This study is limited to time series analysis and cross section analysis of empirical data. In analysing the inventory, modern control of inventory techniques, such as ABC method of selective inventory control for stores inventory, FACT Method (Financial Analysis Consultancy Technique) have also been used which finds out important financial ratios relating to Working Capital management. On the basis of review of literature and objectives of the study, we have used statistical and other quantitative methods of analysis. To test the validity on the efficiency between public and private enterprise ² X tests have also been used in the study.

4.7 Methods of Analysis

The following analysis have been done :

- (i) The ratio trend analysis of the relevant data on working capital during 1981-82 to 86-87, for the individual mills have been made.

- (ii) Inter-firm comparison has been made for the specific ratios on working capital.
- (iii) The average ratios of the big, medium and small mills have been studied separately.
- (iv) The average inventory, receivables, cash, short-term investments and advances have been compared with the Working Capital norms of the Tandon study group and the working capital position of Indian Jute mills.
- (v) The average inventory has been compared with the inventory norms of BJMC.
- (vi) Finally a comparative analysis on Working Capital Management position between selected public and Private sector mills have been made by using FACT METHOD and Chi-square test during 1982-83 to 1986-87.

CHAPTER - FIVE

ANALYSIS AND FINDINGS OF THE STUDY

5.1 INTRODUCTION

The purpose of this chapter is to present a cross sectional and time series data analysis and the result of such analysis and findings. It was possible to obtain both financial and qualitative data of all the six public enterprises in the sample of this research. Out of the six selected public enterprises 3 were jute mills and 3 were cotton textile mills.

This chapter comprises major five sections of which section 5.2 is an analysis and findings of the three selected jute mills on the basis of Audited Balance Sheet and Profit & Loss Account during 1981-82 to 1986-87.

Further insights into working capital management of jute mills are provided in section 5.3 where cross sectional analysis are presented with reference to above attributes.

Section 5.4 presents the analysis on working capital management and findings of selected cotton mills on the basis of time series data as collected from Audited annual Balance Sheet and Profit & Loss account from 1982-83 to 1986-87.

Further insights into the working capital management of the selected cotton textile mills are provided in section 5.5 where cross sectional analysis are presented with reference to working capital management. Since the present study focuses on both the industries, their analysis and findings are presented simultaneously.

5.2 ANALYSIS AND FINDINGS IN JUTE INDUSTRY

Data collected from Primary and Secondary sources by i) Library work, ii) Interview Method and iii) Observation Method have been processed through manually using FACT METHOD, ABC model of inventory analysis, Statistical method, and Chi-square test. This study is mainly limited to the time series analysis and cross section analysis of empirical data compared with specific inventory and receivables and cash norms of Bangladesh Jute & Cotton textile mills Corporations, and the working capital position of Indian jute mills. Data have also been compared with the specific working capital norms prescribed by the Tandon study group of the Reserve Bank of India.

1. Shri Prakash Tandon - Report of the study group to frame guidelines for follow-up of Bank Credit. Reserve Bank of India, Bombay, 1975.

Table 5.1 Percentage of Working Capital to total capital employed in the jute mills during 1981-82 to 1986-87.

Years	JUTE MILLS			Average of three mills
	LBJM	KJM	NBJM	
1981-82	84.90	84.69	78.02	82.54
1982-83	86.37	85.33	79.36	83.69
1983-84	81.25	88.79	85.06	85.03
1984-85	87.12	90.70	91.08	89.63
1985-86	92.45	88.05	92.53	91.01
1986-87	90.97	84.63	98.00	89.53
Average of six yrs.	87.12	87.03	86.50	86.90

Source: Appendix I, II, III (FACT SHEET, Balance Sheet Information).

N.B.: Total assets has been treated as Total capital employed.

Table 5.1 Portrays that the average percentage of the working capital employed is alarmingly as high as 86.90 of all three selected mills during the period under study. The average percentage of working capital to total capital employed was highest in the big mill i.e. 87.12 while the same was 87.03 and 86.50 in the medium and small mills respectively during the period under study. The percentage of working capital to total capital employed in the individual mills had an increasing trend.

from the base year (1981-82) to the current year (1986-87). The above analysis throws sufficient light to the fact that compared to the total capital employed, there has been a higher rate of investment in the Working Capital in almost all the selected units of the BJMC, Dhaka Zone, during the period from 1981-82 to 86-87. This being the situation, a through investigation in the matter of investment and utilisation of Working Capital is considered to be an urgent necessity.

N.B: LBJM = Latif Bawany Jute mills.

KJM = Karim Jute mills.

NBJM= Nabarun Jute mills.

Table 5.2 Turnover of Working Capital in the selected jute mills during 1981-82 to 1986-87

Years	JUTE MILLS			Average of three mills
	LBJM	KJM	NBJM	
1981-82	1.30	1.42	1.21	1.31
1982-83	1.57	1.79	1.17	1.51
1983-84	1.84	1.34	1.02	1.40
1984-85	1.41	1.23	0.81	1.15
1985-86	1.14	1.37	1.07	1.19
1986-87	1.23	1.32	1.05	1.20
Average of six yrs.	1.42	1.41	1.05	1.29

Source: Appendix- I, II, & III Balance Sheet Information of FACT SHEET.

Table 5.2 depicts that the average turnover of Working Capital varies from 1.15 times to 1.51 times in the individual selected units of BJMC, Dhaka Zone. On an average, the industry turnover is 1.29 times as against a turnover of 2.54 times in the Jute mills of India during 1977-88. The average turnover of Working Capital should be 1.81 on the basis of reasonable current assets of the jute mills as per the Working Capital norms of Tandon Study Group of the Reserve Bank of India during the period under study (Annexure-XIII). Compared to above norms, all the selected jute mills of BJMC, Dhaka Zone, had much lower turnover of Working capital. Habibullah¹, in his study of the profitability in the jute industry of Bangladesh, mentioned that higher the turnover of Working Capital, higher would be its profitability, indicating better efficiency in uses. So the declined turnover of working capital reveals that the jute mills failed to have efficiency in the uses of working capital.

1. Md. Habibullah, Ibid p5

Table 5.3 Percentage of inventory to Gross working capital in the selected mills during 1981-82 to 1986-87.

Years	JUTE MILLS			Average of three mills
	LBJM	KJM	NBJM	
1981-82	65.94	60.10	59.50	61.83
1982-83	67.12	59.54	68.20	64.95
1983-84	70.10	57.95	59.77	62.61
1984-85	75.51	75.18	68.10	72.93
1985-86	75.63	66.45	65.78	69.29
1986-87	69.88	55.18	55.82	60.29
Average of six yrs.	70.69	62.40	62.86	65.32

Source: Annexure- I II & III Balance Sheet Information of FACT Method.

A glance at Table 5.3 indicates that the inventories occupy a major proportion of the Working Capital that have been invested in the different selected units of the BJMC during the period of study. A look at the table further shows that among the selected units, Latif Dawany Jute mills had the highest percentage of inventories to gross working capital (70.69), while Karim Jute mills had the lowest percentage of the same (62.40). The average percentage of inventories of the Nabarun Jute mills was 62.86. However, the percentage of inventories to Working Capital of all the mills was 65.32. Thus we find that in all the cases the percentages of inventories to Working Capital are very high and naturally it could be inferred that, because of the high percentage of investment in inventories, a considerable fund has been blocked up in inventories which might affected the long-term profitability of the selected jute mills under study.

5.4 Percentage of Accounts Receivables
(Trade debtors) to Gross Working
Capital during 1981-82 to 86-87.

Years	JUTE MILLS			Average of three mills
	LBJM	KJM	NBJM	
1981-82	12.84	19.73	22.99	18.52
1982-83	12.48	16.83	16.25	15.19
1983-84	12.78	11.48	22.09	15.45
1984-85	9.77	8.67	16.48	11.64
1985-86	13.10	17.64	17.25	15.99
1986-87	11.48	14.94	11.55	12.66
Average of six yrs.	12.0	14.88	17.76	14.91 /

Source: Annexure-I II & III Balance Sheet Information
of FACT METHOD.

Table 5.4 represent the percentage relationship between the receivable and the Working Capital. The average percentage of receivables to Working Capital was 14.91, while the average percentage of receivables to Working Capital was the highest in the Nabarun Jute Mills (17.76) while the same was the lowest in the Latif Bawany Jute mills (12.08). According to some experts and in the opinion of mills management, trade debtors should be a maximum of 10 percent of total current assets. Compared to that, trade debtors was excess by about 5 percent in the selected mills during the study period. Normally the Letter of Credit (LC) period is 30 days. But the average collection period was found 35, 41 and 64 days in the selected jute mills during the period of study. However, receivables management was found inefficient in the jute mills (see annexure- I, II & III).

Table 5.5 Percentage of total receivables to Gross Working Capital of the selected mills during 1981-82 to 86-87

Years	JUTE MILLS			Average of three mills
	LBJM	KJM	NBJM	
1981-82	32.90	39.32	36.88	36.37
1982-83	31.61	36.99	29.30	32.63
1983-84	30.31	25.17	37.98	31.15
1984-85	23.51	23.37	28.50	25.13
1985-86	24.09	30.03	33.13	29.08
1986-87	29.37	39.73	40.54	36.55
Average of six yrs.	28.63	32.26	34.39	31.82 /

Source: Annexure-I, II & III Balance Sheet Information of FACT Method.

Table 5.5 indicate that indusutry average percentage of total rceivables to Working Capital was 31.82. The average percentages of the same of the LBJM, KJM and NBJM were 28.63, 32.26 and 34.39 respectively. The average percentage of receivables to total working capital was 20.24 in the Indian Jute Mills during 1977-^{1978?} 78. This indicates that there was excess receivables in the selected jute mills during the period under study.

Out of the total receivables of about 32 percent, 17 percent was blocked in advances. Most of the advances were found in the form salary and wages, flood and cyclone relief, house building etc. consituted major portion. According to management, ninety percent of advances were arrears and long overdue. This overdue advances to workers in largely due to inefficiency of management, and partly due to leeway given to workers unions by

the Government for pressure of union and social leaders, some of them have become political leaders. Sometimes, management are helpless to realise advances. The indiscipline in case of strong action, means gheraow of the senior enterprise executives.

Table 5.6 Percentage of Cash to total Gross working capital of the selected mills during the period 1981-82 to 86-87.

Years	JUTE MILLS			Average of three mills
	LBJM	KJM	NBJM	
1981-82	1.16	0.59	3.62	1.79
1982-83	1.25	3.45	2.49	2.40
1983-84	0.77	1.18	2.24	1.40
1984-85	0.66	0.36	3.00	1.34
1985-86	0.83	3.52	1.09	1.81
1986-87	0.76	5.09	3.63	3.16
Average of six yrs.	0.91	2.37	2.68	1.99

Source: Annexure-I, II & III Balance Sheet Information of FACT Method.

Table 5.6 depicts that the average percentage of cash to Working Capital was only 1.99 of the selected units under study. The average percentages of Cash of LBJM, KJM and NBJM were 0.91, 2.37 and 2.68 respectively during 1981-82 to 1986-87. The percentage of Cash to Working Capital was 4.48 in case of Indian Jute Mills during 1977-78. According to some Authorities like Professor Nigam of India cash in a well financed Company should not be less than 5 to 10 percent of Working Capital. Compared to this the percentage of cash to Working Capital was very much low in the selected units of jute mills.

5.7 Inventory in terms of months Cost of Production in the Jute mills during 1981-82 to 1986-87.

Years	JUITE MILLS			Average of three mills
	LBJM	KJM	NBJM	
1981-82	6.61	6.58	8.71	7.30
1982-83	6.25	5.51	10.89	7.56
1983-84	3.72	8.48	8.72	6.97
1984-85	8.48	8.41	21.83	12.91
1985-86	8.59	7.55	10.76	8.97
1986-87	6.92	4.81	6.09	5.94
Average of six yrs.	6.76	6.89	11.17	8.27

Source: Annexure-I, II & III Balance Sheet Information of FACT Method.

Table 5.7 shows that the average inventory in terms of month's cost of production was 8.27, which seems to be very high during the period of study. The average inventory in terms of the months cost of production was highest in the NBJM 11.27 while it is the in LBJM 6.76. While inventory in terms of months cost of production should be 2.74 according to the inventory norms of the Tandon Study Group (Appendix XIII) of the Reserve Bank of India. Inventory in terms of months cost of Production, was 3.18 in the Indian Jute mills during 1977-78.

However, average inventory in terms of the months Cost of Production is increasing alarmingly in all the selected units during the period under study i.e. from 1981-82 to 1986-87.

Table 5.8 Inventory turnover ratio in the selected Jute mills during 1981-82 to 86-87

Years	JUTE MILLS			Average of three mills
	LBJM	KJM	NBJM	
1981-81	1.82	1.82	1.37	1.67
1982-83	1.92	2.17	4.58	2.89
1983-84	3.22	1.41	1.37	2.00
1984-85	1.41	1.43	0.54	1.13
1985-86	1.40	1.59	0.52	1.17
1986-87	1.73	2.49	1.97	2.06
Average of six yrs.	1.91	1.82	1.73	1.82

Source: Annexure I, II & III Balance Sheet Information of FACT Method.

Table 5.8 indicates that the total average inventory turnover ratio had a decreasing trend. The average inventory turnover ratio was 1.82 for all the selected jute mills under the period of study, while the average inventory turnover ratio of the individual mills, namely LBJM, KJM, NBJM were 1.91, 1.82 and 1.73 respectively. The normal inventory turnover ratio should be 4.29 during the period under study as determined by the inventory norms of the Tandon Study Group of the Reserve Bank of India(Annexure- XIII). However, the average inventory turnover ratio was very low compared to the norms of the Tandon Study Group.

Table 5.9 Current Ratio in the Selected jute mills during 1981-82 to 1986-87

Years	JUTE MILLS			Average of three mills
	LBJM	KJM	NBJM	
1981-82	1.40	0.73	1.75	1.29
1982-83	1.62	0.98	2.01	1.54
1983-84	2.00	1.10	1.61	1.57
1984-85	1.34	0.93	1.23	1.17
1985-86	0.95	0.76	1.00	0.90
1986-87	0.88	0.68	0.99	0.85
Average of six yrs.	1.37	0.86	1.43	1.22

Source: Annexure-I, II & III Summary Sheet of FACT Method

Table 5.9 depicts the industry average of current ratio which was only 1:22:1 for the selected units for the period under study. The average current ratio was 1.37, 0.86 and 1.43 in the LBJM (big mill), KJM (medium mill) and NBJM (small mill) respectively. Traditionally 2:1 Current ratio is taken as satisfactory standard for the liquidity and solvency of the firm. The same idea was endorsed by expert authorities like Myer, Pandey, Kuchal, Ramawoorthy, Mishra and others.³ However, the average current ratio for all the selected jute mills was less than 2:1 for all the periods under study (1981-82 to 1986-87).

3. Ibid.

Table 5.10 Liquid Ratio in the Selected Jute Mills during 1981-82 to 1986-87.

Years	JUTE MILLS			Average of three mills
	LBJM	KJM	NBJM	
1981-82	0.47	0.29	0.71	0.49
1982-83	0.53	0.40	0.64	0.52
1983-84	0.62	0.29	0.65	0.52
1984-85	0.32	0.22	0.38	0.31
1985-86	0.24	0.25	0.34	0.28
1986-87	0.27	0.31	0.43	0.34
Average of six yrs.	0.40	0.29	0.53	0.41

Source: Annexure-I, II & III SUMMARY SHEET OF FACT METHOD

Table 5.10 indicates that the average liquid ratio of all the selected jute mills was 0.41 during 1981-82 to 1986-87, which is much below the standard ratio of 1:1. The highest ratio found 0.53 in NBJM (small mills), while it was the lowest 0.29 in KJM (medium mills). The average liquid ratio was 0.40 in LBJM (big mills). The average liquid ratio in the jute mill would be 0.84:1 according to the recommendation of the Tandon Study group of the Reserve Bank of India. Compared to this, the average liquidity ratio of the selected jute mills was highly adverse during the study period.

Table 5.11 Cost Breakdown ratio of the selected Jute Mills during 1982-83 to 1986-87.

LATIF BAWANY JUTE MILLS (LBJM)						
Years	% Mat. cost	% Lab. cost	% Prod. overhead	% Admn. Expn.	% Selling Expn.	Total ?
1982-83	39.34	27.80	14.80	1.63	2.71	21
1983-84	78.92	30.98	12.92	1.55	2.38	
1984-85	35.43	29.15	11.27	1.15	1.76	
1985-86	39.00	36.00	6.20	2.26	1.75	
1986-87	39.58	39.66	15.36	1.39	1.79	
Average of 5 yrs.	46.45	32.78	12.11	1.87	1.87	

KARIM JUTE MILLS (KJM)						
Years	% Mat. cost	% Lab. cost	% Prod. overhead	% Admn. Expn.	% Selling Expn.	Total ?
1982-83	34.22	25.38	15.46	1.80	4.21	21
1983-84	37.74	29.21	11.84	1.69	3.25	
1984-85	54.98	26.11	8.91	2.52	1.97	
1985-86	35.95	32.37	10.57	3.28	2.35	
1986-87	39.35	45.88	14.78	3.22	3.76	
Average of 5 yrs.	39.64	31.78	12.31	2.50	3.10	

NABARUN JUTE MILLS (NEJM)						
Years	% Mat. cost	% Lab. cost	% Prod. overhead	% Admn. Expn.	% Selling Expn.	Total
1982-83	37.81	37.16	8.13	7.07	2.30	
1983-84	38.66	36.69	26.00	NA	2.78	
1984-85	34.42	28.14	23.43	NA	1.74	
1985-86	36.86	32.57	11.24	2.32	1.98	
1986-87	38.30	38.75	14.98	NA	2.31	
Average of 5 yrs	37.21	34.66	16.75	1.87	2.22	

The table shows the percentage of cost of material, labour, production overhead, administrative and selling expenses in relation to sales in the selected mills during the period of study.

The findings show that cost of material was highest in big mill, while the cost of labour and production overhead were highest in small Nabarun jute mills. The average cost of sales of all the mills was about 93 percent of sales. These leaves a very little margin of profit in the selected jute mills.

5.3 The following analysis and findings have been presented on the pre-designed questionnaire schedule-I to IV as shown in annexure X.V. The answers of respondents of the selected public sector jute mills of Dhaka Zone and the Bangladesh Jute Mills Corporation are presented in the following tables. Twelve executives were interviewed who were directly related to working capital management. Out of the 12 executives, 3 of them were Head of enterprises, and 9 were head of accounts. The result of the analysis and the findings of the study on the basis of primary data are described below:

Table 5.12 Distribution of Respondent according to Age

Age	Frequency
30-40 yrs	3
40-50 "	8
50-60 "	1
60 yrs. over	None
Total	12

It appears from the table 5.13 that out of the 12 executives in the selected jute mills and BJMC a maximum of 8 belonged to the age group of 40-50 yrs., 3 belonged to 30-40 years and only 1 was in the age group of 50-60 years. Most of the respondents were chief executive and chief accountants of the selected jute mills and the Controller of Accounts and finance of the Bangladesh Jute Mills Corporation.

The findings show that most of the respondents have long experience in their profession and are middle aged.

Table 5.13 Distribution of respondents on the Lack of Working Capital Policy.

Opinion of Respondents	Total frequency	Percentage
1. Agree	9	75.00
2. Strongly agree	2	17.00
3. Disagree	1	8.00
4. Strongly disagree	None	-
5. Undecided	None	-
Total	12	100.00

In reply to a question whether lack of policy is affecting Working Capital management problem in the selected Public sector jute mills, 75 percent respondents agreed to the question, 17 percent strongly agreed, while only 8 percent disagreed.

The findings confirm that lack of proper policy is affecting working capital problem in the selected jute mills during the period of study.

Table 5.14 Distribution of Respondents on the lack of proper inventory management.

Opinion of Respondents	Total frequency	Percentage
1. Agree	9	75.00
2. Strongly agree	1	8.00
3. Disagree	2	17.00
4. Strongly disagree	None	-
5. Undecided	None	-

In reply to a question, whether lack of proper inventory management was responsible for working capital management, 75 percent respondents agreed, 8 percent strongly agreed and the rest 17 percent disagreed to the question.

The findings show that about 83 percent respondents confirmed that lack of proper inventory management is responsible for the lack of proper working capital management. This findings necessitates a proper policy guidelines or model for better inventory management in the selected public sector jute mills in particular and jute industry in general.

Table 5.15 Showing the distribution of respondents on the question of lack of proper Accounts Receivable Management.

Opinion of Respondent	Total frequency	Percentage
1. Agree	8	66.66
2. Strongly agree	2	16.66
3. Disagree	2	16.68
4. Strongly disagree	None	None
5. Undecided	None	None
Total	12	100.00

66.66 and 16.66 percent respondents agreed and strongly agreed respectively, that lack of proper accounts receivables management aggravated the Working Capital Problem in the selected jute mills. While about 17 percent respondents disagreed to the question.

However, the findings confirm that majority of the respondent mentioned that lack of proper receivables management was responsible for proper working capital management in the selected public sector jute mills during the period of study.

Table 5.16 Showing the distribution of respondents on the lack of proper cash management.

Opinion of Respondents	Total frequency	Percentage
1. Agree	7	58.33
2. Strongly Agree	1	8.33
3. Disagree	4	33.34
4. Strongly disagree	None	None
5. Undecided	None	None
Total	12	100.00

In reply to a question, whether lack of proper cash management was responsible for proper working capital management, 58.33 and 8.33 percent respondents agreed and strongly agreed respectively to the proposal, while 33.34 percent disagreed to the same in the selected jute mills.

The findings show that majority of the respondents mentioned that lack of proper cash policy also affected the working capital management problem in the selected mills during the study period. Comparison of actual cash inflows and outflows have shown that mills management prepare only yearly cash budget for submission to Corporations and Ministry of Finance. This is merely an academic exercise having no relationship with reality. A good management is one which prepare monthly rather weekly cash budget which enables them, when to take loan and for which period

and to ensure surplus cash if any to be kept in STD account which yields some gain. Examination of records has shown that monthly cash budget is not prepared at all and the necessity of weekly cash budget is not felt at all.

Table 5.17 Showing the Problems owed to poor Cashflow.

Opinion of Respondents	Total Frequency	Percentage
1. Agree	6	50.00
2. Strongly agree	3	25.00
3. Disagree	1	8.00
4. Strongly disagree	None	None
5. Undecided	2	17.00
Total	12	100

On the question of poor cashflow generation in the selected mills, 50 percent respondents agreed and 25 percent strongly agreed that the mills had been suffering from poor cashflow generation which aggravated the working capital management problem. 8 percent respondents disagreed to it, while 17 percent were undecided.

The findings show that 75 percent respondents mentioned that poor cashflow generation affected the working capital problem in the selected jute mills.

Table 5.18 Showing the distribution of respondents on the much dependence on cash credit of commercial bank.

Opinion of Respondents	Total frequency	Percentage
1. Agree	6	50.00
2. Strongly agree	5	41.66
3. Disagree	1	8.34
4. Strongly disagree	None	None
5. Undecided	None	None
Total	12	100.00

It appears from the table that, 50 percent respondents agreed and 41.66 respondents strongly agreed that they were too much dependent on the cash credit of Commercial bank as a source of Working Capital. 8.34 percent respondents only disagreed with the above view.

The findings confirm the hypothesis that most of the selected mills depended on cash credit as major source or in some cases only source of Working Capital at a very high cost of interest which impaired the profitability and liquidity and aggravating the working capital problem. The Controller of Accounts, BJMC mentioned in course of an interview that they paid Tk.24887.79 lakh as an interest on cash credit of commercial bank.

Table 5.19 Shows the debt equity position of BJMC during 1983-87.

Year	Taka in lakh		
	Total debt	Total equity	Debt equity ratio
1982-83	11759.41	7438.23	61:39
1983-84	11075.43	7026.93	61:39
1984-85	16295.99	(3895.21)	Negative
1985-86	15122.47	(12613.32)	Negative
1986-87	16057.24	(29649.17)	Negative

Source: Annual Report of BJMC

N.B. The picture shows all the jute mills under BJMC.

The findings show that most of the selected mills and the BJMC as a whole have no equity. Due to 100 percent debt capital and the negative debt equity ratio aggravated Working Capital problem to public sector jute industry.

Table 5.20 Showing distribution of respondents on the question of political pressure and environmental constraints.

Opinion of Respondents	Total frequency	Percentage
1. Agree	7	58.33
2. Strongly agree	3	25.00
3. Disagree	1	8.33
4. Strongly disagree	-	-
5. Undecided	1	8.34
Total	12	100.00

In a reply to a question 58.33 percent respondents agreed and 25 percent strongly agreed that too much political pressure and environmental constraints were responsible for proper working capital management in the selected public sector jute mills under study. In reply to the nature of such political pressure most of respondents mentioned about the pressure of the labour unions for unreasonable demands and interference by social and unions leaders, some of them have become political leaders.

The findings confirms the view that political pressure and environmental constraints also affected the working capital problem in the selected jute mills during study period.

Table 5.21 Showing the distribution of respondents on the lack of proper cost accounting and cost control systems.

Opinion of respondents	Total frequency	Percentage
1. Agree	6	50.00
2. Strongly agree	1	8.33
3. Disagree	4	33.34
4. Strongly disagree	1	8.33
5. Undecided	-	-
Total	12	100.00

On the question of lack of proper cost accounting and cost control system, 50 percent respondents agreed and 8.33 percent strongly agreed that lack of proper cost control and cost reduction system were also responsible for poor working capital management in the selected jute mills.

The findings reveal that lack of adequate cost accounting and cost control system, material, labour and overhead cost had an increasing trend in all the selected jute mills during 1981 to 1987.

Table 5.22 Distribution of Respondents on the lack of demand and growing competition in the international market which affects working capital management.

Opinion of Respondents	Frequency	Percentage
1. Agree	10	83.33
2. Strongly agree	2	16.66
3. Disagree	-	-
4. Strongly disagree	-	-
5. Undecided	-	-
Total	12	100.00

It appears from the table that 83.33 percent respondents agreed and 16.66 percent strongly agreed to the view that lack of demand of jute good and growing competition in the international market are mainly responsible for proper working capital management in the selected jute mills and in the jute industry of Bangladesh. None of the respondent disagreed to the above view. Mr. Khan, Controller of Accounts of BJMC mentioned to the researcher in course of an interview that fall in the demand and price of jute goods in the international market and the increasing cost of production were among other things responsible for replenishment of their working capital deficiency.

The findings show that the selected jute mills and all the mills under the Bangladesh Jute Mills Corporation have been suffering from actue working capital problem due to lack of demand and growing competition of jute goods in the international market.

Table 5.23 Distribution of Respondents on the following modern techniques of Inventory Management.

Opinion of respondents	Frequency	Percentage
1. Minimum level	4	19.08
2. Maximum level	2	9.52
3. Re-order level	5	23.80
4. Economic order quantity	1	4.76
5. Perpectual inventory system	2	9.52
6. ABC analysis	3	14.28
7. Inventory Audit	3	14.28
8. Standardisation and variety	1	4.76
9. Others	-	-
Total	21	100.00

On the question of following modern techniques of inventory management in the selected jute mills, 19.08 respondents mentioned that they follow minimum level, 9.52 percent follow maximum level, 23.80 percent follow re-order level, 4.76 percent follow economic order quantity. 9.52 percent follow perpetual inventory system, 14.28 percent follow ABC analysis, 14.28 percent follow inventory audit and only 4.76 follow stanardisation and variety reduction techniques of inventory management.

The findings show that majority of the respondents mentioned, minimum level, re-order level, ABC method and Inventory audit are followed as techniques of inventory management.

Table 5.24 Showing the distribution of respondents on suggested norms for holding different groups of inventory for maximum period (for jute mills)

Maximum period	Raw Material		Work-in-proces		Finsished goods		Stores & Spares				
	Freq.	%	Freq.	%	Freq.	%	Local		Impor- ted		
0-10 days	-	-	6	60.00	-	-	-	-	-	-	-
10-15 "	2	20.00	4	-	-	-	-	-	-	-	-
15- 1 month	-	-	-	-	6	-	-	-	-	-	-
1- 2 months	3	30.00	-	40.00	4	60	9	90.00	-	-	-
2- 3 "	4	40.00	-	-	-	40	1	10.00	3	-	-
3-4 "	-	-	-	-	-	-	-	-	-	-	-
4- 5 "	-	-	-	-	-	-	-	-	-	-	-
5- 6 "	1	10.00	-	-	-	-	-	-	7	-	-
Over 6 "	-	-	-	-	-	-	-	-	-	-	-
Total	10	100	10	100	10	100	10	100	10	100	

The table shows that majority (40 percent) respondents suggested to hold raw material inventory (raw jute) for a maximum period of 3 months. Sixty percent respondents suggested maximum 10 days for holding work-in-process inventory, while majority (60 percent) of the respondents suggested maximum one month for holding finished goods inventory. In case of locally available stores items, 90 percent respondents interviewed in the survey suggested a maximum period of six months for holding imported stores and spares and maximum two months period for local stores and spares.

Table 5.25 Distribution of respondents on the question of accounts receivables policy.

Opinion of respondents	Frequency	Percentage
1. Affirmative	9	75.00
2. Negative	3	25.00
Total	12	100.00

On the question of accounts receivables policy 75 percent respondents replied in the affirmative, while 25 percent of them replied that they had no accounts receivables policy.

The findings show that majority of the respondents mentioned that they had accounts receivables policy. But practically, we found no such policy truly exist in the selected jute mills.

Table 5.26 Distribution of respondents on the question of appropriate norms for collection of receivables on export sales.

Maximum period	Frequency	Percentage
0 - 1 month	6	60.00
1 - 2 months	2	20.00
2 - 3 months	2	20.00
3 - 4 months	-	-
4 - 5 months	-	-
5 - 6 months	-	-
Total :	10	100.00

It appears from the table that 60 percent respondents suggested a maximum one month should be the period for collection of receivables on export sales, 20 percent respondents suggested maximum 2 months and the rest 20 percent suggested maximum three months for the collection of receivables on export sales. It may be mentioned here that about hundred percent sales of the selected jute mills are export sales.

The findings show that a majority of the respondents suggested ideal norm for collection of receivables in export sales for a maximum period of 1 month.

Table 5.27 Distribution of respondents on the question of preparation of cash budget.

Opinion of Respondents	Frequency	Percentage
1. Affirmative	8	100.00
2. Negative	-	-
Total	8	100.00

On the question of preparation of cash budgets cent percent respondents replied in the affirmative. But they mentioned that they prepare cash budget on yearly basis. On the questions of monthly cash budget, only 29 percent respondents replied in the affirmative, while 71 percent replied in the negative.

The findings show that most of the selected public sector jute mills prepare cash budget on yearly basis, but very few of them prepare it on monthly basis. But monthly cash budget is very important for effective controlling of cash.

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5.4 AN ANALYSIS AND FINDING IN COTTON TEXTILE INDUSTRY

Data Collected from primary and secondary sources have been processed through manually, using statistical method, such as, statistical averages, ABC Method, and through financial ratio analysis. This study is mainly limited to the time series analysis and cross section analysis of empirical data, compared with specific inventory norms of Bangladesh Textile Mills Corporation and the inventory norms of the Cotton textile industry prescribed by the Tandon Study Group of the Reserve Bank of India.

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4. Reserve Bank of India: Report of the study group to frame guidelines for follow-up Bank Credit, Bombay, 1975, p20.

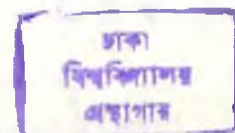


Table 5.28 Percentage of Working Capital to total capital employed in the selected public sector cotton textile mills during 1982-83 to 1986-87

Years	Monnon (old)	Quaderia	Satrang	Average of three mills
1982-83	85.16	90.58	78.89	84.87
1983-84	85.94	92.40	80.19	86.17
1984-85	88.55	91.97	85.88	88.80
1985-86	85.51	88.17	81.11	84.93
1986-87	81.40	87.21	74.02	80.87
Average of 5 yrs.	88.15	89.67	81.36	85.39

Source: Annexure-IV to VI

N.B: 1. Total current assets is considered as working capital in this study.

2. Total assets has been treated as total capital employed.

The above table shows that average investment in working capital was as high as 85.39 percent in the selected public sector cotton textile mills during the study period. The study also reveals that there is wide variation from 74.02 to 92.40 percent in the selected mills.

The findings show that average investment in working capital was very high compared to standard in all the selected cotton mills. Thus, the findings show that the working capital requirement by the enterprise is not calculated or determined in an objective manner.

Table 5.29 Turnover of Working Capital in the selected public sector cotton textile mills during 1982-83 to 1986-87

Years	Monno(old)	Quaderia	Satrang	Aaverage of three mills
1982-83	1.97	1.60	1.95	1.84
1983-84	1.48	1.20	2.14	1.57
1984-85	1.01	0.84	1.43	1.09
1985-86	1.11	1.37	1.75	1.41
1986-87	1.46	1.29	1.93	1.56
Average of 5 yrs.	1.40	1.26	1.81	1.48

It appears from the above table that the average turnover of working capital varies from 1.09 times to 1.84 in the selected cotton textile mills during the study period. The average turnover of working capital was 1.40, 1.20 and 1.81 in Monnon(old), Quaderia and Satrang textiles respectively, while industry average was 1.48 during the study period. The turnover of working capital was 2.05 times for both years in 1979-80 and 1980-81 in the 48 Indian Cotton textile mills. Compared to Indian cotton textile mills none of the selected textile mills fulfill working capital turnover standard. Thus the findings show that there is inefficiency in the proper utilisation of working capital in the selected public sector cotton textile mills in Bangladesh.

Table 5.30 Percentage of inventory to Gross working capital in the selected textile mills during 1982-83 to 1986-87

Years	Monno(old)	Quaderia	Satrang	Average of three mills
1982-83	39.94	37.64	41.97	39.85
1983-84	59.90	47.25	54.65	53.93
1984-85	63.32	62.25	50.81	58.79
1985-86	49.20	42.41	39.40	40.98
1986-87	29.24	37.11	56.60	40.98
Average of five years	48.32	45.33	48.64	47.44

Source : Annexure-IV V & VI

N.B: Calculation have been made by us.

A glance at the table 5.30 indicates that the inventories occupy a major proportion of the working capital that have been invested in the different selected units of BTMC during the period of study.

However, the average percentage of inventories to working capital of all the mills was 47.44. Thus, we find that in all the cases the percentage of inventories to working capital was very high and naturally it could be inferred that, because of the high percentage of investment in inventories, a considerable fund has been blocked up in inventories, which affected the net working Capital position of all the mills during period under study.

Table 5.32 Percentage of Stores & Spares inventory to aggregate inventory in the selected textile mills during 1982-83 to 1986-87

Years	Monno(old)	Quaderia	Satrang	Average of three mills
1982-83	49.44	60.30	54.03	54.59
1983-84	21.55	62.15	33.70	39.12
1984-85	63.47	55.41	26.16	48.35
1985-86	54.40	67.83	49.74	57.32
1986-87	63.74	47.34	59.06	56.71
Average of 5 yrs.	50.52	58.60	44.53	51.21

Source : Annexure- IV, V & VI

N.B: Calculation have been made by us

Table 5.32 reveals that the average percentage of stores & spares to total inventory was highest 58.60 in Quaderia Textile and lowest 44.33 in Satrang textiles. The industry average was 51.21 of all the selected textiles during the period under study. The average percentage of stores & spares was 50.52 in the Monno(old) textile. However, there was excessive stock of stores and spares in all the selected cotton textile mills of BTMC under study. In cotton textile mills more than eighty percent of stores and spares are imported, compared to twenty percent of jute mills. Procurement of stores is more complicated in cotton mills. Purchase is done through tender, but purchase procedure does not conform to five P's of sound procurement policy. An industrial enterprise should purchase right quantity, at right quality, at right time, at the right price and from the right source. On visit to godown, it was found that items which would be used with minor repairs have been dumped and new items are purchased. This represents attempts to leak out working capital.

Table 5.33

----- Category of Items -----	
A	
B	
C	

Total	13.7

From the T
spares inve
covers an am
lakh consti
percentages
textile mil
percentages

		<u>Taka in lakh</u>
1.	Monno(old) Textile mills @ 14% interest on Tk.91.73	12.84
2.	Quaderia Textile @ 14% interest on Tk. 22.33	3.13
3.	Satrang textile @ 14% interest on Tk.36.47	5.10
Total:		<u>Tk. 21.07 lakhs</u>

Table 5.35 Percentage of total receivables to working capital (current assets) in the selected public sector cotton textile mills during 1982-83 to 1986-87

Years	Monno(old)	Quaderia	Satrang	Average of three mills
1982-83	48.34	48.41	23.86	40.20
1983-84	32.43	35.22	28.12	31.92
1984-85	36.57	29.72	20.96	29.08
1985-86	50.57	43.29	31.04	41.63
1986-87	70.76	48.29	36.22	50.03
Average of 5 yrs.	47.73	40.98	28.04	38.57

It is evident from the table that average percentage of receivables varies from 29.08 to 50.03 percent in the selected mills. The industry average of all the years is 38.57. Another notable feature of the table is that percentage in certain mills vary widely from year to year. In Monno(old) textile the average

percentage of receivables to working capital varies from 29.72 in 1984-85 to 70.76 in 1986-87.

The findings show that high percentage of fund is blocked in receivables in the selected mills during the study period. The findings suggest that an innovative norm or model is an urgent need for efficient management of receivables in public sector cotton textile industry.

Table 5.36 Percentage of Accounts Receivables(Trade debtors) to working capital(current assets) in the selected public sector cotton textile mills during 1982-83 to 1986-87.

Years	Monno(old)	Quaderia	Satrang	Average of three mills
1982-83	23.08	4.05	4.46	10.53
1983-84	14.28	3.13	8.31	7.57
1984-85	25.13	2.57	7.32	11.67
1985-86	23.87	3.95	14.57	14.13
1986-87	36.80	12.21	16.52	21.84
Average of 5 yrs.	24.63	5.18	10.52	13.14

The above table depicts the percentage of trade debtors to working capital in the selected mills during 1982-83 to 1986-87. It appears from the table that average percentage of trade debtors to working capital varies from 7.57 to 21.89 percent in the selected mills during the period of study. The industry average of all the years is 13.14. The average percentage of trade debtors to working capital was found very high as 36.80 in 1986-87 in Monno Textiles, while the same was lowest in the Quaderia textiles mills (5.18).

Table 5.37 Percentage of Cash to Working Capital (current assets) in the selected public sector cotton textile mills during 1982-83 to 1986-87.

Years	Monno(old)	Quaderia	Satrang	Average of three mills
1982-83	11.11	14.71	34.11	19.97
1983-84	7.50	17.61	17.00	14.03
1984-85	0.19	7.96	28.21	12.12
1985-86	0.09	14.14	29.55	14.59
1986-87	0.02	14.52	6.60	7.04
Average of 5 yrs.	3.78	13.78	23.09	11.35

The above table reveals the percentage of cash to total working capital in the selected mills during 1982-83 to 1986-87. It appears from the table that average percentage of cash to working capital varies from 7.04 to 19.97 percent in the selected cotton mills. The percentage was found very low in Monno(old) and relatively very high in Satrang textiles.

The findings show that none of the selected units under BTMC maintains an uniform cash balance. Absence of an innovative norm or model is responsible for inefficient management of cash in the selected public sector cotton textile mills.

Table 5.38 Percentage of net cash flows to current liabilities in the selected public sector cotton textile mills during 1982-83 to 1986-87

Years	Monno(old)	Quaderia	Satrang	Average of three mills
1982-83	20.78	91.28)	(19.57)	(0.02)
1983-84	22.77	1.59	(61.35)	(12.33)
1984-85	8.17	(3.18)	(49.68)	(14.22)
1985-86	1.96	(15.57)	(53.06)	(22.22)
1986-87	21.51	(15.57)	(82.90)	(25.65)
Average of 5 yrs.	15.03	(7.12)	(53.31)	(14.88)

The above table reveals the percentage of net cashflows to current liabilities in the selected cotton textile mills during 1982-83 to 1986-87. The average percentage of cash flow of all the years was (14.88). The average percentage of net cash flows to current liabilities was 15.03, (7.12) and (53.31) in Monno(old), Quaderia and Satrang textile mills respectively.

The findings show that except Monno(old) the majority of the selected mills have been suffering from shortage of net cashflows and thus the solvency of cotton textile mills is at stake, while actual solvency of the selected mills is mainly based on percentage of net cashflow to current liabilities.

Table 5.39

Years	Mat cost
1982-83	63.8
1983-84	62.4
1984-85	74.4
1985-86	55.4
1986-87	44.3
Average of 5 yrs.	60.3

The above table shows the material cost in the selected administrative period. The material cost was 61.00, 11.00 percentage of

The material cost in selected period over expenditure and public

Table 5.41 Showing distribution of respondents on the poor cashflow generation.

Opinion of respondents	Frequency	Percentage
1. Agree	8	50.00
2. Strongly agree	3	18.75
3. Disagree	4	25.00
4. Strongly disagree	-	-
5. Undecided	1	6.25
Total	16	100.00

On the question of poor cash flow generation in the selected mills 50 percent respondents agreed and 18.75 strongly agreed that the mills had been suffering from poor cashflow generation. But 25 percent respondents disagreed and 6.25 were undecided to the above view.

The findings show that majority respondents mentioned that poor working capital position was due to poor cash flow generation of the selected cotton mills during study period.

Table 5.42 Distribution of respondents on the inadequate cost accounting and cost control system.

Opinion of respondents	Frequency	Percentage
1. Agree	6	37.50
2. Strongly agree	6	37.50
3. Disagree	4	25.00
4. Strongly disagree	-	-
5. Undecided	-	-
Total	16	100.00

On the question of lack of adequate cost accounting and cost control system, 37.50 percent respondents agreed and 37.50 percent strongly agreed that lack of adequate cost accounting and cost control system were responsible for poor working capital management in the selected public sector cotton textile mills during study period. But 25 percent disagreed to the view. The findings reveal that 75 percent respondents confirmed our hypothesis, that there is inadequate cost accounting and cost control system in the selected mills resulting poor working capital management.

Table 5.44 Distribution of respondents on the centralised buying raw cotton, affecting working capital.

Opinion of respondents	Frequency	Percentage
1. Affirmative	10	83.33
2. Negative	2	16.66
Total	12	100.00

In a reply to a question, whether the centralised buying of raw cotton by BTMC complicate the working capital problem of enterprises, 83.33 percent respondents replied in the affirmative and only 16.66 percent respondents replied in the negative. In support of their view they mentioned that BTMC imports the raw cotton centrally and allot to every mill on quota basis, whether they require it or not. The whole lot of quota of each enterprises had to be lifted at a time, which blocks the working capital of individual mill. The above view was disagreed by top officials of BTMC. Corporation officials mentioned that enterprise management is incompetent in understanding economic and diseconomics of raw cotton procurement. The enterprise management were critical about the procurement by the Corporation. They want procurement power to be decentralised, which in the opinion of Corporation's top management is not possible, because Corporation cannot purchase cotton on cash or credit. They are to depend on aid and loans and also on barter agreement, particularly with socialistic countries. This work which is suitable to be handled centrally and with constant co-operation with different relevant ministries.

Table 5.43 Distribution of respondents on suggested norms for holding different groups of inventory for maximum period.

Maximum period	Raw Material Inventory (Imported)		Work-in-process		Finished goods		Stores & spares	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
0- 15 days			6	85.71				
0 - 1 month	2	20.00	1	14.29	8	89.00	4	33.33
1 - 2 months	2	20.00					2	16.67
2 - 3 months	6	60.00			1	11.00	6	50.00
3 - 4 months								
4 - 5 months								
5 - 6 months								
Over 6 months								
Total	10	100.00	7	100.00	9	100.00	12	100.00

It appears from the table that 60 percent respondents suggested maximum three months for holding raw material inventory in the selected cotton mills, 20 percent suggested for one month and other 20 percent suggested maximum period of 2 months for holding the same.

85.71 percent respondents suggested a maximum of 15 days should be the appropriate norm for holding work-in-process inventory and the rest 14.29 percent suggested maximum 1 month. In case of finished goods, about 89 percent respondents suggested one month for holding the same in the selected cotton mills. A maximum 3 months was suggested for stores and spares.

The findings show that the majority of respondents suggested a maximum period of 3 months for holding raw material inventory, a maximum period of 15 days for work-in-process, a maximum one month for finished goods and maximum 3 months for holding stores and spares inventory in the selected cotton textile enterprises under BTMC. In reply to question for holding imported stores and spares, majority of respondents suggested a maximum period of six months should be the appropriate norms for holding imported stores and spares inventory.

Table 5.44 Distribution of respondents on the centralised buying raw cotton, affecting working capital.

Opinion of respondents	Frequency	Percentage
1. Affirmative	10	83.33
2. Negative	2	16.66
Total	12	100.00

In a reply to a question, whether the centralised buying of raw cotton by BTMC complicate the working capital problem of enterprises, 83.33 percent respondents replied in the affirmative and only 16.66 percent respondents replied in the negative. In support of their view they mentioned that BTMC imports the raw cotton centrally and allot to every mill on quota basis, whether they require it or not. The whole lot of quota of each enterprises had to be lifted at a time, which blocks the working capital of individual mill. The above view was disagreed by top officials of BTMC. Corporation officials mentioned that enterprise management is incompetent in understanding economic and diseconomics of raw cotton procurement. The enterprise management were critical about the procurement by the Corporation. They want procurement power to be decentralised, which in the opinion of Corporation's top management is not possible, because Corporation cannot purchase cotton on cash or credit. They are to depend on aid and loans and also on barter agreement, particularly with socialistic countries. This work which is suitable to be handled centrally and with constant co-operation with different relevant ministries.

Table 5.45 Distribution of respondents on the question of low purchasing power by poorer customers and demand for foreign goods by richer customers complicate finished goods inventory system.

Opinion of respondents	Frequency	Percentage
1. Affirmative	8	66.67
2. Negative	4	33.33
Total	12	100.00

On the above question, 66.67 percent respondents replied in the affirmative, and only 33.33 respondents replied in the negative.

The findings show that majority of respondents mentioned that low purchasing power of the poorer section and clamour for foreign clothes by the richer section of customers, a huge stock of finished goods accumulated in cotton textile enterprises. In support of their view, they mentioned that a huge quantity of Indian cotton goods came to Bangladesh through smuggling. The richer section of customers are very much fond of Indian clothes and specially ladies sarees. They also mentioned that a sizeable portion of poorer section buy also Indian clothes, as the inferior quality of those clothes are cheaper than Bangladeshi clothes.

Table 5.46 Distribution of respondents on the question of preparation yearly and monthly cash budget.

Opinion of Respondents	Yearly	Monthly	Percentage	Percentage
			Yearly	Monthly
1. Affirmative	6	2	75.00	25.00
2. Negative	2	6	25.00	75.00
Total	8	8	100.00	100.00

On the question of preparation of yearly cash budget 75 percent respondent replied in the affirmative and the 25 percent replied in the negative. On the question of monthly cash budget, only 25 percent respondents replied in the affirmative, while 75 percent of them replied that they did not prepare any cash budget on monthly basis.

The findings show that a majority on the selected cotton mills prepare cash budget on yearly basis, for submission to Corporation and Ministry of Finance. A good management is one which prepare monthly rather weekly cash budget which enables them, when to take loan and for which period and to ensure surplus cash if any to be kept in STD Account which yields some gain. The examination of records has shown that monthly cash budget is not prepared and the necessity of weekly cash budget is not felt at all.

5.6 SUMMARY

The analysis and findings of the study revealed many things about the inefficiency of working capital management in the selected public enterprises of jute and cotton textile industry and have answered many previous questions. The findings revealed that there is inefficiency in managing working capital properly in general and more particularly, the inefficiency in inventory, receivables and cash management are affecting the proper management of working capital in the selected public enterprises. The findings from time series and cross sectional data analysis reveal that there is heavy investment of fund in inventory and receivables component of working capital, but the investment in cash is very low in public sector jute mills, but cash was found excess in cotton textile mills compared to our suggested model.

The findings suggest that a innovative working capital management model/norm is an urget necessity for proper working capital management in public enterprises in Bangladesh and the development of such model/norm is the prive objective of this research study.

CHAPTER - SIX

A COMPARISON OF WORKING CAPITAL MANAGEMENT POSITION BETWEEN
PUBLIC AND PRIVATE SECTOR JUTE AND COTTON TEXTILE MILLS.

6.1 Introduction

The object of this chapter is to present a comparative picture of the state of working capital management between the selected public vs private sector jute and cotton textile mills. Since the sample of the present study was taken in such a way that three public sector jute mills of different sizes can be compared with the three private sector jute mills of similar sizes and the three public sector cotton (spinning) mills with the three cotton mills of similar type in the private sector. In the national context, such a comparison between public and private sector, especially on the vital issue of working capital management after disinvesting 27 cotton and 33 jute mills from public to private sector after 1982 has not been made and this chapter provides an interesting perspective. It will enable us to have better insights as how working capital management position of public sector compares with private sector in terms of efficiency and particularly to liquidity, solvency and profitability of business.

Six main sections comprise this chapter. The source of the comparative data is covered in section on 6.2, whilst comparative analysis and findings of the selected jute mills and cotton textile mills are presented in section 6.3 and 6.4 respectively on the basis of time series data. On the basis of cross sectional data χ^2 analysis and test are done on section 6.5, inventory, receivables and cash management respectively. Finally a summary is given in section 6.6.

6.2 The data Source and Analysis.

The data for comparative purposes were collected from the audited Annual reports of the selected companies. These data are presented as an aggregate balance sheet, profit & loss account and sources and uses of funds for all sample companies. Therefore, it should be kept in mind that the data permit an aggregate comparison only.

The latest available data from the selected mills are for 1982-83 to 1986-87. Therefore, the comparison is made for the period 1983 to 1987.

6.3 Comparative Analysis of working capital position and findings between the selected public and private sector jute mills.

Table 6.1 depicts that the average percentage of gross working capital to total capital employed is alarmingly as high as 87.79 and 85.03 of the selected public and private jute mills respectively during 1982-83 to 1986-87. The average percentage of

working capital to total capital employed was highest in small public jute mills (88.20), while, the same lowest 81.59 in small jute mills of private sector. The above analysis throws sufficient light to the fact that compared to total capital employed, there has been a higher percentage of investment in working capital in both the selected public and private sector jute mills during 1982-83 to 1986-87.

Table 6.2 shows the comparative turnover of working capital in the selected public and private sector jute mills during 1982-83 to 1986-87. It appears from the Table 6.2 that the average inventory turnover ratio was 1.82 in selected public sector jute mills compared to 2.25 in the private sector jute mills during the period under study. Normally the inventory ratio should be 4.29 as per the Tandon Committee Report of the Reserve Bank of India. However, all the jute mills both in public and private sector could not satisfy this norm.

Even this pt. seen shows a better picture

Table 6.3 highlights the comparative percentage of inventory position to current assets in the selected public and private jute mills during 1982-83 to 1986-87. It is found from the table 6.3 that the average percentage of inventory to total current assets in the selected public and private sector jute mills was 65.95 and 65.53 respectively. So, there is little variation between public and private jute mills with regard to average percentage of inventory to total current assets.

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1. A.C. Saha(1982), A study of some problem of working capital management in the jute mills of Dhaka Zone, Bangladesh, unpublished Ph.D thesis, University of Baroda, p 176.

Table 6.4 depicts the comparative percentage of total receivables to working capital in the selected public and private sector jute mills during 1982-83 to 1986-87. It appears from the table that average percentage of receivables to working capital in the selected public and private jute mills were 30.90 and 28.92 respectively during the study period. Although the average percentage of receivables to working capital was 2 percent higher in public sector compared to private sector jute mills during the study period, but there is no significant difference between them so far the percentage of receivables to working capital is concerned. However, it is clear from the analysis that a sizeable amount of funds are locked up in receivables in the selected public and private sector jute mills during 1983-87.

Table 6.5 shows the comparative percentage of Trade debtors to working capital in the selected public and private jute mills during 1982-83 to 1986-87. The average percentage of trade debtors was found 14.63 in the selected public sector jute mills, while the same was found only 9.67 percent in the private sector jute mills for the study period. It seems private jute mills are very prompt in collecting bills from customers compared to public sector jute mills. But individually the average percentage of receivables was higher 16.60 in big private jute mills compared to only 11.92 of the same in public sector during the study period.

Table 6.6 highlights the comparative percentage of cash position to total current assets in the selected public and private sector jute mills during 1982-83 to 1986-87. Cash is vital component of working capital. Guthman suggested that percentage of cash to working capital shows the efficiency of cash management² as a determinant to working capital management.

Table 6.6 reveals that the average percentage of cash to working capital were 2.02 and 2.69 in the public and private sector jute mills respectively during 1982-83 to 1986-87. Some authorities think that the cash in a well financed company should not be less than 5 to 10 percent of working capital.³ Experience shows that strong companies always have cash sufficient to cover all current indebtedness. Compared to that cash was very much low in both the public and private sector jute mills under study.

2. Ibid. 5. A.C. Saha. Ibid p 186 6. Ibid, p 187

3. A.C. Saha, Ibid p 187.

Table 6.1 Comparative percentage of working capital (i.e. current assets) to total capital employed (operating assets) in the public and private sector jute mills during 1982-83 to 1986-87.

PUBLIC SECTOR JUTE MILLS				
Years	LBJM (big mill)	KJM (medium mill)	NBJM (small mill)	Average of three mills
1982-83	86.37	85.33	79.36	83.69
1983-84	81.25	88.79	85.06	85.03
1984-85	87.12	90.70	91.08	89.63
1985-86	92.45	88.05	92.53	91.01
1986-87	90.97	84.63	93.00	89.53
Average of 5 yrs.	87.63	87.50	88.20	87.79

PRIVATE SECTOR JUTE MILLS				
Years	CJMC Ltd. (big mill)	VJP Ltd. (medium mill)	NJM Ltd. (small mill)	Average of three mills
1982-83	84.44	82.92	67.56	78.11
1983-84	91.81	86.30	79.14	85.54
1984-85	93.77	90.27	83.83	89.29
1985-86	91.50	78.15	87.11	85.58
1986-87	90.36	79.40	90.10	86.62
Average of 5 yrs.	90.35	83.29	81.54	85.03

Source: Annexure I, II, III, VII, VIII & IX (Fact Method)
Balance sheet information.

CJMC = Chittagong Jute Mfg. Company Ltd.
VJP = Victory Jute Products Ltd.
NJM = Noapara Jute Mills Ltd.

6.2 Comparative inventory turnover ratio in the selected public and private jute mills during 1982-83 to 1986-87

PUBLIC SECTOR JUTE MILLS				
Years	LBJM (big mill)	KJM (medium mill)	NBJM (small mill)	Average of three mills
1982-83	1.92	2.70	4.58	2.89
1983-84	3.22	1.41	1.37	2.00
1984-85	1.41	1.43	0.54	1.13
1985-86	1.40	1.59	0.52	1.17
1986-87	1.70	2.49	1.97	2.06
Average of 5 yrs.	1.91	1.82	1.73	1.82

PRIVATE SECTOR JUTE MILLS				
Years	CJMC Ltd. (big mill)	VJP Ltd. (medium mill)	NJM Ltd. (small mill)	Average of three mills
1982-83	2.55	0.61	2.33	1.83
1983-84	2.09	0.48	1.59	1.38
1984-85	2.49	3.37	2.46	2.77
1985-86	2.23	4.29	1.71	2.74
1986-87	2.40	2.19	2.95	2.51
Average of 5 yrs.	2.35	2.18	2.21	2.25

6.3 Comparative percentage of inventory to current assets (i.e. gross working capital) in the selected public & private sector jute mills during 1982-83 to 1986-87.

PUBLIC SECTOR JUTE MILLS				
Years	LBJM (big mill)	KJM (medium mill)	NBJM (small mill)	Average of three mills
1982-83	67.12	59.54	68.20	64.95
1983-84	70.10	57.95	59.77	62.61
1984-85	75.51	75.18	68.10	72.93
1985-86	75.63	66.45	65.78	69.29
1986-87	69.88	55.18	55.82	60.29
Average of 5 yrs.	71.64	62.86	63.53	65.95

PRIVATE SECTOR JUTE MILLS				
Years	CJMC Ltd. (big mill)	VJP Ltd. (medium mill)	NJM Ltd. (small mill)	Average of three mills
1982-83	30.97	65.33	67.61	54.63
1983-84	70.49	72.12	63.61	68.74
1984-85	73.44	73.20	63.84	70.16
1985-86	75.58	64.86	61.30	67.24
1986-87	68.33	75.40	49.05	64.26
Average of 5 yrs.	63.76	71.16	61.08	65.00

6.4 Comparative percentage of total receivables to working capital (current assets) of the selected public and private sector jute mills during 1982-83 to 1986-87.

PUBLIC SECTOR JUTE MILLS				
Years	LBJM (big mill)	KJM (medium mill)	NBJM (small mill)	Average of three mills
1982-83	31.61	36.99	29.30	32.63
1983-84	30.31	25.17	37.98	31.15
1984-85	23.51	23.57	28.50	25.13
1985-86	24.09	30.03	33.13	29.08
1986-87	29.37	39.73	40.54	36.55
Average of 5 yrs.	27.77	31.09	33.89	30.90

PRIVATE SECTOR JUTE MILLS				
Years	CJMC Ltd. (big mill)	VJP Ltd. (medium mill)	NJM Ltd. (small mill)	Average of three mills
1982-83	45.41	40.41	31.66	39.16
1983-84	16.11	21.72	34.52	24.11
1984-85	18.31	19.83	33.71	23.95
1985-86	23.34	24.04	34.80	27.39
1986-87	27.48	19.32	43.28	30.02
Average of 5 yrs.	26.13	25.06	35.59	28.92

6.5 Comparative percentage of accounts receivable (trade debtors) to working capital (total current assets) in the selected public and private sector jute mills during 1982-83 to 1986-87.

PUBLIC SECTOR JUTE MILLS				
Years	LBJM (big mill)	KJM (medium mill)	NBJM (small mill)	Average of three mills
1982-83	12.48	16.83	16.25	15.19
1983-84	12.78	11.48	22.09	15.45
1984-85	9.77	8.67	16.48	11.64
1985-86	13.10	17.64	17.25	15.99
1986-87	11.48	14.94	11.55	14.91
Average of 5 yrs.	11.92	13.91	16.72	14.63

PRIVATE SECTOR JUTE MILLS				
Years	CJMC Ltd. (big mill)	VJP Ltd. (medium mill)	NJM Ltd. (small mill)	Average of three mills
1982-83	30.70	10.01	17.37	19.36
1983-84	12.81	7.48	3.74	8.01
1984-85	11.54	8.48	2.15	7.39
1985-86	11.07	8.00	7.91	8.99
1986-87	16.90	6.16	11.82	11.62
Average of 5 yrs.	16.60	8.02	8.59	9.67

6.6 Comparative percentage of cash to total current assets (i.e. gross working capital) in the selected public & private sector jute mills during 1982-83 to 1986-87.

PUBLIC SECTOR JUTE MILLS				
Years	LBJM (big mill)	KJM (medium mill)	NBJM (small mill)	Average of three mills
1982-83	1.25	3.45	2.49	2.40
1983-84	0.77	1.18	2.24	1.40
1984-85	0.66	0.36	3.00	1.34
1985-86	0.83	3.52	1.09	1.81
1986-87	0.76	5.09	3.63	3.16
Average of 5 yrs.	0.85	2.72	2.49	2.02 /

PRIVATE SECTOR JUTE MILLS				
Years	CJMC Ltd. (big mill)	VJP Ltd. (medium mill)	NJM Ltd. (small mill)	Average of three mills
1982-83	1.00	4.26	0.72	1.99
1983-84	2.60	0.18	1.04	1.27
1984-85	0.40	1.72	2.44	1.52
1985-86	1.07	7.97	3.89	4.31
1986-87	4.18	1.27	7.66	4.37
Average of 5 yrs.	1.85	3.08	3.15	2.69 /

6.7 Comparative percentage of Net Cash flows to current liabilities in the selected public and private sector jute mills during 1982-83 to 1986-87.

PUBLIC SECTOR JUTE MILLS				
Years	LRJM (big mill)	KJM (medium mill)	NBJM (small mill)	Average of three mills
1982-83	(14.18)	12.02	12.01	3.28
1983-84	(6.32)	(1.85)	18.59	3.47
1984-85	(2.47)	(19.71)	13.66	(2.84)
1985-86	(6.64)	(15.99)	(6.63)	(9.75)
1986-87	1.13	(8.18)	(18.25)	(8.43)
Average of 5 yrs.	(5.69)	(6.74)	3.87	(2.85)

PRIVATE SECTOR JUTE MILLS				
Years	CJMC Ltd. (big mill)	VJP Ltd. (medium mill)	NJM Ltd. (small mill)	Average of three mills
1982-83	(10.41)	(32.74)	(128.58)	(57.24)
1983-84	(23.37)	(83.59)	(63.15)	(56.70)
1984-85	(40.72)	(44.76)	(79.01)	(41.34)
1985-86	(59.02)	(53.83)	(69.35)	(60.96)
1986-87	(56.64)	(51.27)	(76.48)	(61.46)
Average of 5 yrs.	(38.03)	(53.23)	(83.31)	(55.55)

Table 6.7 reveals the comparative percentage of net cash flows to current liabilities in the selected public and private sector jute mills during 1982-83 to 1986-87. The average percentage negative net cash flows to current liabilities was (2.85) and (55.55) in the selected public and private sector jute mills respectively during the period of study.

The position of net cash flows to current liabilities is very grave in the selected private jute mills compared to public sector. Except Nabarun jute mills in the public sector, all the selected jute mills had negative percentage of net cashflows, but Nabarun jute mills had also negative percentage of cashflows in some years. Actual liquidity and solvency of the jute mills is mainly based on percentage of net cashflows to current liabilities and coverage of current liabilities.

4. Ibid, p 266

Table 6.8 Comparative Cost Breakdown Ratios of the selected public and private sector jute mills during 1982-83 to 1986-87

PUBLIC SECTOR JUTE MILLS																
Yrs.	LBJM					KJM					NBJM					
	% Mat. cost	% Lab. cost	% Over head cost	% Admn exp.	% Sell exp.	% Mat. cost	% Lab. cost	% Over head cost	% Admn. exp	% Sell. exp.	% Mat. cost	% Lab. cost	% Over head cost	% Adm. exp	% Sell. exp.	
1982-83	39.34	27.80	14.80	1.63	2.71	34.22	25.38	15.46	1.80	4.21	37.81	37.16	8.13	7.04	2.03	
1983-84	78.92	30.98	12.92	1.55	2.38	37.72	29.21	11.84	1.69	3.25	38.66	36.69	26.00	-	2.78	
1984-85	35.43	29.15	11.27	1.15	1.76	54.98	26.11	8.91	2.52	1.97	34.42	28.14	23.43	-	1.74	
1985-86	39.00	36.00	6.20	2.26	1.76	35.95	32.37	10.57	3.28	2.35	36.86	32.57	11.24	2.32	1.98	
1986-87	39.58	39.66	15.36	1.39	1.79	39.35	45.88	14.78	3.22	3.76	38.30	38.75	14.98	-	2.31	
Average of 5 yrs.	46.45	32.78	12.11	1.59	1.87	39.64	31.78	12.31	2.50	3.10	37.21	34.66	16.75	1.87	2.22	

PRIVATE SECTOR JUTE MILLS																
Yrs.	CJMC LTD.					VTP LTD.					NJM LTD.					
	% Mat. cost	% Lab. cost	% Over head cost	% Admn exp.	% Sell exp.	% Mat. cost	% Lab. cost	% Over head cost	% Admn. exp	% Sell. exp.	% Mat. cost	% Lab. cost	% Over head cost	% Adm. exp	% Sell. exp.	
1982-83	38.53	29.56	19.45	3.45	0.99	38.61	26.57	28.72	3.18	0.72	35.17	22.32	38.36	1.74	-	
1983-84	51.90	35.87	25.27	0.66	0.81	49.33	31.28	32.44	5.99	0.58	49.51	21.50	27.85	3.04	1.26	
1984-85	86.68	28.37	17.18	0.31	0.55	77.63	28.78	12.68	3.66	0.62	63.35	17.54	27.37	2.45	1.30	
1985-86	33.82	36.23	24.23	4.24	0.72	36.62	35.53	16.30	4.95	0.71	46.37	33.61	37.77	3.57	1.83	
1986-87	40.37	43.54	25.27	2.72	1.40	36.34	46.23	15.97	4.10	0.96	29.95	20.21	32.99	3.21	0.77	
Average of 5 yrs.	50.26	34.71	22.28	2.27	0.89	47.70	33.67	21.22	4.37	0.71	44.87	23.03	32.86	2.80	1.43	

Source : FACT sheet of the selected jute mills annexure-III & VII to IX.

N.B. Percentage of each component of cost has been calculated in relation to sales, taking sales as 100%.

Table 6.8 reveals that average material cost was higher in private sector jute mills compared to public sector, but there was no significant differences in labour cost between public and private sector jute mills excepting small mills. But average overhead cost was found much higher in private sector jute mills compared to public sector. Further insights into the average lowest cost per ton of Hessian, Sacking and CBC between public and private sector jute mills are shown in the table 6.9 and 6.10. Comparative elementwise lowest cost structure of hessian, sacking and CBC is shown in Table 6.11.

Table 6.9 Showing the comparative productwise average cost per ton (in Taka) of hessian, sacking and CBC between public (BJMC) and Private (BJMA) sector jute mills during 1987-88.

	<u>HESSIAN</u>			
	<u>Cost</u>	<u>Export earning</u>	<u>Gap (Tk.)</u>	<u>%</u>
BJMC	25720	21329	4391	17.1
BJMA	29209	21788	7421	25.4
Average	27465	21558	5906	21.5
<u>SACKING</u>				
BJMC	16802	13754	3048	18.1
BJMA	17097	13126	3971	23.2
Average	16950	13440	3510	20.7

C.B.C				
BJMC	32208	24633	7555	23.5
BJMA	29320	24630	4690	16.0
Average	30764	24641	6122	19.9

Table 6.10 Showing the comparative productwise average of five lowest cost per ton of hessian, sacking, and CBC and five highest export earnings of the same between the public and private sector jute mills during 1987-88.

HESSIAN				
	Lowest Cost (Av. 5 mills)	Highest Export earning (Av. 5 mills)	Gap (Tk.)	%
BJMC	23066	21805	1261	5.5
BJMA	24367	23388	979	4.0
Average	23717	22596	1121	4.7
SACKING				
BJMC	14772	14623	149	1.0
BJMA	14861	14168	693	4.7
Average	14817	14395	422	2.8
C.B.C.				
BJMC	28199	23253	4946	17.5
BJMA	27666	24347	2819	10.2
Average	27933	24050	3883	13.9

All figures calculated on simple average basis.

Source: Annual Report of BJMC and BJMA, 1987-88.

Table 6.11 Showing the comparative lowest elementwise cost per ton of hessian, sacking and CBC between public and private sector jute mills during 1987-88.

	Hessian		Sacking		CBC	
	BJMC	BJMA	BJMC	BJMA	BJMC	BJMA
Raw jute	7118	7911	5196	5680	8395	10653
Other Mat.	701	525	808	562	791	766
Wages	7157	6399	4546	3660	7512	5403
Salary	1442	1601	871	787	1690	1634
Repairs	1378	1404	643	579	1673	1475
Power	1446	1112	631	416	1677	1231
Interest	1063	1415	437	694	1565	1932
Others	1443	1519	698	736	2223	2346
Total:	21748	21886	13830	13114	25526	25440

Source: Annual Reports of BJMC and BJMA, 1987-88.

Table 6.9 shows the productwise per ton average cost of jute industry both in public and private sector jute mills. The average cost of production per ton of hessian was found to be much higher in private sector jute mills compared to public sector. The average cost of production per ton of hessian in private sector jute mills was found to be Tk. 29209 compared Tk.25720 in Public Sector jute mills during 1987-88. The average cost of production per ton of hessian was found Tk. 3489 more in private sector jute mills compared to public sector, but export earning from per ton of hessian was found only Tk.459 more in

private sector jute mills compared to public sector. Table 6.10 shows that the lowest average cost per ton of hessian and sacking of five private sector jute mills was higher compared to public sector. It was revealed from Table 6.11; that private sector jute mills showed Tk. 793 more for raw jute cost per ton of hessian compared to public sector jute mills. Similarly per ton raw jute cost for sacking and CBC was Tk. 484, and Tk.1658 respectively higher in private sector jute mills compared to public sector. Similarly interest cost was much higher per ton of sacking and CBC in private sector jute mills compared to public sector. But, wages, salary, repairs and power costs per ton of hessian, sacking and CBC were found higher in public sector jute mills compared to private sector.

From the above analysis, it may be inferred that private sector jute mills generally show higher prices of raw jute cost, in order to extract undue concessions from the Government in terms of compensation for loss and also to evade the payment of taxes. The data also support that private sector jute mills enjoy mere cheap bank loan compared to public sector. However, it was found that cost control system is ineffective in public sector jute mills and wages, salary, repairs and power cost per ton of hessian, sacking and CBC were found higher in public sector jute mills compared to private sector. However, it was found that cost control system is ineffective in public sector jute mills and wages, salary, repairs and power cost per ton of hessian, sacking and CBC were found higher in public sector jute mills compared to private sector.

6.4 Comparative analysis of working capital position and findings between the selected public and private sector cotton (spinning) textile mills.

6.4.1 INTRODUCTION

This section of chapter six presents an interesting picture between the selected public vs private sector cotton spinning mills disinvested to private sector from public sector (BTMC) after the new Industrial policy of 1982. Table 6.12 to 6.24 highlights the comparative findings of both public and private sector cotton textile mills during the period from 1982-83 to 1986-87. Attempt has been made to find out whether there is any difference in efficiency for managing the working capital between public and private sector cotton textile mills. It has been widely accepted that the profitability of a business enterprise largely depends on the manner in which its working capital is managed. Both excessive and inadequate working capital are harmful for any business. So, it is desirable that every enterprise is expected to maintain an optimum level of current assets for maximum return on investment. However, the following analysis and findings will enable us to answer our hypothesis is in Chapter-1, that there is no difference between the levels of efficiency in working capital management of public and private sector cotton textile enterprises.

6.12 Comparative inventory turnover ratio in the selected public and private sector cotton (spinning) mills during 1982-83 to 1986-87.

PUBLIC SECTOR TEXTILE MILLS				
Years	Monno (old)	Quaderia	Satrang	Average of three mills
1982-83	4.38	4.18	1.75	3.44
1983-84	2.21	2.34	1.32	1.96
1984-85	1.14	1.17	3.31	1.87
1985-86	2.32	3.13	1.95	2.47
1986-87	4.28	2.96	1.95	2.83
Average of 5 yrs.	3.74	2.77	1.92	2.51

PRIVATE SECTOR TEXTILE MILLS				
Years	Ashraf	Chand (spinning)	Raz	Average of three mills
1982-83	NA	1.36	3.08	2.22
1983-84	1.57	2.03	1.31	1.64
1984-85	2.28	1.73	1.57	1.86
1985-86	1.37	1.08	1.15	1.66
1986-87	1.41	1.33	3.73	2.16
Average of 5 yrs.	1.66	1.51	2.17	1.91

Source : Appendix I - XII

Table 6.12 depicts the comparative turnover of working capital in the selected public and private sector cotton textile mills during 1982-83 to 1986-87. It appears from the table that average inventory turnover ratio was 2.51 times in public sector compared to 1.91 in the private sector mills. The average inventory turnover ratio of individual selected units during five years was found 3.74, 2.77 and 1.92 in the Monno (old), Quaderia and Satrang

textiles respectively in public sector, while the same was found 1.66, 1.57 and 1.91 in Ashraf, Chand and Raz textiles respectively in the private sector. The average inventory turnover ratio was 4.42 in 1978-79 in the 48 Indian cotton textile mills.⁵ However, the picture in both public and private sector cotton textile mills during the study period was very low compared to Indian industry standard.

5. A.T.Tofazzal Hossain(1984) Management of working capital in cotton textile industry of Bangladesh, Unpublished Ph.D. Thesis, University of Kallayani, Baruda, p 63.

6.13 Comparative percentage of inventory to total current assets in the selected public and private sector cotton textile mills during 1982-83 to 1986-87.

PUBLIC SECTOR TEXTILE MILLS				
Years	Monno (old)	Quaderia	Satrang	Average of three mills
1982-83	39.94	37.64	41.97	39.85
1983-84	59.90	47.25	54.65	53.93
1984-85	63.32	62.55	50.81	58.79
1985-86	49.20	42.41	39.40	43.67
1986-87	29.24	37.11	56.60	40.98
Average of 5 yrs.	48.32	45.33	48.64	47.44

PRIVATE SECTOR TEXTILE MILLS				
Years	Ashraf	Chand (spinning)	Raz	Average of three mills
1982-83	80.55	48.74	67.58	65.62
1983-84	87.82	49.76	77.99	71.85
1984-85	62.13	51.69	78.72	64.18
1985-86	70.91	59.21	84.80	71.64
1986-87	59.21	55.62	58.70	57.84
Average of 5 yrs.	71.96	53.00	73.55	66.22

Source : Annexure VII to XII, which are prepared from published Annual accounts and reports of the selected cotton Mills.

Table 6.13 reveals that average percentage of inventory to total current assets was 47.44 in the selected units of public sector cotton mills compared to 66.22 percent in the selected private sector cotton mills for the period under study. This indicates that accumulation of inventory was more in the private mills compared to that in the public sector cotton mills. Such

percentage in the 48 Indian cotton textile mills for the years 1979-80 and 1980-81 were 40.68 and 37.74 respectively. ⁶ Compared to these percentages, almost all the selected units both in public and private sector cotton textiles mills held much higher percentages of inventory to total current assets.

6.14. Comparative percentage of total receivables to working capital (current assets) in the selected public and private sector cotton textile mills during 1982-83 to 1986-87.

PUBLIC SECTOR TEXTILE MILLS				
Years	Monno (old)	Quaderia	Satrang	Average of three mills
1982-83	48.34	48.41	23.86	40.20
1983-84	32.43	35.22	28.12	31.92
1984-85	36.57	29.72	20.96	29.08
1985-86	50.57	43.29	31.04	41.63
1986-87	70.76	48.29	36.22	50.03
Average of 5 yrs.	47.73	40.98	28.04	38.57

PRIVATE SECTOR TEXTILE MILLS				
Years	Ashraf	Chand (spinning)	Raz	Average of three mills
1982-83	20.52	44.23	30.83	31.86
1983-84	16.06	37.93	3.21	19.06
1984-85	12.75	29.48	12.01	18.08
1985-86	19.44	22.28	13.65	18.45
1986-87	37.35	27.41	40.35	35.08
Average of 5 yrs.	21.22	28.26	20.01	24.50

6. A.T.M. Tafazzal Hossain, Ibid, p93.

Table 6.14 Portrays to comparative percentage of total receivables to working capital in the selected public and private cotton mills during 1982-83 to 1986-87. Receivables represent an important component in the structure of working capital of the selected cotton textile mills. It is evident from the table that average percentage of receivables to working capital varies from 29.08 to 50.03 percent in the selected public sector cotton mills compared to only 18.08 to 35.08 percent in the selected private sector cotton mills for the period under study. The industry average of all the years are 38.57 and 24.50 percent in the selected public and private sector cotton mills respectively. This indicates that receivables management is more efficient in private cotton textile mills compared to the selected public sector cotton mills.

6.15 Comparative percentage of Accounts receivables (trade debtors) to working capital (current assets) in the selected public and private sector cotton textile mills during 1982-83 to 1986-87.

Years	PUBLIC SECTOR TEXTILE MILLS			
	Monno(old)	Quaderia	Satrang	Average of three mills
1982-83	23.08	4.05	4.46	10.58
1983-84	14.28	3.13	8.31	7.57
1984-85	25.13	2.57	7.32	11.67
1985-86	23.87	3.95	14.37	14.13
1986-87	36.80	12.21	16.52	21.84
Average of 5 yrs.	21.63	5.18	10.52	13.14

PRIVATE SECTOR TEXTILE MILLS				
Years	Ashraf	Chand (spinning)	Raz	Average of three mills
1982-83	5.51	28.31	0.20	11.27
1983-84	4.01	19.18	0.30	7.23
1984-85	1.93	11.02	3.99	5.64
1985-86	3.10	7.48	2.89	4.49
1986-87	3.06	9.97	4.70	5.75
Average of 5 yrs.	3.52	15.09	2.41	6.99

Table 6.15 depicts the comparative percentage of trade debtors or accounts receivables to total working capital in the selected public and private sector cotton textile mills during 1982-83 to 1986-87. The industry average of all the years are 13.14 and 6.99 percent in the selected public and private sector cotton mills respectively. The findings reveal that accounts receivables (trade debtors) management is more efficient in private sector compared to the selected public sector cotton mills during the study period.

6.16 Comparative percentage of cash to working capital (current assets) in the selected public and private sector cotton textile mills during 1982-83 to 86-87.

PUBLIC SECTOR TEXTILE MILLS				
Years	Monno(old)	Quaderia	Satrang	Average of three mills
1982-83	11.11	14.71	34.11	19.97
1983-84	7.50	17.61	17.00	14.33
1984-85	0.19	7.96	28.21	12.12
1985-86	0.09	14.14	29.55	14.59
1986-87	0.02	14.52	6.60	7.04
Average of 5 yrs.	3.78	13.78	23.09	11.35

PRIVATE SECTOR TEXTILE MILLS				
Years	Ashraf	Chand (spinning)	Raz	Average of three mills
1982-83	0.50	7.02	1.56	3.02
1983-84	0.10	12.30	18.78	10.39
1984-85	0.13	18.82	9.26	9.40
1985-86	1.78	18.49	1.53	7.26
1986-87	0.01	16.92	0.93	5.95
Average of 5 yrs.	0.84	14.71	6.41	7.20

Table 6.16 reveals the comparative percentage of cash to total current assets on working capital in the selected public and private sector cotton textile mills during 1982-83 to 1986-87. It appears from the table that average percentage of cash to working capital varies from 7.24 to 19.97 percent in the selected public sector cotton mills compared to 3.02 to 10.39 percent in the selected private sector cotton mills for the period under study. The industry average of all the years are 11.35 and 7.20 percent in the selected public and private sector cotton mills respectively.

6.17 Comparative percentage of net cashflows to current liabilities in the selected public and private sector cotton textile mills during 1982-83 to 86-87.

PUBLIC SECTOR TEXTILE MILLS				
Years	Monno(old)	Quaderia	Satrang	Average of three mills
1982-83	20.78	(1.28)	(19.57)	(0.02)
1983-84	22.77	1.59	(61.35)	(12.33)
1984-85	8.17	(3.18)	(49.68)	(14.22)
1985-86	1.96	(15.57)	(53.06)	(22.22)
1986-87	21.51	(15.57)	(82.90)	(25.65)
Average of 5 yrs.	15.08	(7.12)	(53.31)	(14.88)

PRIVATE SECTOR TEXTILE MILLS				
Years	Ashraf	Chand (spinning)	Raz	Average of three mills
1982-83	1.14	20.44	(8.86)	4.24
1983-84	0.70	19.07	(3.03)	5.58
1984-85	13.34	18.61	(5.33)	8.87
1985-86	20.99	14.98	(16.25)	6.57
1986-87	54.02	17.41	(30.82)	13.53
Average of 5 yrs.	18.03	18.10	(12.85)	7.75

Table 6.17 reveals the comparative of net cash flows to current liabilities in the selected public and private sector cotton textile mills respectively during 1982-83 to 1986-87. The average percentage of net cash flows to current liabilities of all the years was (14.88) and 7.75 in the selected public and private cotton mills respectively during the study period. The average

percentage of net cashflows to current liabilities was 15.08, (7.12) and (53.31) in Monno(old), Quaderia and Satrang textiles respectively compared to 18.03, 18.10 and (12.85) in Ashraf, Chand and Raz textile mills respectively in the private sector. The findings showed that majority of the selected public sector cotton mills had been suffering from shortage of net cash flow compared to textile mills in the private sector.

Table 6.18 Comparative Cost breakdown ratio (i.e. cost on percentage of sales) in the selected public and private sector cotton textile (spinning) mills during 1982-83 to 1986-87.

PUBLIC SECTOR COTTON MILLS															
Yrs.	MONNO					QUADERIA					SATRANG				
	% Mat. cost	% Lab. cost	% Over head cost	% Admn exp.	% Sell exp.	% Mat. cost	% Lab. cost	% Over head cost	% Adm. exp.	% Sell. exp.	% Mat. cost	% Lab. cost	% Over head cost	% Adm. exp.	% Sell. exp.
1982-83	63.82	13.37	10.03	3.19	-	74.14	11.16	11.16	3.96	-	64.00	12.21	20.63	4.83	-
1983-84	62.67	16.77	10.73	3.36	-	67.58	11.07	24.26	5.02	-	75.73	14.39	11.64	17.57	-
1984-85	74.72	19.97	11.72	4.28	-	71.10	18.22	12.63	19.00	-	62.14	16.03	11.09	18.34	-
1985-86	55.91	28.05	10.31	7.82	-	51.03	20.25	12.71	14.99	-	52.38	18.87	9.75	17.68	-
1986-87	44.37	27.34	11.63	6.09	-	46.96	25.83	15.14	16.78	-	50.78	24.41	13.67	14.64	-
Average of 5 yrs.	60.23	21.10	10.88	4.94	-	62.16	17.30	15.18	11.95	-	50.78	17.18	3.35	14.61	-

PRIVATE SECTOR COTTON MILLS															
Yrs.	ASHRAF					CHAND					RAZ				
	% Mat. cost	% Lab. cost	% Over head cost	% Admn exp.	% Sell exp.	% Mat. cost	% Lab. cost	% Over head cost	% Adm. exp.	% Sell. exp.	% Mat. cost	% Lab. cost	% Over head cost	% Adm. exp.	% Sell. exp.
1982-83	62.50	14.22	14.05	2.15	0.08	60.75	11.59	13.26	1.12	0.05	64.64	10.71	13.02	10.40	0.10
1983-84	59.56	14.99	10.32	8.69	0.05	57.32	12.78	15.93	2.55	0.06	63.49	11.43	12.96	10.75	0.06
1984-85	47.87	12.11	9.20	4.43	-	63.99	14.69	14.28	3.59	0.02	62.99	15.11	12.49	11.75	0.08
1985-86	30.00	12.35	7.30	3.30	0.03	56.01	20.13	10.79	3.50	0.01	68.85	21.44	11.96	12.66	0.14
1986-87	26.00	13.05	3.22	3.22	-	54.88	20.74	16.90	3.49	0.01	62.48	20.42	11.12	13.06	0.20
Average of 5 yrs.	45.18	13.38	8.81	2.71	0.01	58.59	15.98	14.19	2.85	0.02	62.89	15.78	12.31	11.72	0.11

Source FACT Sheet of the selected cotton textile mills appendix VI to XII

N.B. (i) Cost has been calculated in relation to sales taking sales as 100 percent.

(ii) Administrative & Selling Expenses have been merged in the Annual Report of BTMC.

Table 6.18 depicts the comparative picture of cost breakdown ratio in the selected public and private sector cotton spinning mills during 1982-83 to 1986-87. Each element of cost has been expressed in relation to net sales figure. The average percentage of material, labour, production overhead and administrative expenses was found to be 61, 18.33, 13.13 and 10.50 respectively in the public sector cotton textile mills compared to 55.55, 15.04, 11.77 and 5.76 percent of the same in the private sector cotton textile mills respectively. The total cost of sales is equal to or some times higher than sales revenue in the selected cotton textile mills excepting Monno(old) textile in the public sector and Ashraf and Chand textiles in the private sector. The findings show the cost of sales of all the selected cotton textile mills both in public and private sector is very high which leaves very low and negative margin for the cotton textile mills. But the position is little bit better in private sector compared to public sector.

2

6.5 Comparative efficiency test through X between public and private sector enterprises.

2

The Chi-Squire (X) test of significance.

Chi-square test has been used to test the significance of differences between public and private sector jute and cotton textile mills respectively with respect to inventory, receivables and cash policy and their suggested norms by the respondents.

The analysis shows that there is no association between public and private sector jute and cotton textile mills with regard to working capital management policy.

Therefore, the main conclusion which emerges is that, in terms of inventory, receivables and cash policy, public sector jute and cotton mills do not vary significantly with private sector mills. So, the hypothesis is accepted.

Detailed Chi-square Analysis is shown below:

Here Chi-square χ^2 analysis has been done to test interdependence i.e. association between the attributes. As a line of demarcation 5% and 1% levels of significance are taken. Generally, for χ^2 - test degree of freedom is calculated by counting the number of cells except the last row and the last column (for our cases d.f. is thus 1).

The table value of χ^2 for 1 d.f. at 5% level of significance is 3.84 and at 1% level of significance is 6.64. If χ^2 computed is more than χ^2 table value, it indicates that the characteristics are dependent.

Null hypothesis is that the two characteristics are independent. According to the hypothesis if the two characteristics are independent the proportion of cell frequencies to the class frequencies will remain constant for all the classes. On the basis of this criterion the expected frequencies are calculated for each cell of the table. Now χ^2 will give the extent of discrepancies between observed frequencies and expected frequencies. If the observed (calculated) value of χ^2 is less than the theoretical value of χ^2 (table value) we accept the hypothesis. On the contrary, if χ^2 table value is more than the observed value, the hypothesis is rejected i.e. the characteristics under consideration are dependent.

The following tables present the χ^2 calculation and the analysis is given underneath of each table.

6.19 Lack of Inventory Management Policy

Table 6.24 showing observed and expected frequency

Jute mills	Agree		Disagree		Total
	Observed	Expected	Observed	Expected	
public	10	10.11	2	1.89	12
Private	6	5.89	1	1.11	7
Total	16	16	3	3	19

Table showing calculation of

$$\chi^2 = \frac{\sum \frac{(O - E)^2}{E}}$$

Jute mills	Agree	Disagree	Total
Public	9.89	2.12	12.01
Private	6.11	0.09	7.01
Total	16	3.02	19.02

$$\chi^2 = 19.02 - 19 = 0.02 \quad 3.84 \text{ So "agree" or "disagree"}$$

to the lack of inventory management policy is not associated with sectoral (whether public or private) position.

Table 6.20 Lack of Receivables Management Policy

Table 6.20 showing observed and expected frequency

Jute mills	Agree		Disagree		Total
	Observed	Expected	Observed	Expected	
Public	10	10.00	2	2.00	12
Private	5	5.00	1	1.00	6
Total	15	15	3	3	18

In this case, $\chi^2 = 0$, which means no interrelation exists between the characteristics.

6.21 Lack of proper Cash Management policy.

Table 6.26 showing observed and expected frequency.

Jute mills	Agree		Disagree		Total
	Observed	Expected	Observed	Expected	
Public	8	8	4	4	12
Private	4	4	2	2	6
Total	12	12	6	6	18

Table showing $\chi^2 = 0$ same as above. So $\chi^2 = 0$
E

No association between the characteristics.

6.22 Lack of proper inventory management policy between public and private sector cotton mills.

Table 6.22 showing observed and expected frequency.

Cotton mills	3 months		6 months		Total
	Observed	Expected	Observed	Expected	
Public	10	9.43	1	1.57	11
Private	2	2.57	1	0.43	3
Total	12	12	2	2	14

2
0
-
E

showing calculation of

Cotton mills	1 month	6 months	Total
Public	5.85	4.16	10.01
Private	2.16	0.87	3.03
Total	8.01	5.03	13.04

$$X^2 = 13.04 - 13 = 0.04 \quad 3.84$$

So, cited for receivables are not associated with sectoral position of cotton mills.

6.24 Lack of proper cash management policy between the selected public and private jute mills.

Table 6.24 showing observed and expected frequency.

Cotton mills	Upto 10 days		Upto 20 days		Total
	Observed	Expected	Observed	Expected	
Public	5	5.33	3	2.67	8
Private	3	2.67	1	1.33	4
Total	8	8	4	4	12

showing calculation of

2
0
-
E

Cotton mills	Upto 10 days	Upto 20 days	Total
Public	4.70	3.37	8.074
Private	3.37	0.75	4.127
Total	8.07	4.12	12.19

$$X^2 = 12.19 - 12 = 0.19 \quad 3.84$$

So mentioned for cash in hand is not associated with sectoral position of textile mills.

6.6. Summary.

The main points have emerged from this chapter are summarised below.

First, when percentage of investment in working capital is considered as a whole, there seems to be little or no difference between public and private sector jute mills. But there is a bit difference between public and private sector cotton mills during the period under review. The analysis reveals that there has been a higher percentage of investment in working capital in both the selected public and private sector jute and cotton textile mills.

Secondly, there were only minor variations between public and private sector jute mills with regard to average percentage of inventory to working capital. But there was some variation of

average percentage of inventory to working capital between public and private sector cotton mills. The average percentage inventory to working capital was much higher in public sector cotton mills compared to private sector.

Thirdly, when average percentage of receivables to working capital is considered, there seems to be little difference (only 2 percent) between public and private sector jute mills during the study period. But the average percentage of receivables to working capital was much higher in some public sector cotton mills compared to private sector. Receivables management was found to be more efficient in two private sector cotton textile mills compared to public sector.

Fourthly, in terms of cash management, public sector jute mills were not different from private sector. It was found that percentage of cash to working capital was very much low in both public and private sector jute mills under the study.

But there was a little bit difference between the average percentage of cash to working capital between public and private sector cotton mills. The average percentage of cash to working capital was 11.35 and 7.20 in the selected public and private cotton textile mills respectively during the study period. The average percentage of cash to working capital was only 0.84 in private sector Ashraf Textile Mills compared to 23.09 percent in Satrang Textile mills under public sector.

The Chi-Square, test also confirm that there is no significant variation between public and private sector jute and cotton textile mills with regard to the management of inventory, receivables and cash components of working capital. But the cost analysis revealed that private sector jute mills show higher prices of raw jute cost compared to public sector in order extract undue concessions from the Government in terms of compensation for loss, to get cheap bank loan and to evade payment of taxes. But wages, salary, repairs and power cost were found higher in public sector jute mills compared to private sector.

THE SUGGESTED MODEL

7.1 INTRODUCTION:

The present deplorable state of affairs in the selected public enterprises of jute and cotton mills under the administrative control of Bangladesh jute and textile mills corporations respectively are not expected to be continued for long. Our analysis and findings in chapter five and six confirm that working capital management is one of the major problem area not only in public sector jute and cotton textile industries, but most of the private sector jute and cotton textile mills have been suffering from the problem of working capital management.

7.2 THE DESCRIPTIVE MODEL:

A wayout is, therefore, an immediate necessity. In order to streamline the existing working capital management in practice a descriptive operational model is suggested.

7.2.1 CONTROL AND MANAGEMENT OF INVENTORY.

To bring down the overstocking of inventories to normal level, the individual units are expected to establish an 'Integrated inventory management Department' so as to introduce

to direct control measure under the direct supervision of a responsibel officer. The existing staff of the department is to be given proper training. The most important changes required relates to the adoption of various techniques of inventory management. Standardisation and variety reduction should be made. To implement this policy a 'seperate cell' may nbe established. For the better planning and control of inventory, the management should set up minimum, maximum, re-order levels, safety stock and danger levels for each items of inventory. For proper management and control of stores items of inventory individual units are expected to group the inventory items into ABC analysis.

For better management of inventories from the clutches of enviornemtnal constraints the following guidelines are suggested:-

- (i) To minimise the excess accumulation of work-in-process, efforts should be made to prevent frequent power failure and mechanical troubles leading to looms and machine hour lost.
- (ii) For the quick shipment of finished jute goods, better shipping facilities should be managed. This requires the attention of the Ministry of Jute, Port authority and the Bangladesh Jute mills corporation.

- (iii) A list of obsolete stores and spares must be made for each of the jute and cotton textile mills and these need to be separated from serviceable stores and spares.
- (iv) For quick import of raw cotton for textile mills and imported stores and spares, import licence and sanction of foreign exchange should be obtained in time.
- (v) Efforts must be made to increase the manufacture of stores and spares locally for cotton textile industries through sub-contracting.

7.2.2 MANAGEMENT OF RECEIVABLES.

For better receivables management, the selected units are expected to delegate the authority and responsibility to some specific department for determining the appropriate terms of credit and to frame a suitable collection policy.

However, the following guidelines may improve the receivables management:-

- (i) Steps should be taken to reduce the volume of credit sales and credit period which ranges between 30 to 180 days.
- (ii) Immediate steps should be taken to reduce the volume of advances, deposits and prepayments.

- (iii) Steps should be taken for preparing aging schedules of accounts receivables for controlling the volume of the same.
- (iv) For collecting accounts receivables some skilled Personnel will have to be entrusted with the task.
- (v) Specific credit and collection policy must be followed in all the jute and cotton mills and evaluation of the efficiency in sales and collection must be judged from time to time.
- (vi) Local consumption of jute goods should be increased to minimise the excessive dependence on export sales and from competition of synthetic products.
- (vii) Steps should be taken to produce quality jute products.
- (viii) Innovative market research should be undertaken to boost up the demand for jute goods both at home and abroad.

7.2.3 CONTROL AND MANGEMENT OF CASH.

To improve the liquidity position of the individual jute and cotton textile mills, the following guidelines are recommended:

- (i) Volume of cash maintained in the jute and cotton textile mills should be assessed on the basis of its operational requirements.
- (ii) Cash control devices should be introduced to ensure cash inflows and cash outflows. Internal control of cash through annual cash budget, quarterly budget usage statement and monthly cash flows statement, cash budget and budget variance analysis should be maintained.
- (iii) The large volume of inventories and receivables would have to be reached to that level as per suggested model /norms prescribed by us. (Table 7.1)
- (iv) The frequent analysis of current and liquid ratios will help in controlling the volume of cash. Efforts must be made to prevent cash losses through better planning and control of cash.

- 7.2.4 Financing of working capital should be based on specific research based norms as suggested by our model/norms in table 7.1. For determining the financing methods, it is recommended to use the guideline.
- 7.2.5 Steps should be taken to reduce the cost of operation and improve profit margin. Cost of production should be reduced through the effective cost control measures, such as standard costing and budgetary control systems.
- 7.2.6 Steps should be taken to improve the productive efficiency of jute and cotton textile mills through better supervision, quality control and improved labour management relations.
- 7.2.7 Efforts should be made to have better capacity utilisation through controlling the power failures, mechanical troubles, shortage of weavers and spares, strike and others.
- 7.2.8 Selling price should be competitive in the market, but at the same time should cover the cost of production and sales.

- 7.2.9 To improve the working finance conditions, the permanent portion of working finance i.e. the core current assets should be arranged in the forms of equity and long-term loan.
- 7.2.10 To improve the present condition, both the Government, Corporations, and the management of the selected jute and cotton textile mills must have to take a number of measures as suggested to run these mills on strictly commercial principles.
- 7.2.11 Export incentive like export bonus schemes may be introduced for jute industry.

Our overall conclusion is that the introduction of a long-term working capital management planning model is expected to be more effective in the spheres of working capital management of the jute and cotton textile industries in Bangladesh.

7.3 Suggested Model for Inventory Receivables and Cash.

Table 7.1 presents our suggested model for inventory, receivables and cash components of working capital management for public enterprises in jute and cotton textiles. This is a research based model/norms designed taking into account the following:

- (i) Process period of the jute and cotton textile mills,
- (ii) Discussion with the experts in the industries concerned.
- (iii) General discussions with the industry interest,
- (iv) Opinion survey report of the respondents.
- (v) Need for ensuring smooth production, depending upon the availability of the materials, seasonality, etc. and
- (vi) Reactions and feed back on a National Seminar on working capital management organised by the author himself.
- (vii) Studying the Tandon Committee Report of the Reserve Bank of India.

Our norms in table 7.1 represents the maximum period for holding inventory, receivables and cash for each industry.

The norms suggested by us will have to be applied flexibly and not rigidly, responsive to any major change in environmental and within the industry. We are unable to accept that uncertainties can be regarded as a reason for not laying down norms, an argument that some happily, not many placed before

us. In fact, the greater the uncertainties, the more is the need for planning model. The main objective to design an innovative model is to introduce a discipline in the maintenance of reasonable inventory, receivables and cash balance levels consistent with encouragement of production on the basis of helpful relationship between the provider of working capital gap, i.e. banker and the customer.

The approach for prescribing norms for different groups of inventory and receivables for both local and export sales and cash balance bristles with a variety of problem. But we hope, that there should be an understanding of the total problem and a firm and helpful approach can be built into the suggested model and its implementation.

Our suggested model although prescribe maximum period for holding inventory, receivables and cash in each industry, but this is not an entitlement to hold them upto this levles. If an individual mill can manage with less than the maximum, it should continue to do so. The suggested model is as follows:

Table 7.1 Suggested Model for Inventory Receivables and Cash.

INDUSTRY	INVENTORIES					Receivables maximum period		Cash for maxi. period.
	Raw mat. holding for maxi. period	Work-in-process for maxi. period	Finished goods for maxi. period	Stores & Spares		Local sales	Export sales	
			Local	Imported				
Jute	9 months	1/3 rd month or 10 days	2 months	6 months	1 month	2 month	1/3rd month or 10 days	
Cotton Textiles	4 months	1/2 month or 15 days	1 month	3 months	6 months	1 month	No export sales 1/3rd month or 10 days	

N.B. Although majority of the respondents suggested to hold raw jute for a maximum period of three months, but when we talked to top management of BJMC we were informed that as per the directives of the Government jute mills are bound to purchase raw jute from the growers and to hold it for a maximum period of 9 months, and they also viewed that purchasing raw jute at a time during harvesting season is also very much economical. As such, we have also recommended to hold raw jute inventory for a maximum period of 9 months in line with the Government policy.

7.4 ESTIMATE OF WORKING CAPITAL REQUIREMENT ACCORDING TO SUGGESTED MODEL AND COMPARISON WITH ACTUAL FIGURES THROUGH BACKWARD PROJECTION.

7.4.1 Tables 7.2 to 7.6 shows the calculation of estimated inventories, receivables and cash requirements of the selected public sector jute mills, while Tables 7.7 to 7.11 depict the estimated inventories, receivables and cash requirements of the selected public sector cotton textile mills according to our model. After estimating the required inventories, receivables and cash of the selected mills, a comparison has been made with actual figures to show excess/or shortage of inventories, receivables, and cash position of the selected mills. The analysis revealed that there was Tk. 1175 lakhs, Tk. 225 lakhs and Tk. 829 lakhs excess inventories held by big, medium and small jute mills respectively compared to our model during the period of study (See Tables 7.2.1, 7.3.1 and 7.4.1). It appears from the table 7.5 that there was excess receivables of Tk. 1866 lakhs in the selected jute mills during the study period, compared to required receivables as per our model. Out of excess receivables held by the mills Tk. 886 lakhs and Tk. 980 lakhs were blocked in trade debtors and advances respectively. The excess trade debtors was found Tk. 101, Tk. 260 and Tk. 525 lakhs in big, medium and small jute mills respectively. The excess investment in advances was Tk. 165, Tk. 140 and Tk. 675 lakhs in big, medium and small jute mills respectively during 1982-83 to 1986-87. It reveals from the study that highest investment in inventories was found in small mills and the same was lowest in big jute mills.

It appears from table 7.6 that there was huge shortage of cash amounting to Taka 1924 lakhs in the selected public sector jute mills compared to required cash balance as per our model. The highest cash shortage of Tk. 1137 lakhs was found in big mills and the lowest Tk. 310 lakhs was found in small jute mills. The medium jute mills had a cash shortage of Tk. 477 lakh during the study period.

Table 7.7.1 shows that there was excess inventories amounting to Tk. 373.5 lakhs and Tk. 206.5 lakhs in public sector Monno(old) and Quaderia Textile mills respectively. However, Satrang textile mills had a shortage of Tk. 54 lakhs inventories compared to our model. But, on the whole, selected cotton textile mills held excess inventories of Tk. 526 lakhs compared to the model. Table 7.10 reveals that there was excess receivables of Tk.242 lakhs in the selected cotton mills during the study period. The highest excess investment in receivables of Tk. 140 lakhs was found in Monno(old) textile mills, while the lowest of Tk.26 lakhs was in Satrang textile mills. The excess trade debtors of Tk.80 lakhs was found in Monno(old) textile mills, but there was shortage of trade debtors of Tk. 28 lakh and Tk. 17 lakhs in Quaderia and Satrang textile mills respectively. The excess investments in advances was found Tk.60 lakhs, Tk. 121 lakhs and Tk.26 lakhs in Monno(old), Quaderia and Satrang textile mills respectively during the period of study.

It appears from the table 7.11 that huge cash shortage amounting to Tk. 191.94 lakhs was found in Monno(old) textile mills but excess cash of Tk. 80 lakhs and Tk. 196 lakhs were found in Quaderia and Satrang textile mills compared to our model. On the whole, excess cash held by the selected mills was Tk. 84.06 lakhs during the period of study.

Out of above analysis, it may be concluded that there was huge over investment of funds in inventories, receivables but there was huge shortage of cash components of working capital in the selected public sector jute mills during the study period compared to our model.

In cotton textile mills there was over investment of fund in inventories in Monno(old) and Quaderia, but Satrang textile had shortage of inventories. A huge fund was found blocked in receivables of Monno(old) and Quaderia textile mills, but investment in receivables was found shortage of Tk.26 lakhs only in Satrang textile mills. Huge cash shortage was found in Monno(old), but there was huge excess cash of Tk.80 lakhs and Tk. 196 lakhs in Quaderia and Satrang Textile mills respectively. Cash planning was found very ineffective in the selected mills.

7.4.2 Demonstrated savings out of blocked excess investment on inventories, receivables and cash.

The selected jute mills could save Tk. 574.42 lakhs as interest only out of excess investment in inventories and receivables as calculated under:

	Tk. in lakh
(i) Inventories Tk.2229 at 14%	= 312.06
(ii) Receivables Tk.1866 at 14%	= 261.24
Total:	<u>Tk.573.30</u>

The selected cotton textile mills could save Tk. 119.29 lakhs as interest only out of excess investments in inventories, receivables and cash as calculated under:

(i) Inventories Tk. 526 lakhs(net) at 14%	= Tk.73.64
(ii) Receivables Tk.242 lakhs(net) at 14%	= Tk.33.88
(iii) Cash Tk. 84.06 (net) at 14%	= Tk.11.77
Total:	<u>Tk.119.29</u>

7.4.3 IMPACT OF MODEL ON NET PROFIT/(LOSS) OF JUTE MILLS.

	Tk. in lakh
(i) Net profit/(loss) of Latif Bawany Jute Mills during 1982-83 to 1986-87	= (215.92)
(ii) Net profit/(loss) of Karim Jute mills during 1982-83 to 1986-87	= (849.54)
(iii) Net profit/(loss) of Nabarun jute mills during 1982-83 to 1986-87	= (90.46)
Total accumulated Net loss as per actual	= (Tk.1155.92)
Less: Savings out of interest income + out of excess inventories & receivables	573.30
Accumulated Net loss as per model	<u>(582.62)</u>

7.4.4 Impact of Model on cash flow of the selected jute mills during 1982-83 to 1986-87

	Tk. in lakh

(i) Total cash flows of Latif Sawany Jute mills (big mills) during 1982-83 to 1986-87	(4.96)
(ii) Total cash flows of Karim jute mills	(747.42)
(iii) Total cash flows of Nabarun Jute mills	(443.37)
Actual Total accumulated cash flows	(1195.75)
Add: Savings out of interest income on excess inventories, receivables	573.30
Accumulated net negative balance of cash flows as per suggested Model	(622.45)

7.4.5 IMPACT OF MODEL ON NET PROFIT/(LOSS) OF COTTON TEXTILE MILLS.

	Tk. in lakh

(i) Net profit/(loss) of Monno(old) Tex. Mills during 1982-83 to 1986-87 =	177.12
(ii) Net profit/(loss) of Quaderia Tex. mills during 1982-83 to 1986-87 =	(29.51)
(iii) Net profit/(loss) of Satrang Tex. mills during 1982-83 to 1986-87 =	(31.56)
Total accumulated Net profit/(loss) of three mills as per actual	= Tk.116.05
Less: Savings out of interest income on excess inventories, receivables and cash	119.29
Accumulated Net profit would have been Tk.235.34 lakhs as per our model instead of Tk. 116.05 lakhs.	235.34

7.4.6 Impact of Model on cash flow of the selected Cotton Tex. Mills during 1982-83 to 1986-87

	Tk. in lakh

(i) Total cash flows of Monno(old) Tex. mills during 1982-83 to 1986-87	40.17
(ii) Total cash flows of Quaderia Tex. mills	(505.60)
(iii) Total cash flows of Satrang Tex. mills	(1108.25)
Actual Total accumulated cash flows	(1573.68)
Add: Savings out of interest income on excess inventories, receivables	119.29
Accumulated net negative balance of cash flows as per suggested Model	(1454.39)

7.4.7 Impact of model on Net profit and cash flows:

BY testing our model with actual figures, it has been found that there was over investment of Tk. 2229 lakhs and Tk. 1866 lakhs in inventories and receivables respectively in the selected public sector jute mills during the study period. The selected jute mills could save Tk. 574.42 lakhs as interest income if the aforesaid fund was not blocked in the two major components of working capital. The savings would have been more, if we could calculate insurance cost, holding cost, shortage/or pilferage of inventories. Moreover, Table 7.12.1 reveals that only the big jute mills availed excess bank borrowings of Tk. 1171 lakhs in 1987. If the excess bank borrowings was not taken the said mills, could save interest expense of Tk. 105.39 lakhs (at 9% subsidised rate), which would contribute to profitability.

By analysing the impact of our model on the selected jute mills, it is revealed that the jute mills could reduce accumulated balance of loss by fifty percent by reducing the loss to Tk. 581.50 lakhs from Tk.1155.92 lakhs. Similarly net negative cashflows would have been reduced to Tk. 621.33 lakhs from Tk.1195.75 lakhs.

By testing our model in cotton textile mills, it is revealed that the said mills could save Tk. 119.24 lakhs as interest income out of the excess blocked fund of inventories, receivables and cash components of working capital.

By testing our model of net profit/loss, it is revealed that accumulated net profit as per model would have been Tk. 235.3 lakhs instead of actual figure of Tk. 116.05 lakhs in the selected cotton mills during the study period. Similarly total negative cash flows would have been reduced to Tk. 1434.39 lakhs instead of actual figure of Tk. 1573.68 lakhs.

7.4.8 IMPACT OF MODEL ON THE ECONOMY AS A WHOLE

The excess bank borrowings of the jute mills at 9 percent subsidized interest rate has an impact on the economy as a whole. The high inflationary rate (12%) in the economy of Bangladesh as a result of huge increase in price levels may be partially responsible for excess bank borrowings by the public and private enterprises of jute and cotton textile industries, as the two industries constitute more than seventy percent of the industrial sectors of the country.

LATIF BAWANY JUTE MILLS

Table 7.2 Showing the estimated maximum inventories requirement as per the suggested planning and the excess inventories held (through backward projection) during 1982-83 to 1986-87.

Category	Year																
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992							
(I) RAW MATERIAL	119	126	127	140	147	181	183	220	247	316	308	371	17	14	15	14	17
(II) WORK-IN-PROCESS	42	47	49	60	61	220	247	316	308	371	34	28	30	28	34	34	34
(III) FINISHED GOODS	42	47	49	60	61	220	247	316	308	371	34	28	30	28	34	34	34
(IV) STORES AND SPARES	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34

TK. in lakh

Table 7.2.1 Estimated required inventories as per Model and excess inventories actually held during 1982-83 to 1986-87.

Category	Year			
	1983	1984	1985	1986
(I) Raw Material	846	954	1854	1071
(II) Work-in-Process	42	47	49	60
(III) Finished Goods	220	247	316	308
(IV) Stores & spares	34	28	30	28
Total Inventories as per model	1142	1276	2249	1467
Stock actually held	1194	1272	1925	2578
Excess/(shortage) of Inventories	48	(4)	(324)	1011

= 1175

2044

KARIM JUTE MILLS (MEDIUM MILLS)

Table 7.3 Showing the estimated maximum Inventories requirement as per the suggested planning and the excess inventories held (through backward projection) during 1982-83 to 1986-87.

Category	Year									
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
(I) RAW MATERIAL	60	112	73	57	64	75	87	105	102	110
(II) WORK-IN-PROCESS	47	60	112	73	57	64	75	87	105	102
(III) FINISHED GOODS	18	18	18	18	18	18	18	18	18	18
(IV) STORES AND SPARES	20	20	20	20	20	20	20	20	20	20
Max. Inventory	102	112	73	57	64	75	87	105	102	110
Avg. Inventory	47	60	112	73	57	64	75	87	105	102
Max. Inventory	1	1	1	1	1	1	1	1	1	1
Period	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
to be	1	1	1	1	1	1	1	1	1	1
Period	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
as per	1	1	1	1	1	1	1	1	1	1
design-	1	1	1	1	1	1	1	1	1	1
ed	1	1	1	1	1	1	1	1	1	1
model	1	1	1	1	1	1	1	1	1	1

TK. in lakh

Table 7.3.1 Estimated required inventories as per Model and excess inventories actually held during 1982-83 to 1986-87.

TK. in lakh

Category	Year			
	1983	1984	1985	1986
(I) Raw Material	423	540	998	657
(II) Work-in-Process	21	25	29	35
(III) Finished Goods	110	123	181	206
(IV) Stores & spares	18	18	18	20
Total Inventories as per model	572	706	1226	918
Stock actually held	496	844	1170	1081
Excess/(shortage) of Inventories	(76)	138	(56)	163

TK. in lakh

NABARUN JUTE MILLS (SMALL MILLS)

Table 7.4 Showing the estimated maximum inventories requirement as per the suggested planning and the excess inventories held (through backward projection) during 1982-83 to 1986-87.

Category	1983					1984					1985					1986					1987				
	Jan	Feb	Mar	Apr	May	Jan	Feb	Mar	Apr	May	Jan	Feb	Mar	Apr	May	Jan	Feb	Mar	Apr	May	Jan	Feb	Mar	Apr	May
(I) RAW MATERIAL	19	22	22	22	22	19	22	22	22	22	19	22	22	22	22	19	22	22	22	22	19	22	22	22	22
(II) WORK-IN-PROCESS	29	33	33	33	33	29	33	33	33	33	29	33	33	33	33	29	33	33	33	33	29	33	33	33	33
(III) FINISHED GOODS	47	48	44	44	44	47	48	44	44	44	47	48	44	44	44	47	48	44	44	44	47	48	44	44	44
(IV) STORES AND SPARES	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Max. Inventory	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Period to be tied up as per design model	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m	x 9m

Tk. in lakh

Table 7.4.1 Estimated required inventories as per Model and excess inventories actually held during 1982-83 to 1986-87.

Category	1983					1984					1985					1986					1987				
	Jan	Feb	Mar	Apr	May	Jan	Feb	Mar	Apr	May	Jan	Feb	Mar	Apr	May	Jan	Feb	Mar	Apr	May	Jan	Feb	Mar	Apr	May
(I) Raw Material	171	198	198	198	198	171	198	198	198	198	171	198	198	198	198	171	198	198	198	198	171	198	198	198	198
(II) Work-in-Process	10	11	11	11	11	10	11	11	11	11	10	11	11	11	11	10	11	11	11	11	10	11	11	11	11
(III) Finished Goods	44	54	54	54	54	44	54	54	54	54	44	54	54	54	54	44	54	54	54	54	44	54	54	54	54
(IV) Stores & spares	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Total Inventories as per model	233	273	273	273	273	233	273	273	273	273	233	273	273	273	273	233	273	273	273	273	233	273	273	273	273
Stock actually held	356	397	397	397	397	356	397	397	397	397	356	397	397	397	397	356	397	397	397	397	356	397	397	397	397
Excess/(shortage) of Inventories	123	124	124	124	124	123	124	124	124	124	123	124	124	124	124	123	124	124	124	124	123	124	124	124	124

Tk. in lakh

Years	LBM(Big)	KJM(Medium)	NBM(Small)	Total			
1982-83	234.30	122.70	83.28	61.20	52.30		
1983-84	257.10	170.32	126.60	114.56	67.80	66.53	
1984-85	294.90	254.97	157.50	155.61	81.00	100.48	
1985-86	319.50	340.95	183.30	162.65	88.20	100.60	
1986-87	360.00	292.59	180.30	135.57	80.40	92.75	
Total as per model	1466	1240	770	650	300	415	4841
Total as per actual	1567	1405	1030	790	825	1090	6707
Total Excess	101	165	260	140	525	675	1866

Table 7.5 Showing the required investment in Accounts receivables as per suggested model in the selected jute mills and the excess amount actually held during 1982-83 to 1986-87.

Table 7.6 Showing the required investment in Cash as per suggested guidelines in the selected public sector Jute mills and the excess/(shortage) of cash actually held during 1982-83 to 1986-87.

Years	LBJM(Big)			KJM(Medium)			NBJM(Small)		
	Req.	Act.	Excess/Shortage	Req.	Act.	Excess/Shortage	Req.	Act.	Excess/Shortage
1982-83	181.27	22.68	(158.59)	83.28	28.77	(54.51)	52.30	13.04	(39.26)
1983-84	170.32	13.20	(157.12)	114.56	13.57	(100.99)	66.53	14.93	(51.60)
1984-85	254.97	16.76	(238.21)	155.61	5.55	(150.06)	100.48	30.17	(70.31)
1985-86	340.95	28.20	(312.75)	162.65	57.28	(105.37)	100.60	10.99	(89.61)
1986-87	292.59	22.26	(270.33)	135.57	69.00	(66.57)	92.75	37.70	(59.05)
Total	1240.10	103.10	(1137)	651.61	174.17	(476.44)	412.66	102.83	(309.83)

as per model

* Total cash shortage Tk. 1924 lakhs and required cash has been estimated on the basis of 10% of Current assets.

Table 7.7 Showing the estimated maximum inventories requirement as per the suggested planning and the excess inventories held(through backward projection) during 1982-83 to 1986-87.

Inventory Category	Year											
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
(I) RAW MATERIAL	35	34	43	83	23	13	15	18	20	21	49	48
(II) WORK-IN-PROCESS	35	34	43	83	23	13	15	18	20	21	49	48
(III) FINISHED GOODS	35	34	43	83	23	13	15	18	20	21	49	48
(IV) STORES AND SPARES	35	34	43	83	23	13	15	18	20	21	49	48
Av. mon-ly req-	35	34	43	83	23	13	15	18	20	21	49	48
Max. period x 4m	1	1	1	1	1	1	1	1	1	1	1	1
to be tied up as per =140	1	1	1	1	1	1	1	1	1	1	1	1
design- ed model	12	12	12	12	12	12	12	12	12	12	12	12

Tk. in lakh

Table 7.7.1 Estimated required inventories as per Model and excess inventories actually held during 1982-83 to 1986-87.

Inventory Category	Year				
	1983	1984	1985	1986	1987
(I) Raw Material	140	136	172	116	92
(II) Work-in-Process	6.5	7.5	9	10	10.5
(III) Finished Goods	49	48	52	54	57
(IV) Stores & spares	12	12	12	12	12
Total Inventories as per model	207.5	163.5	245	192	171.5
Stock actually held	134	261	549	277	132
Excess/(shortage) of Inventories	(73.5)	97.5	85	(39.5)	=Tk.373.5 lakhs excess stock held

Tk. in lakh

QUADERIA TEXTILE MILLS

Table 7.8 Showing the estimated maximum inventories requirement as per the suggested planning and the excess inventories held (through backward projection) during 1982-83 to 1986-87.

Year	Raw Material		Work-in-Process		Finished Goods		(iv) Stores and Spares	
	Av. mon-35	Av. mon-35	Av. mon-35	Av. mon-35	Av. mon-35	Av. mon-35	Av. mon-35	Av. mon-35
1983	35	31	27	21	11	13	14	17
1984	35	31	27	21	11	13	14	17
1985	35	31	27	21	11	13	14	17
1986	35	31	27	21	11	13	14	17
1987	35	31	27	21	11	13	14	17
1988	35	31	27	21	11	13	14	17
1989	35	31	27	21	11	13	14	17
1990	35	31	27	21	11	13	14	17
1991	35	31	27	21	11	13	14	17
1992	35	31	27	21	11	13	14	17
1993	35	31	27	21	11	13	14	17
1994	35	31	27	21	11	13	14	17
1995	35	31	27	21	11	13	14	17
1996	35	31	27	21	11	13	14	17
1997	35	31	27	21	11	13	14	17
1998	35	31	27	21	11	13	14	17
1999	35	31	27	21	11	13	14	17
2000	35	31	27	21	11	13	14	17
2001	35	31	27	21	11	13	14	17
2002	35	31	27	21	11	13	14	17
2003	35	31	27	21	11	13	14	17
2004	35	31	27	21	11	13	14	17
2005	35	31	27	21	11	13	14	17
2006	35	31	27	21	11	13	14	17
2007	35	31	27	21	11	13	14	17
2008	35	31	27	21	11	13	14	17
2009	35	31	27	21	11	13	14	17
2010	35	31	27	21	11	13	14	17
2011	35	31	27	21	11	13	14	17
2012	35	31	27	21	11	13	14	17
2013	35	31	27	21	11	13	14	17
2014	35	31	27	21	11	13	14	17
2015	35	31	27	21	11	13	14	17
2016	35	31	27	21	11	13	14	17
2017	35	31	27	21	11	13	14	17
2018	35	31	27	21	11	13	14	17
2019	35	31	27	21	11	13	14	17
2020	35	31	27	21	11	13	14	17

TK. in lakh

Table 7.8.1 Estimated required inventories as per Model and excess inventories actually held during 1982-83 to 1986-87.

Year	Raw Material		Work-in-Process		Finished Goods		(iv) Stores & spares		Total Inventories as per model		Stock actually held		Excess/(shortage) of Inventories	
	(i)	(ii)	(iii)	(iv)	(i)	(ii)	(iii)	(iv)	Total	Model	Actual	Excess	Shortage	
1983	140	5.5	46	12	140	5.5	46	12	203.5	203.5	132	36.5	(71.5)	
1984	140	6.5	47	12	140	6.5	47	12	205.5	205.5	241	36.5		
1985	124	7	38	12	124	7	38	12	181	181	386	205		
1986	98	8.5	50	12	98	8.5	50	12	168.5	168.5	193	24.5		
1987	84	9	39	12	84	9	39	12	144	144	158	14		

TK. in lakh

=Tk. 206.5 lakhs excess stock held

SATRANG TEXTILE MILLS

Table 7.9 Showing the estimated maximum inventories requirement as per the suggested planning and the excess inventories held (through backward projection) during 1982-83 to 1986-87.

Year	RAW MATERIAL					WORK-IN-PROCESS					FINISHED GOODS					(IV) STORES AND SPARES				
	Av. mon-25	26	27	28	29	Av. mon-25	26	27	28	29	Av. mon-25	26	27	28	29	Av. mon-25	26	27	28	29
1983	25	26	27	28	29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1984	26	27	28	29	30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1985	27	28	29	30	31	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1986	28	29	30	31	32	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1987	29	30	31	32	33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1988	30	31	32	33	34	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1989	31	32	33	34	35	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1990	32	33	34	35	36	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1991	33	34	35	36	37	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1992	34	35	36	37	38	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1993	35	36	37	38	39	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1994	36	37	38	39	40	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1995	37	38	39	40	41	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1996	38	39	40	41	42	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1997	39	40	41	42	43	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1998	40	41	42	43	44	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1999	41	42	43	44	45	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2000	42	43	44	45	46	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

TK. in lakh

Table 7.9.1 Estimated required inventories as per Model and excess inventories actually held during 1982-83 to 1986-87.

Year	INVENTORIES					Shortage (54) of stocks as per model
	(I) Raw Material	(II) Work-in-Process	(III) Finished Goods	(IV) Stores & spares	Total Inventories as per model	
1983	100	6.5	39	6	151.5	(49.5)
1984	104	5.5	37	12	158.5	(22.5)
1985	108	6	33	12	159	27
1986	104	7	46	6	153	(21)
1987	88	8	37	6	139	151

Shortage (54) of stocks as per model

Table 7.10 Showing the required investment in Accounts receivables as per suggested model in the selected cotton mills and the excess amount actually held during 1982-83 to 1986-87.

Years	MONNO (OLD)			QUADERIA			SATRANG			Total
	Trade debtors	Advances	Trade debtors	Advances	Trade debtors	Advances	Trade debtors	Advances		
1982-83	54	33	47	36	39	24				
1983-84	53	43	50	51	44	25				
1984-85	57	87	43	62	43	37				
1985-86	52	56	52	45	48	34				
1986-87	54	45	45	42	42	27				
Total as per model	54	53	47	47	43	29				
Total as per actual	134	113	19	168	26	55				
Total Excess	80	60	(28)	121	(17)					
Total average excess receiv. Tk. 242 lakh.										

Total excess cash held by the Mills: Tk. 84.06 Lakh.

Years	MONNO (OLD)			BUADERIA			SATRANG		
	Req.	Act.	Excess/Shortage	Req.	Act.	Excess/Shortage	Req.	Act.	Excess/Shortage
1982-83	33	37	4	36	52	16	24	83	59
1983-84	43	33	(10)	51	90	39	25	42	17
1984-85	87	2	(85)	62	49	(13)	37	102	65
1985-86	56	0.5	(55.5)	45	64	19	34	99	65
1986-87	45	0.01	(44.99)	42	61	19	27	17	(10)
Total	264	72.51	(191.94)	236	316	80	147	343	196
as per model									

TK. in Lakh

Table 7.11 Showing the required investment in Cash as per suggested guides in the selected public sector cotton mills and the excess/(shortage) of cash actually held during 1982-83 to 1986-87.

TK. in lakh

Years	MONNO (OLD)			GUADERIA			SATRANG		
	Req.	Act.	Excess/Shortage	Req.	Act.	Excess/Shortage	Req.	Act.	Excess/Shortage
1982-83	33	37	4	36	52	16	24	83	59
1983-84	43	33	(10)	51	90	39	25	42	17
1984-85	87	2	(85)	62	49	(13)	37	102	65
1985-86	56	0.5	(55.5)	45	64	19	34	99	65
1986-87	45	0.01	(44.99)	42	61	19	27	17	(10)
Total	264	72.51	(191.94)	236	316	80	147	343	196

Total excess cash held by the mills: Tk. 84.06 lakh.

Table 7.11 Showing the required investment in Cash as per suggested guides in the selected public sector cotton mills and the excess/(shortage) of cash actually held during 1982-83 to 1986-87.

*Is this not
standing on
gross liabilities
to be covered
by
the theory and the core current assets should be financed
out of long term funds.*

(iii) Same as (ii) above, but excluding core current assets on

(ii) The individual public enterprise is to provide for a minimum of 20 percent current assets out of long term funds. A certain level of credit for purchases and other current liabilities will be available and the bank will provide the balance. Total current liabilities inclusive of bank borrowings will not exceed 80 percent of current assets.

(i) The individual public enterprise can work out the working capital gap, i.e. total current assets less current liabilities other than bank borrowings, and ask for bank finance a maximum of 80 percent of gap; the balance to come out of long term loan and equity sources.

7.5 Our proposed approach leading to a model for taking case credit from commercial banks:
In order to carry a reasonable level of current assets in relation to production requirements, the maximum permissible limit of bank borrowings (cash credit/overdraft) could be found out under the three following methods.

7.6.1 Analysis of proposed three methods.

In Model I (Table 7.12.1) the borrowers will have to contribute a minimum of 20 percent of the working capital gap from the long term sources and the balance 80 per cent will be financed by the bank. In Method II, the borrower will have to provide a minimum of 20 percent of total current assets from long term sources and the gap will be provided by the bank. This will strengthen the current ratio from 1st Method. In the III, borrower's contribution from long term funds will be to the

per our presentation in table 7.12.

borrowings has not to be made according to companies Act, but as and current liabilities for calculating permissible level of bank projected balance sheet, and the classification of current assets sheets as on 30th June, 1987. But, the model should be based on selected cotton textile mills as reflected in their balance current liabilities of one of our selected jute mills and one model, we have used the actual figures of current assets and more meaningful and considering the practical operation of our example of borrower's financial position. To make the analysis three alternatives have been illustrated by taking the following bank borrowing will not exceed 80 percent of current assets. This based on our suggested norms and current liabilities inclusive assets, i.e. inventory receivables and cash should be worked a It should be borne in mind that the projected current

extent of the entire 'core' current assets, and a minimum of 20 percent of the balance of current assets, thus strengthening the current ratio further. This is evident from our calculation shown in table 7.12.1 and 7.13.1 from illustration of Latif Bawany Jute mills, and Monno(old) cotton textile mills respectively.

Table 7.13 depicts the statement of current assets and current liabilities of Monno(old) cotton textile mills. Methods of determining maximum permissible bank borrowings on the basis of table 7.13 has been presented in table 7.13.1. The calculation shows that Monno(old) textile did not utilise the maximum permissible limit of bank borrowings. In spite of low bank borrowings, the position of current ratio did not improve, because the current liabilities is about 93 percent of current assets which has exceeded our suggested norm of 80 percent. It is suggested that individual cotton textile mills should project its current assets and current liabilities as per our guideline.

A beginning may be made with 1st method, placing all borrowers in this method within a period of about one year and the ideal of 3rd method may be reached in stages. The liberal approach under 1st method has been suggested as a first step, particularly to facilitate financial structuring of new companies, setting up project in backward areas and mainly for flexibility in restructuring of existing companies with a weak financial base, especially for already sick public sector jute and cotton textile enterprises. However the aim should be to move

forward and borrowers in the third or second category should not revert to first or second category respectively by increasing their dependence on bank borrowings. A request for additional credit on a regular basis from a borrower who already has an excess borrowing under any of the three methods may be considered provided the borrower brings in matching contribution required under relevant method of lending.

LATIF BAWANY JUTE MILLS

Table 7.12 Statement of Current Assets & Current Liabilities as on 30th June, 1987.

Taka in lakh			
Current liabilities	Taka	Current assets	Taka
Creditors for goods	72.00	Inventories	2045.00
Other current liab.	1244.00	Receivables	810.00
Bank borrowings (cash credit)	1994.00	Other current assets	73.00
Total	3310.00		2928.00

Table 7.12.1 Methods of Determining Bank borrowing.

Take in lakh					
Ist Method	Tk.	2nd Method	Tk.	3rd Method	Tk.
Total current assets	2928	Total current assets	2928	Total current assets	2928
less current liabilities other than cash credit	1244	20% of the above from long-term sources	586	less core current assets (25% illustrative figure from long-term sources)	732
Working capital gap	1684	less current lib. other than bank borrowings	1244	Real current assets)	2196
20% of the above from equity/loan (i.e. long-term sources)	337	Working capital gap.	1098	20% of above from long-term sources	439
Maximum bank permissible borrowings	1347	Maximum bank borrowings permissible	1684	Less current lib. other than bank borrowings	1757
					513
				Working capital gap	1684
				Maximum bank borrowing permissible	513
Excess bank borrowings	647	Excess bank borrowings	586	Excess borrowings	1171
Current ratio 1.09:1		Current ratio 1.21:1		Current ratio 1.60:1	

Monno (old) Cotton textile Mills

Table 7.13 Statement of Current Assets & Current Liabilities
as on 30th June, 1987.

Current liabilities	Taka in lakh	Current assets	Taka in lakh
Creditors for goods	169	Inventories	132
Other current liab.	175	Receivables	167
Bank borrowings (cash credit)	76	Other current assets	152
Total	420		451

Table 7.13.1

Ist Method

Total current assets

less current liabilities other than capital credit

Working capital gap

20% of the amount from equity/loan (i.e. long term sources)

Maximum permissible borrowing

Shortage of bank borrowing

Current ratio

Table 7.13.1 Methods of Determining Bank borrowing.

Taka in lakh					
Ist Method	Tk.	2nd Method	Tk.	3rd Method	Tk.
Total current assets	451	Total current assets	451	Total current assets	451
less current liabilities other than cash credit	175	20% of the above from long-term sources	90	less core current assets (25%) illustrative figure from long-term sources	113
Working capital gap	276	less current lib. other than bank borrowings	175	Real current assets	338
20% of the above from equity/loan (i.e. long-term sources)	55	Working capital gap.	276	20% of above from long-term sources	68
Maximum permissible borrowing	221	Maximum bank borrowings permissible	106	Less current lib. other than bank borrowings	175
					95
Shortage of bank borrowings	145	Shortage of Bank borrowings	110	Working capital gap	276
				Maximum bank borrowing permissible	95
Current ratio 0.79:1		Current ratio 0.85:1		Current ratio 1:02:1	

7.6 SUMMARY

This chapter provides an operational working capital management model for public sector jute and cotton textile industries of Bangladesh. In this model, research based norms have been designed for effective management of inventories, receivables and cash components of working capital. It has also suggested a new approach leading to a model for determining ideal bank borrowings from commercial banks, which will improve the working capital position by gradually reducing the dependence on bank borrowings and strengthening the current ratio under three innovative methods. Our suggested model have been put to test by estimating inventories, receivables and cash position as per model and comparing it with actual figures of the selected mills through backward projection. The analysis revealed that there was over investment of Tk.2229 and Tk.1866 lakhs in inventories and receivables respectively in the selected jute mills during the study period compared to our model. The selected jute mills could save Tk.574.92 lakhs only as interest income out of excess investment in inventories and receivables. But the selected jute mills had a huge cash shortage of Tk.1137 lakhs during the period of study. The selected jute mills could save Tk.573.30 lakhs only as interest income if the inventories and receivables were not overstocked. This savings would decrease the accumulated loss by fifty percent by planning working capital as per suggested model. Similarly negative cashflows would have been reduced by forty eight percent by using our model.

In cotton textile mills there was over investment of Tk. 526, Tk. 242 and Tk. 84.06 lakhs in inventories, receivables and cash components respectively during the period fo study. The mills could save Tk. 119.29 lakhs out of interest income only of the blocked fund. As a result, net profit would have been Tk. 235.34 lakhs instead of Tk. 116.05 lakhs, and the negative cash flows would have been reduced to (k.1454.39) lakhs compared to actual of (Tk.1573.68) lakhs. The high inflationary rate (12%) in the economy is partially responsible due to excess bank borrowings by the public enterprises. Finally it can be concluded that savings could have been much more than shown if the actual data was compared by taking minimum period (norms) of inventories, receivables and cash instead of maximum period as taken.

CHAPTER- EIGHT

SUMMARY OF CONCLUSIONS AND POLICY IMPLICATIONS

8.1 Summary of conclusions and findings.

1. Our first hypothesis was, that investment in inventories is disproportionately high which creates working capital problem in public enterprises. Our findings lent support to this hypothesis. It was revealed that the average percentage of inventories to current assets was found to be 66 and 48 (see p 122 & 136) in the selected public sector jute and cotton mills respectively compared to 65 and 66 percent in private sector jute and cotton mills respectively. Because of the high percentage of investment in inventories, a considerable fund has been blocked, which aggravated working capital problem. Our analysis in chapter seven revealed that excess inventories of Tk.1175 lakhs, Tk.225 lakhs and Tk.829 lakhs held by big, medium and small jute mills respectively compared to our planned inventories as per model (see Table 7.3.1 to 7.4.1). Table 7.7.1 shows that there was excess inventories of Tk. 373.5 lakhs and Tk. 206.5 lakhs in Monno(old) and Quaderia Cotton mills respectively, but Satrang Cotton mills had a shortage of inventories amounting to Tk. 54 lakhs compared to our model during the study period.

I i. Our first sub-hypothesis regarding procurement of raw jute inventory was: "Unplanned procurement of raw materials eats up a big chunk of working capital of jute mills". Our data and observation supported this sub-hypothesis. Tandon Committee of

India suggested that 2.5 month's requirement of raw jute should be kept in stock (see annexure XIII). Our sample reported that three months raw material should be stored. In the matter of procurement of raw jute Bangladesh Bank has issued guideline that raw jute should be procured direct from the growers and should be stored for nine months (see annexure XIV). Bangladesh Bank issued circular by considering the policy of the Government to save the jute growers who reportedly burnt down jute by not getting buyers in the market. But this is a heavy financial burden on jute mills, although Bangladesh Bank granted credit at subsidized interest rate of 9 percent only. So, a large part of over buying is compensated. But since the jute mills incurred heavy losses, the excess bank credit although given at lower interest rate, added fuel to the flame and had eaten up a big chunk of working capital of jute mills.

I ii. Our second sub-hypothesis regarding raw jute was: "there is inefficiency and corruption in procurement, storage and usage stages of raw jute in public sector jute mills". The data lent some support to this hypothesis, without indicating any definite conclusions. Our survey and observation revealed that there were some inefficiency and corruption in the procurement of raw jute. One sample reported that the chief executive of a public sector jute mills fixed quota on his subordinate jute purchase officer to pay taka one lakh per month as gratification out of the share of raw jute purchase. It was also reported by a

Report 1986-87 P30). However, raw cotton procurement is a work which should be done centrally and with constant cooperation with different relevant Ministries.

I iv. Our fourth sub-hypothesis was: "low inventory turnover ratio of finished goods is responsible for working capital management crisis to a large extent". The data supported this sub-hypothesis. Our findings revealed that average inventory turnover ratio was 1.82 (p117) in the selected public sector jute mills compared to 2.25 in private sector during the period of study. Tandon Committee suggested 4.29 should be normal inventory turnover ratio for the jute industry of India. The average inventory turnover ratio was found 2.51 in the public sector cotton mills compared to 1.91 in the private sector. The average inventory turnover ratio was very low both in public and private sector cotton mills compared to 4.42 of 52 Indian Cotton mills in the year 1978-79. In USA the same ratio is about seven times.

I v. Our fifth sub-hypothesis was: "low demand of jute goods and serious competition in international market, a huge stock of finished goods is piled up". There was strong support for this sub-hypothesis. Out of twelve respondents interviewed in our survey, eighty three percent of them replied that low demand and serious competition in the international market a huge stock of finished goods piled up in the godown. In 1986-87, the closing

stock of finished goods was Tk. 530 lakhs, Tk. 281 lakhs and Tk.127 lakhs in big, medium and small public sector jute mills respectively. As per suggested model on an average one month's cost of production should be the maximum period for holding finished goods stock, but average finished goods inventory in terms of months cost of production was found as high as eight months in public sector jute mills during the study period (see p 75) which aggravated working capital problem. Inventory in terms of months cost of production was 3.18 (see p 75) in Indian jute mills during 1977-78.

I vi. Our sixth sub-hypothesis in this study was: "In cotton textile enterprises, a huge stock of finished goods accumulates due to lower purchasing power of poorer section and clamour for foreign cotton goods by the richer section of consumers". The data lent reasonable support for this sub-hypothesis. Out of twelve respondents interviewed, about sixty percent of them supported this contention.

I vii. Our seventh sub-hypothesis was: "procurement of stores and spares is more complicated in cotton mills compared to jute mills". Our findings lent support to this sub-hypothesis. It was found that more than eighty percent of stores and spares of cotton textile mills have to be imported compared to only twenty percent for jute industry. Stores and spares constituted 51

percent to total inventories (see p 98) in the selected cotton mills held an excess stock of stores and spares of Tk.150.53 lakhs on 30th June, 1986 (see p 100) out of which Tk.21.0 lakhs could be saved as interest income only(see p 101). In cotton mills, purchase is done through tender, but purchase procedures do not conform to five "P'S" of sound procurement policy. An enterprise should purchase right quantity, at right quality, at right time, at the right price and from the right source. Though purchase is made through tender, right quality items are not purchased and also at right prices. For example if an wooden Almirah is supposed to be made of "Shel Koroi" of Sylhet district, very often wood of Jessore district is supplied, whose market value is lower by 50 percent(for low quality). The researcher on visit to the godown observed that some stores items had never been used, which could be sold out. It was also observed that items which would be used with minor repairs have been dumped in the godown and new items are purchased. This represents attempt to leak out working capital.

2. Our second hypothesis was:"for poor collection policy, a huge fund is blocked in accounts receivables, which creates working capital problem in public enterprises". Our data strongly supported this hypothesis. The average percentage of receivables to current assets was found 31 and 39 in public sector jute and cotton textile mills respectively compared to the percentage of

29 and 25 in private sector jute and cotton textile mills respectively during the study period. The table 7.5 in chapter seven revealed that there was excess receivables of Tk.1866 lakhs in the public sector jute mills compared to our planned receivables as per model during the study period. The selected jute mills could save Tk.261 lakhs as interest income only out of the blocked fund. Table 7.10 revealed that there was excess receivables of Tk.242 lakhs in the selected cotton mills and the mills could save about Tk.34 lakhs as interest income only out of the blocked receivables. Moreover, the savings could reduce the accumulated net loss of jute and cotton mills to a considerable extent and could contribute to the improvement of cash flows (see Table 7.5.2 to 7.5.5).

2 i. Our first sub-hypothesis on receivables management was: "for poor collection policy, a huge fund is blocked in trade debtors, which creates working capital management problem". The data and investigation lent support to this sub-hypothesis. Out of total 28 respondents in our survey, about eighty three percent agreed that due to poor collection policy a huge fund was blocked in trade debtors in the selected public enterprises. Table 7.5 revealed that there was excess trade debtors of Tk.886 lakhs in public sector jute mills compared to our model. The excess trade debtors was found Tk.101. Tk.260 and Tk. 525 lakhs in big, medium and small jute mills respectively during the study period. In

cotton mills, the excess trade debtors was found to be Tk.80 lakhs in Monno(old), but there was shortage of trade debtors of Tk.28 lakhs and Tk. 17 lakhs in Quaderia and Satrng Cotton mills respectively compared to our model. On the whole ,there was excess of Tk.35 lakhs blocked in trade debtors in selected cotton mills. However, there is no provision for credit sales in BTMC enterprises. In jute mills, average collection period is 30 days as per L.C. But in the year 1987 about 44, 56 and 100 days sales were tied up in big, medium and small jute mills in public sector respectively compared to 35, 16 and 29 days sales in private sector jute mills(See annexure I -III and VII-IX). This is an indication of inadequate effort to collect trade debtors by the public sector jute mills.

In cotton textile enterprises sales were mostly done on cash basis, but some sales are made on credit to Government department and autonomous bodies like, family planning and health Directorates, Consumers suppliers Corporation, Military, Police, Ansar, VDP, Jails and other semi-govt. and cooperative bodies through BTMC Head office. All these Govt. and Semi-Govt. agencies, which are supposed to have enough of budgetary allocation make payment at a time at the end of financial year which creates receivables management problem. The corporation has not laid down any good collection policy to realise money promptly from the Govt. Semi-Govt. and autonomous bodies, which aggravates the working capital management problem of BTMC enterprises.

2 ii. Our second sub-hypothesis on receivables management was: "management are reluctant and sometimes become helpless in realising advances from employees because of undue Government orders under the pressure of union and social leaders, as a result a huge fund is blocked in advances over a long period". Our findings and observation supported this sub-hypothesis. Our findings revealed that out of 31 percent receivables in public sector jute mills about 16 percent was blocked in advances compared to 19 percent in private sector. Table 7.5 shows that out of total excess receivables of Tk.1866 lakh in public sector jute mills Tk. 980 lakh was blocked only in advances. Table 7.10 reveals that out of excess receivables of Tk. 242 lakhs an amount of Tk.207 lakhs was blocked in advances in public sector cotton mills during the period of study. On examination of record, it was found that advances to employees in the form of salary, wages, flood and cyclone relief and TA and DA constituted a major portion of total advances. In the year 1987, the total accumulated employee advances was about Tk. 597, Tk.70 and Tk.22 lakhs in big, medium and small jute mills respectively.

In 1987 audit report of jute mills it is specially mentioned by the auditors that they were informed by the management that advance against wages paid to workers is difficult to realise, because the management has stopped deducting all advances from workers as per Government order. Therefore, the management mentioned, that they were totally helpless to realise advances

from workers and they were unable to say to what extent advances to workers and employees will be recoverable. In the opinion of the management out of the total advances 90 percent were arrears from the very inception of nationalisation period (from March '72). Recently the Ministry of Finance has been issuing strong directives for immediate recovery of employee advances, but action as noted by knowledgeable persons is rather slow.

In public sector cotton mills, an average of 26 percent receivables was blocked in advances and due to pressure of union and social leaders and Government directives, the management is reluctant to realise it. The conclusion is that workers and employees are enjoying advances at interest free loan by forgoing the enterprises to seek further loan from the bank at high rate of interest. This is largely due to inefficiency of management and partly due to leeway given to workers and employees unions by Government. This indiscipline, in case of strong action means gheraos of the senior enterprise executives.

3. Our third sub-hypothesis was: "cash planning is ineffective in public sector jute and cotton mills". The findings supported this hypothesis. Out of total twenty eight officials interviewed, in our survey, about seventyfive percent respondents replied that they did not prepare monthly/weekly cash budgets which is very vital for effective cash planning. However, it was mentioned that they prepare only yearly cash budget for submission to

Corporations and Ministry of finance. Comparison of actual cash inflows and outflows have shown that this is mere an academic exercise having no relationship with reality. A good management is one which prepare monthly rather ^{weekly} cash budget which enables them, when to take loans and for which period and to ensure surplus cash if any to be kept in short term deposit (STD) account which yields some gain. Examination of records has shown that monthly cash budget is not prepared. The necessity of weekly cash budget is not felt at all. It is revealed that average percentage of cash to current assets was only 2.02 in public sector jute mills compared to 2.69 in private sector during the study period. The average percentage of cash was found 11 percent in public sector cotton mills compared to 7 percent in private sector. According to some authorities like Prof. Nigam of India and top management of Corporation, that cash in a well financed company should not be less than 5 to 10 percent to cover current indebtedness. Compared to that cash was found much lower in jute mills. However cash was found bit higher in public sector cotton mills, Compared to standard. This reveals that cash planning is ineffective in the selected mills, especially in jute mills.

The fourth hypothesis in this study was: "private sector jute mills show higher prices of raw jute cost in order to extract undue concessions from the Government in terms of compensation for loss, to get cheap bank loan and also to evade taxes". The data lent some support to this hypothesis. The lowest

average per ton cost of raw jute for hessian, sacking and C.B. C. of five private sector jute mills (BJMA) was found to be Tk.7911, Tk.5680 and Tk. 10653 compared to Tk. 7118, Tk.5196 and Tk.8395 of five public sector jute mills (BJMC) respectively during 1987-88. Similarly the lowest average interest cost per ton of hessian, sacking and CBC of five private jute mills was found to be Tk.1415, Tk. 694 and Tk.1932 compared to Tk.1063, Tk.434 and Tk.1565 of five public sector jute mills respectively during the same period. The findings show that raw jute cost was shown much higher in private jute mills compared to similar jute mills in public sector. It is also revealed from the interest cost data that private jute mills enjoyed bigger amount of bank loan compared to similar jute mills in the public sector. Moreover, it was found that most of the selected private sector jute mills incurred huge losses and did not pay taxes at all during the study period.

However, from the above analysis, it may be inferred, that our eighth hypothesis is true to some extent, without being any definite conclusion.

Our fifth hypothesis was that undue demand of fringe benefits by unions at the instigation of management and social leaders enhanced the wage and salary costs. Our observation and interviews lent some support to this hypothesis. Some union leaders reported that they were inspired by the management to

demand undue fringe benefits, in the form of extra bonus, overtime etc. On the other hand, some management people reported that they were pressurised by the unions at the instance of some social leaders to pay undue fringe benefits. Management also mentioned that they were forced in some occasions to buy weight jute and low quality jute supplied by union and social leaders. However, no documentary evidence was available to establish this hypothesis.

However, certain costs which the mills had to incur whether public or private though not justified by production effort. This emanate from the orders issued by the Government from time to time under pressure of union leaders, some of them have become political leaders.

Our sixth hypothesis was : "Cost accounting and cost control system are inadequate in public enterprises". Our data supported this hypothesis. Out of the twelve respondents interviewed in our survey, majority of them admitted that there was no effective cost accounting system and cost control effort in their enterprises are totally absent to control over expenditure which aggravated the working capital management problem.

The seventh hypothesis in this study was that lack of coordination between production and sale affected working capital management problem. The data supported this hypothesis.

Out of twelve executives interviewed in our survey about 67 percent reported that there was lack of coordination between production and sales in their enterprises.

Our eighth hypothesis in this study was: "There is no basic difference on the level of efficiency between public and private sector enterprises with respect to inventories, receivables and cash components of working capital management." Our ²X analysis in chapter- six supported this hypothesis. No significant association was found on the efficiency of management of inventories, receivables and cash components of working capital between public and private sector jute and cotton textile enterprises. However, it was found that some private sector cotton mills are better compared to public sector.

Our ninth hypothesis was that, public enterprises are overmanned either by ghost workers/or by surplus managerial people of the disinvested mills and some workers especially union leaders do not work at all, which increases undue wage and salary costs in public enterprises compared to private enterprises. Our data and observation indicated some evidence of support for this hypothesis. The wages and salary costs were found higher in public sector jute mills compared to private sector. The average wages cost per ton of hessian, sacking and CBC was Tk.7157, Tk.4546 and Tk. 7512 respectively in public sector jute mills compared to Tk.6399, Tk. 3660 and 5403 respectively in the

private sector jute mills. The average salary cost per ton of hessian, sacking and CBC was found Tk.1442, Tk.871 and Tk.1690, compared to Tk.1601, Tk.787 and Tk.1634 in public and private sector jute mills respectively. Syed Nazrul Islam, the then industries minister (1974), in his speech on the floor of the parliament house mentioned that there were twenty six thousands ghost workers in our public enterprises. The surplus labour still exists in public enterprises. (Ref: Habibullah, Accountability structure of public enterprises in Bangladesh, U.G.C. October, 1988).

8.2 POLICY IMPLICATIONS

Based on the review of literature on working capital management, and the analysis carried out in this study, some recommendations are put forward which have policy implications.

8.2.1 We are confident that as we go along with the implementation of the package of the model recommended by us in chapter seven, will enable the management of public enterprises in jute and cotton textile industries to manage their working capital most efficiently and effectively.

8.2.2 We suggest that the inventory, receivables and cash norms should be given effect immediately, while action should be initiated to implement the new approach and where the individual mills seek additional cash credit facilities on regular basis, the limits will be fixed on the basis of designed norms.

8.2.3 It is suggested that export incentive scheme like export bonus scheme should be given to jute industry immediately to save the industry from ruination, but at the same time the management of the jute enterprises are expected to operate their enterprises at least at breakeven level.

- 8.2.4 It is suggested that the enterprise management should be courageous enough to resist any undue interference of the labour union and the Government also should look into the matter to save public enterprises.
- 8.2.5 Measures should be taken by the Government and the enterprise management to stop any inefficiency and corruption in the public sector jute and cotton mills. It is suggested that management audit should be introduced in all enterprises immediately.
- 8.2.6 The working capital gap will have to be computed by the individual public enterprises, the extent of bank finance will be arrived at and the overall credit will be fixed on the basis of suggested model as indicated in chapter seven.
- 8.2.7 Managerial competence is an important factor in the efficiency of operations, reflected in profitability and working capital and financial management. The banker of the enterprise providing cash credit, should keep in mind that appraisal of management may be essential. It is recommended that banker should undertake supervised cash credit system, particularly as we place a new emphasis on viability and development rather than on security alone.

8.2.8 Special training courses on working capital management, financial management, and cost control should be organised for the public enterprise officials at the Bangladesh Management Development Centre and other training institutions.

8.2.9 Each bank should conduct banker borrower seminar to create an understanding between the enterprise officials in the respective banks and their customers.

8.2.10 It is being recommended that attitude of richer section of customers clamouring for foreign textile goods should be changed through motivation and curbing smuggling.

8.2.11 It is suggested to produce quality jute products at minimum cost to face export market and internal market for jute goods should be extended.

8.2.12 The present practice of BTMC's allotment of raw cotton to the individual textile mills without considering its requirement and the same should be allotted on the basis of need and suggested norm, which might help to reduce the blockage of raw material inventory.

8.3 DIRECTIONS FOR FURTHER RESEARCH.

Working capital management in public enterprises in Bangladesh has received the attention of the Government, Banker, Management, Academician and by the general public during the last

decade. Saha (1982) Hossain(1984) have provided an elaborate set of premises and agenda for additional research on working capital management in the public sector jute and textile industries in Bangladesh. In this last section of the chapter some aspect of working capital management in public enterprises are raised which, the researcher believes, warrant further research attention.

8.3.4 Limitations of the Study.

- (i) The study is limited to only three jute mills of Dhaka Zone and three cotton spinning mills of Tongi Zone of BJMC and BTMC respectively.
- (ii) The study is mainly based on the annual audited balance sheets and profit and loss accounts, management information system reports, budgets, quarterly jute goods statistics, and the information collected through questionnaire by interviewing key personnel of the selected mills and BJMC and BTMC head offices. Data for weekly or monthly variation in inventory level, receivables and cash, would have been more meaningful, but reliance is placed on yearly basis data in the absence of them.
- (iii) There are also limitations in regard to the memory and knowledge of the respondents.

- (iv) The absence of some of the relevant official data and internal audit reports for our purpose have also limited the scope of our study.
- (v) Due to the inflationary trend of economy in the the country, and from the point of view of the diminuation in the value of money during the period of study, the effectiveness of data may be questioned. We have tried to minimise the gap but due to the lack of price indices from official sources, we could not achieve our mission.

It is ture that all such limitations are common to any type of research work, but we have tried our best to minimise the probability of errors through a logical comination of questionnaire and using direct interview method, which we suppose would help to find out the authentically of data on the hand and carry on the logical analysis of data on the other.

However, analysing the above limitations, and based on the present research study, a few recommendations are given below for further studies:

- (i) The study be udnertaken in the other zones of jute and cotton textile mills respectively.

- (ii) Specific research study may be undertaken on each component of working capital seperately, i.e. inventory, receivables, and cash positions of jute and cotton textile mills respectively.

- (iii) The detailed study on the courses of operating losses, absence of gross margin, causes of losses and low profit may be made to find out the factors responsible for the negative and low earning power of the jute and textile mills respectively.

- (iv) Another study may be made on the basis of the price level adjustment accountig due to the inflationary trend of the economy.

- (v) A detailed study may be undertaken on the enviornmental effect affecting working capital management in the public enterprises.

- (vi) Another comparative study on working capital management may be made between public and private sector composite cotton textile mills.

FINANCIAL ANALYSIS CONSERVANCY TECHNIQUES-CALCULATION SHEET

LATIF RAWANI JUTE MILLSTakha in thousand

Profit & Loss Account Information							
Year ended		1982	1983	1984	1985	1986	1987
Ref	Accounts Items	000	000	000	000	000	000
10	Sales	220558	285151	313163	359095	388752	360238
11	Inventory Increase + or decrease	35117	42284	41121	35267	44463	52977
12	Other Income	1146	1218	1850	1879	989	711
13	Materials	89580	112179	247179	127236	151692	142580
14	Labour	79985	79296	97034	104697	139998	142875
15	Production Overheads	33193	42219	40469	40496	35490	55345
16	R&D Overheads	-	-	-	-	-	-
17	Selling & Distribution Overheads	5807	7743	7466	6333	6798	6459
18	General Admn. Overheads	6725	11618	13456	7163	8779	5003
19	Depreciation	4548	4659	4863	4160	3584	3830
20		-	-	-	-	-	-
21	Interest	15044	13148	13393	19971	30125	17934
22	Corporation Tax	-	-	-	-	-	-
23	Preference dividend	-	-	-	-	-	-
24	Ordinary dividend	-	-	-	-	-	-
25	Increase in retained earnings and reserves	(6724)	20442	10221	(24162)	(27529)	(64)
DERIVED FIGURES							
30	Total Revenue	221704	286369	315013	360974	388741	360949
31	Average daily sales	604	781	857	983	1065	1200
32	Added value	166095	215256	107105	317121	281523	269735
33	Contribution	52517	93741	30397	171932	117450	5683
34	Operating Profit	35836	69719	8882	194275	98108	775
35	Net Profit before tax	-	20442	10221	(24662)	(27529)	(64)
36	Net Profit after tax	(6724)	20442	10221	(24662)	(27529)	(64)
37	Ordinary earnings	-	-	-	-	-	-
38	Cash flow	(2176)	25101	15084	(20502)	(23945)	3766
39	Cost of sales	202758	233694	384683	272437	410473	354574

Balance Sheet Information

Ref	Year	1982	1983	1984	1985	1986	1987
		000	000	000	000	000	000
50	Land & Bld.(at cost)	-	-	-	-	-	-
51	Plant & Machinery(at cost)	-	-	-	-	-	-
52	Vehicles (at cost)	-	-	-	-	-	-
53	Interest in other companies(associated with the trade).	-	-	-	-	-	-
54	Long-term investment (not associated with the trade)	-	-	-	-	-	-
55	Depreciation to date	-	-	-	-	-	-
56	TOTAL FIXED TANGIBLE ASSETS (50 to 54-55)	30106	28604	48910	37699	28805	29030
57	Stock(raw materials)	-	-	-	-	-	-
58	Stock(WIP)	-	-	-	-	-	-
59	Stock(finished goods)	111650	121702	119398	192531	257845	204434
60	Trade debtors(less provision for bad debts)	21733	22615	21771	24920	44684	52351
61	Cash	1965	2268	1320	1676	2820	2226
62	Other easily realisable assets	33768	34611	29862	35033	37457	33585
63	TOTAL CURRENT ASSETS (57 to 62)	169319	181278	170325	254970	340950	292599
64	Tax due						
65	Interest due on loan						
66	Bank Overdraft	78248	71239	35085	123652	229032	199429
67	Other current liabilities	-	33082	37659	58888	123542	124421
68	Trade Creditors	8336	6921	7301	6896	8012	7136
69	TOTAL CURRENT LIABILITIES (64 to 68)	170140	111247	85046	189437	360586	330916
70	Issue Ordinary Shares	61117	236640	73963	78910	87230	87230
71	Other Liabilities	33554	34528	3813	3265	72176	15538
72	Long term loan, debentures etc.	59525	62083	61306	60075	37331	40425
73	Retained earnings and reserves	(4511)	(25067)	(20478)	(37028)	(122337)	(115406)
74	TOTAL LONG TERM FUNDS (70-to 73)	108485	308184	118604	103233	178749	27787
75	Outside minority interests in subsidiary companies.						
76	Goodwill, patents, trade marks, etc.						
77	No. of ordinary shares issued	1650	1650	1650	1650	1650	1650
	DERIVED FIGURES						
80	Net worth	15600	208597	53485	39892	(9241)	(1263)
81	Working Capital	49179	70030	85270	65533	(19635)	(38387)
82	Equity shareholders funds	15606	211572	53484	84623	(9241)	
83	Total asset(Tangible)	199425	209883	209629	292070	368759	321629
84	Capital employed	79285	98635	39303	37609	8172	(93357)
85	Operating assets	199425	209883	209629	292070	368759	321629
86	Liquid assets	57666	59575	52955	61650	84962	88162

FINANCIAL ANALYSIS CONSOLIDATED STATEMENTS SUMMARY SHEET

LATIF RAWANI JUTE MILLS

	Ref	Derivation	Ratios	Value (& trends over 5 yrs)					
				1982	1983	1984	1985	1986	1987
General	A	$\frac{35}{84}$	$\frac{\text{Net Profit before tax}}{\text{Capital employed}} \times 100\%$	(8.48)	20.72	26%	65%	(337)	Neg.
	B	$\frac{10}{84}$	$\frac{\text{lab. s}}{\text{Capital employed}}$	2.78	2.89	7.96	9.52	48	Neg.
	C	$\frac{35}{10}$	$\frac{\text{Net Profit before tax}}{\text{Sales}} \times 100\%$	% (3.04)	% 7.16	% 3.26	% (6.86)	(7)	-0.07
Managerial Performance	D	$\frac{-34}{85}$	$\frac{\text{Operating Profit}}{\text{Operating assets}} \times 100\%$	% 17.97	% 33.21	% 4.23	% 52.7	NA	%
	E	$\frac{32}{85}$	$\frac{\text{Added value}}{\text{Operating asset}}$	.83	1.02	.51	1.08	NA	-0.24
	F	$\frac{39}{57+58+59}$	$\frac{\text{Cost of sales}}{\text{Stocks}}$	1.82	1.92	3.22	1.41	NA	0.58
	G	$\frac{32}{56}$	$\frac{\text{Added value}}{\text{Fixed asset}}$	5.52	7.53	2.19	8.41	10.12	0.2
	H	$\frac{32}{3}$	$\frac{\text{Added value}}{\text{No. employees}}$						
	I	$\frac{56}{3}$	$\frac{\text{Fixed asset}}{\text{No. employees}}$						
	J	$\frac{10}{81}$	$\frac{\text{Sales}}{\text{Working Capital}}$	4.48	4.07	3.67	5.48	0.76	Neg.
Financial Performance	K	$\frac{57+58+59}{81}$	$\frac{\text{Stock}}{\text{Working Capital}}$	2.27	1.74	1.40	2.94	NA	DO
	L	$\frac{10}{31}$	$\frac{\text{Trade debtors}}{\text{Av. daily sales}}$	36days	29days	25days	25days	42	44
	M	$\frac{63}{69}$	$\frac{\text{Current assets}}{\text{Current Liabilities}}$	1.40	1.62	2.00	1.34	0.95	0.88
	N	$\frac{86}{69}$	$\frac{\text{Liquid asset}}{\text{Current Liabilities}}$	0.47	0.53	0.62	0.32	0.24	0.27
	O	$\frac{33}{34}$	$\frac{\text{Contribution}}{\text{Operating Profit}}$	1.47	1.34	3.42	1.11	Neg.	Neg.
Rating as an Investment	P	$\frac{71+72}{84}$	$\frac{\text{Fixed interest capital}}{\text{Capital employed}}$						
	Q	$\frac{37}{24}$	$\frac{\text{Ordinary earning (net)}}{\text{Gross Ord. dividend}}$						
	R	$\frac{36}{80}$	$\frac{\text{Net profit after tax}}{\text{Net worth}} \times 100\%$						

LATIF BAWANY JUTE MILLS

Ref	Derivation	Ratios	Value (& trends over 5 yrs)					
			1982	1983	1984	1985	1986	1987
S	$\frac{13}{10+(11 \times 3/2)}$	$\frac{\text{Material}}{\text{Sales}} \times 100\%$	40.61	39.34	28.92	35.43	39.39	39.58
T	$\frac{14}{10+(11 \times 3/2)}$	$\frac{\text{Labour}}{\text{Sales}} \times 100\%$	36.26	27.80	30.98	29.15	36.39	39.66
U	$\frac{15}{10+(11 \times 3/2)}$	$\frac{\text{Production Overheads}}{\text{Sales}} \times 100\%$	15.04	14.86	12.92	11.27	6.20	15.86
V	$\frac{16}{10+(11 \times 3/2)}$	$\frac{\text{R\&D Overhead}}{\text{Sales}} \times 100\%$	-	-	-	-	-	-
W	$\frac{17}{10+(11 \times 3/2)}$	$\frac{\text{Selling, dist. overhead}}{\text{sales}} \times 100\%$	2.63	2.71	2.38	1.76	1.75	1.79
X	$\frac{18}{10+(11 \times 3/2)}$	$\frac{\text{General admin. overhead}}{\text{sales}} \times 100\%$	2.06	1.63	1.55	1.15	2.26	1/39

Cost Breakdown:

FINANCIAL ANALYSIS COE DEDUCT TECHNIQUES-CALCULATION SHEET

KARIM JUTE MILLS LTD.

Taka in Thousands

Profit & Loss Account Information							
Year ended		1982	1983	1984	1985	1986	1987
Sl. No.	Accounts Item	000	000	000	000	000	000
10	Sales	15,047	15,153	15,395	19,154	22,158	17,914
11	Inventory increase + or decrease	14,770	12,779	3,176	5,382	1,009	2,807
12	Other Income	1,113	1,501	1,566	1,854	1,452	1,187
13	Materials	4,548	5,654	7,213	13,490	8,764	7,050
14	Labour	4,174	4,192	5,582	6,486	7,891	8,220
15	Production Overheads	18,657	25,578	22,632	21,864	25,766	26,485
16	R&D Overheads	-	-	-	-	-	-
17	Selling & Distribution Overheads	6,984	6,953	6,208	6,175	8,000	6,748
18	General Adm. Overheads	2,915	2,969	3,225	4,830	5,731	5,782
19	Depreciation	1,933	1,893	1,642	1,861	1,968	2,648
20							
21	Interest	8,881	9,515	10,344	17,176	23,011	12,183
22	Corporation Tax						
23	Preference dividend						
24	Ordinary dividend						
25	Increase in retained earnings and reserves	(1,141)	8,700	(3,975)	(34,733)	(36,079)	188,558
DERIVED FIGURES							
30	Total Revenue	16,198	15,748	15,378	19,682	18,707	18,032
31	Average daily sales	323	400	422	525	611	601
32	Added value	8,330	10,868	11,299	11,054	15,614	13,671
33	Contribution	2,726	4,181	3,547	2,584	5,162	2,806
34	Operating Profit	6,605	19,851	13,128	(5,408)	12,752	(19,965)
35	Net Profit before tax	7,718	8,290	(3,575)	(34,733)	(36,078)	(188,558)
36	Net Profit after tax	7,718	2,152	14,694	(34,733)	(36,078)	(188,558)
37	Ordinary earnings						
38	Cash flow	(9,916)	10,183	(1,933)	(52,872)	(34,111)	(16,210)
39	Cost of Sales	9,137	16,801	11,940	16,690	24,695	186,575

Balance Sheet Information							
Year		1982	1983	1984	1985	1986	1987
Ref	Accounts Items	000	000	000	000	000	000
50	Land & Bld.(at cost)						
51	Plant & Machinery(at cost)						
52	Vehicles (at cost)						
53	Interest in other companies(associated with the trade).						
54	Long-term investment (not associated with the trade)						
55	Depreciation to date						
56	TOTAL FIXED TANGIBLE ASSETS (50 to 54-55)	19058	14323	14467	15965	22075	24614
57	Stock(raw materials)						
58	Stock(works)	50046	19592	84404	116986	108090	74800
59	Stock(finished goods)						
60	Trade debtors(less provision for bad debts)	16430	14019	13147	13496	28696	33618
61	Cash	488	2877	1357	555	5728	6900
62	Other easily realisable assets	16313	16796	15658	22869	20143	20249
63	TOTAL CURRENT ASSETS (57 to 62)	83278	83285	114566	155616	162657	135563
64	Tax due						
65	Interest due on loan						
66	Bank Overdraft	61009	41062	68384	129277	135253	103144
67	Other current liabilities	48865	37964	26923	27731	68603	82529
68	Trade Creditors	4374	5663	8775	9693	9439	12333
69	TOTAL CURRENT LIABILITIES (64 to 68)	114250	84694	104082	166700	213295	198281
70	Issue Ordinary Shares	9900	9900	9900	9900	9900	9900
71	Other Liabilities	44231	31585	44827	56356	56886	67128
72	Long term loan, debentures etc.	14169	18022	20578	23527	58370	6638
73	Retained earnings and reserves	(2535)	1024	5738	(25419)	(26765)	(26092)
74	TOTAL LONG TERM FUNDS (70-to 73)	36435	60531	81038	64364	98191	117744
75	Outside minority interests in subsidiary companies.						
76	Goodwill, patents, trade marks, etc.						
77	No. of ordinary shares issued						
DERIVED FIGURES							
80	Net worth	21554	42509	60460	40837	39830	50986
81	Working Capital	(3072)	(1405)	10484	(11084)	(50638)	(162440)
82	Equity shareholders funds	2565	10924	15638	(15519)	(16855)	(16142)
83	Total asset(Tangible)	98336	97608	129033	171581	184732	160182
84	Capital employed	(15914)	17914	24951	4881	(28563)	(587826)
85	Operating assets	98336	97608	129033	171581	184732	160182
86	Liquid assets	33231	33692	30162	36947	54507	60707

FARID JUNE MILLS LTD.

Ref	Derivation	Ratio	Value (& trends over 5 yrs)					
			1982	1983	1984	1985	1986|1987	
General	A	$\frac{35}{84}$	$\frac{\text{Net profit before tax}}{\text{Capital employed}} \times 100\%$	-	% 164	% 59	% (75)	-
	B	$\frac{10}{71}$	$\frac{\text{Sales}}{\text{Capital employed}}$					
	C	$\frac{57}{70}$	$\frac{\text{Net profit before tax}}{\text{Sales}} \times 100\%$	% 6.54	% 14.17	% 9.59	% (1.85)	% 6.36 Neg.
Managerial Performance	D	$\frac{-34}{85}$	$\frac{\text{Operating Profit}}{\text{Operating assets}} \times 100\%$	% 6.72	% 2.03	% 10.17	% (3.15)	% 6.90 -12.46
	E	$\frac{32}{85}$	$\frac{\text{Added value}}{\text{Operating asset}}$	0.89	1.11	0.87	0.64	0.85 0.85
	F	$\frac{59}{57+58+59}$	$\frac{\text{Cost of sales}}{\text{Stocks}}$	1.82	2.17	1.41	1.43	1.59 2.45
	G	$\frac{32}{56}$	Added value/fixed asset	5.80	7.58	7.31	6.92	7.07 5.55
	H	$\frac{57}{3}$	$\frac{\text{Added value}}{\text{No. employees}}$	NA	NA	NA	NA	NA NA
I	$\frac{56}{3}$	$\frac{\text{Fixed asset}}{\text{No. employees}}$	NA	NA	NA	NA	NA NA	
Financial Performance	J	$\frac{10}{81}$	$\frac{\text{Sales}}{\text{Working Capital}}$	NA	NA	10.68	NA	NA NA
	K	$\frac{57+58+59}{81}$	$\frac{\text{Stock}}{\text{Working Capital}}$	NA	NA	8.05	NA	NA NA
	L	$\frac{60}{31}$	$\frac{\text{Trade debtors}}{\text{Av. daily sales}}$	50.86 days	34.27 days	31.15 days	25.70 days	46.96 55.94 days days
	M	$\frac{63}{69}$	$\frac{\text{Current assets}}{\text{Current Liabilities}}$	0.73	0.98	1.10	0.93	0.76 0.68
	N	$\frac{86}{69}$	$\frac{\text{Liquid asset}}{\text{Current Liabilities}}$	0.29	0.40	0.29	0.22	0.25 0.31
Rating as an Investment	O	$\frac{33}{34}$	$\frac{\text{Contribution}}{\text{Operating Profit}}$	NA	NA	NA	NA	NA NA
	P	$\frac{71+72}{81}$	$\frac{\text{Fixed interest capital}}{\text{Capital employed}}$					
	Q	$\frac{37}{24}$	$\frac{\text{Ordinary earning (net)}}{\text{Gross Ord. dividend}}$					
	R	$\frac{36}{83}$	$\frac{\text{Net profit after tax}}{\text{Net worth}} \times 100\%$					

KARIM JUTE MILL LTD.

Ref	Derivation	Ratio	Value (& trends over 5 yrs.)					
			1982	1983	1984	1985	1986	1987
S	$\frac{13}{10+(11 \times 3/2)}$	$\frac{\text{Material}}{\text{Sales}} \times 100\%$	34.25	34.22	37.74	54.98	35.95	39.35
T	$\frac{14}{10+(11 \times 3/2)}$	$\frac{\text{Labour}}{\text{Sales}} \times 100\%$	31.43	25.38	29.21	26.11	32.37	45.88
U	$\frac{15}{10+(11 \times 3/2)}$	$\frac{\text{Production overheads}}{\text{Sales}} \times 100\%$	14.20	15.46	11.84	8.91	10.57	14.78
V	$\frac{16}{10+(11 \times 3/2)}$	$\frac{\text{R\&D overhead}}{\text{Sales}} \times 100\%$	-	-	-	-	-	-
W	$\frac{17}{10+(11 \times 3/2)}$	$\frac{\text{Selling, dist. overhead}}{\text{sales}} \times 100\%$	5.26	4.21	3.29	2.52	3.28	3.76
X	$\frac{18}{10+(11 \times 3/2)}$	$\frac{\text{General admn. overhead}}{\text{sales}} \times 100\%$	2.19	1.80	1.69	1.97	2.35	3.22

COST BREAKDOWN

FINANCIAL ANALYSIS CONSULTANCY TECHNIQUES-CALCULATION SHEET

NAFARI JUPE MILLS LTD.

Taka in thousands

Profit & Loss Account Information							
Year ended		1982	1983	1984	1985	1986	1987
no:	Accounts Item:	000	000	000	000	000	000
10	Sales	65702	61287	67797	80918	107211	98801
11	Inventory Increase + or decrease	7656	12703	13986	31978	12676	12064
12	Other Income	1054	1054	235	201	120	780
13	Materials	25094	23173	26215	27859	39519	37465
14	Labour	18411	17773	24876	22773	34922	37905
15	Production Overheads	8508	4985	17633	18961	12054	14640
16	R&D Overheads	-	-	-	-	-	-
17	Selling & Distribution Overheads	2328	1411	1885	1411	2127	2256
18	General Adm., Overheads	2162	4319	-	-	2484	-
19	Depreciation	2271	2397	2197	2397	1906	649
20							
21	Interest	2703	2603	6346	2603	7049	44893
22	Corporation Tax	1323	1942	-	1042	-	-
23	Preference dividend						
24	Ordinary dividend						
25	Increase in retained earnings and reserves:	(820)	(855)	956	(6421)	(24200)	(24135)
DERIVED FIGURES							
30	Total Revenue	66757	62333	6803	81119	107331	98588
31	Average daily sales	219	204	226	270	294	268
32	Added value	48204	40808	73558	85036	80368	72407
33	Contribution	22425	23048	31050	43301	33392	19851
34	Operating Profit	14582	14920	44600	39492	726875	65
35	Net Profit before tax	15637	6765	2084	(9378)	(8579)	0.62
36	Net Profit after tax	11610	6765	2084	36	19946	0.31
37	Ordinary earnings	11610	12330	38489	36048	19946	31
38	Cash Flow	1420	2232	3153	(4024)	(22244)	(23504)
39	Cost of sales	44337	39510	54738	37616	75819	10208

Balance Sheet Information							
Year		1984	1983	1984	1985	1986	1987
Ref	Accounts Items	000	000	000	000	000	000
50	Land & Bld.(at cost)						
51	Plant & Machinery(at cost)						
52	Vehicle (at cost)						
53	Interest in other companies(associated with the trade).						
54	Long-term investment (not associated with the trade)						
55	Depreciation to date						
56	TOTAL FIXED TANGIBLE ASSETS (50 to 55)	15287	13602	11682	9846	8123	69744
57	Stock(raw materials)						
58	Stock(WIP)						
59	Stock(finished goods)	32174	35677	39767	68429	66174	51779
60	Trade debtors(less provision for bad debts)	12431	8500	14700	16556	17356	26888
61	Cash	1957	1304	1493	3017	1099	3370
62	Other easily realisable assets	7502	6336	610571	212081	15972	10715
63	TOTAL CURRENT ASSETS (57 to 62)	40774	52309	66532	100487	100603	92753
64	Tax due						
65	Interest due on loan						
66	Bank Overdraft	9921	-	10971	46629	51117	51348
67	Other current liabilities	19487	25742	29909	34372	47368	41531
68	Trade Creditors	1423	223	340	408	2575	323
69	TOTAL CURRENT LIABILITIES (64 to 68)	30827	25966	41221	81292	100599	93402
70	Issue Ordinary Shares	16332	18794	18794	18794	18860	18860
71	Other Liabilities	-	-	-	-	-	31
72	Long term loan, debentures etc.	25615	21237	17242	16669	13468	11615
73	Retained earnings and reserves	(3468)	(85)	956	(6421)	(24200)	(242154)
74	TOTAL LONG TERM FUNDS (70-to 73)	38499	39945	36992	29042	8128	63524
75	Outside minority interests in subsidiary companies.						
76	Goodwill, patents, trade marks, etc.						
77	No. of ordinary shares issued						
DERIVED FIGURES							
80	Net worth	12804	16708	19750	18151	(5340)	25213
81	Working Capital	25	3343	25310	19195	"	(650)
82	Equity shareholders funds	13332	16708	19750	18151	(5340)	(5214)
83	Total asset(Tangible)	22311	25112	78214	110334	108726	99787
84	Capital employed	33486	39945	36992	29042	8127	6324
85	Operating assets	69315	69912	78214	110334	108726	99784
86	Liquid assets	21904	16631	26764	31654	34427	4097

BAHARON JUTE MILLS LTD.

	Ref	Derivation	Ratios	Value (& trends over 5 yrs)					
				1982	1983	1984	1985	1986	1987
General	A	$\frac{35}{84}$	$\frac{\text{Net Profit before tax}}{\text{Capital employed}} \times 100\%$	40.63	39.99	121.20	136.67	245.42	0.78
	B	$\frac{10}{74}$	$\frac{\text{Sales}}{\text{Capital employed}}$	1.70	1.53	1.83	2.75	1319.20	15.46
	C	$\frac{35}{78}$	$\frac{\text{Net Profit before tax}}{\text{Sales}} \times 100\%$	25.80	26.06	66.13	49.05	18.60	0.03
Managerial Performance	D	$\frac{-34}{85}$	$\frac{\text{Operating Profit}}{\text{Operating assets}} \times 100\%$	21.13	22.33	22.07	35.11	4.72	0.06
	E	$\frac{32}{75}$	$\frac{\text{Added value}}{\text{Operating asset}}$	0.70	0.77	0.94	0.77	0.74	0.72
	F	$\frac{32}{57+58+59}$	$\frac{\text{Cost of sales}}{\text{Stocks}}$	1.37	4.58	1.37	0.54	0.52	1.97
	G	$\frac{32}{16}$	$\frac{\text{Added value}}{\text{Fixed asset}}$	3.17	2.73	6.29	8.63	9.89	10.2
	H	$\frac{32}{5}$	$\frac{\text{Added value}}{\text{No. employees}}$						
I	$\frac{56}{5}$	$\frac{\text{Fixed asset}}{\text{No. employees}}$							
Financial Performance	J	$\frac{10}{81}$	$\frac{\text{Sales}}{\text{Working Capital}}$	2.82	2.53	2.67	4.22	4.61	Net.
	K	$\frac{57+58+59}{31}$	$\frac{\text{Stock}}{\text{Working Capital}}$	1.38	1.35	1.57	3.56	16.54	do.
	L	$\frac{60}{31}$	$\frac{\text{Trade debtors}}{\text{Av. daily sales}}$	57days	42days	65days	61days	59	100days
	M	$\frac{63}{69}$	$\frac{\text{Current assets}}{\text{Current liabilities}}$	1.75	2.01	1.61	1.23	1.00	0.49
N	$\frac{86}{69}$	$\frac{\text{Liquid asset}}{\text{Current Liabilities}}$	0.71	0.64	0.65	0.38	0.34	0.43	
Rating as an investment	O	$\frac{33}{34}$	$\frac{\text{Contribution}}{\text{Operating Profit}}$	1.54	1.54	-	1.10	-	30.27
	P	$\frac{71+72}{84}$	$\frac{\text{Fixed interest capital}}{\text{Capital employed}}$						
	Q	$\frac{37}{24}$	$\frac{\text{Ordinary earning (net)}}{\text{Gross Ord. dividend}}$						
	R	$\frac{36}{80}$	$\frac{\text{Net profit after tax}}{\text{Net worth}} \times 100\%$	90.25	65.90	194.87	198.60	-	0.01

ANNEXURE III

FINANCIAL ANALYSIS USING BALANCE SHEET TECHNIQUE-SUBBARY
SICRE

NAPARUH JOPE MILLS LTD.

ref	Derivation	Ratio	Value (& trends over 5 yrs)					
			1982	1983	1984	1985	1986	1987
S	$\frac{13}{10+(11 \times 3/2)}$	$\frac{\text{Material}}{\text{Sales}} \times 100\%$	% 38.19	% 37.81	% 38.66	% 34.42	% 36.86	% 38.30
T	$\frac{14}{10+(11 \times 3/2)}$	$\frac{\text{Labour}}{\text{sales}} \times 100\%$	28.02	37.16	36.69	28.14	32.57	38.75
U	$\frac{15}{10+(11 \times 3/2)}$	$\frac{\text{Production Overheads}}{\text{Sales}} \times 100\%$	12.95	8.13	26.00	23.43	11.24	14.98
V	$\frac{16}{10+(11 \times 3/2)}$	$\frac{\text{R\&D Overhead}}{\text{Sales}} \times 100\%$	-	-	-	-	-	-
W	$\frac{17}{10+(11 \times 3/2)}$	$\frac{\text{Selling, dist. overhead}}{\text{sales}} \times 100\%$	3.54	2.30	2.78	1.74	1.98	2.31
X	$\frac{18}{10+(11 \times 3/2)}$	$\frac{\text{General adms. overhead}}{\text{sales}} \times 100\%$	3.29	7.04	-	-	2.32	NA

Cost Breakdown

FINANCIAL ANALYSIS CONSULTANCY TECHNIQUES - CALCULATION SHEET.

MOLINO (OLD) TEXTILE MILLS

TALA HI LAH

Profit and Loss Account Information							
Year ended		1983	1984	1985	1986	1987	
Ref	Accounts Items	000	000	000	000	000	
10	Sales	658.87	643.88	696.31	626.94	662.29	
11	Inventory Increase + or decrease -	12.26	(3.83)	(110.96)	48.92	(31.91)	
12	Other Income	6.69	2.38	2.82	2.08	5.72	
13	Materials & H.O. parts	420.43	403.43	518.91	350.7	276.01	
14	Labour	88.43	108.19	139.23	175.96	181.01	
15	Production Overheads	66.34	69.32	81.63	64.63	69.91	
16	R & D Overheads	-	-	-	-	-	
17	Selling & Distribution Overheads	-	-	-	-	-	
18	General Admn. Overheads	21.31	21.64	29.80	49.03	40.35	
19	Depreciation	1.03	3.89	4.00	3.83	5.03	
20		-	-	-	-	-	
21	Interest	6.08	2.27	-	22.79	2.06	
22	Corporation Tax	-	-	-	-	-	
23	Preference dividend	-	-	-	-	-	
24	Ordinary dividend	-	-	-	-	-	
25	Increase in retained earnings and reserves.	15.91	34.09	12.13	(50.90)	21.84	
	DERIVED FIGURES	Derivation					
30	Total Revenue	10 + 12	665.56	646.26	699.13	629.02	668.01
31	Average daily sales	10 ÷ 365	1.80	1.76	1.90	1.72	1.81
32	added value	10 - 13 + 11	295.40	236.62	66.44	227.31	354.37
33	Contribution	10 + 11 - (13 + 14 + 15)	71.66	59.11	67.50	(16.08)	96.31
34	Operating Profit/Loss	10 + 11 - (13 to 15)	50.35	45.13	71.10	(14.00)	55.96
35	Net profit before tax and interest.	34 + 12	57.04	47.51	73.92	(63.03)	61.68
36	Net profit after tax and interest.	35 - 21 - 22	57.04	47.51	73.92	(63.03)	61.68
37	Ordinary earnings	36 - 23	-	-	-	-	-
38	Cash flow	25 + 19	6.24	37.98	16.15	(47.07)	26.87
39	Cost of sales	13 + 14 + 15 + 16 + 17 + 18 + 19	587.21	577.11	628.61	643.02	565.98

Financial Year ending date		Name of Company MONMO (LD) TEX. MILLS					
Balance Sheet Information							
Ref	Accounts Items	Year (Notes)	1983	1984	1985	19 86	19 87
			Taka	000	000	000	000
50	Land & Bld. (at cost)	(i)					
51	Plant & Machinery (at cost)	(i)					
52	Vehicles (at cost)						
53	Interest in other companies (associated with the trade)						
54	Long term investment (not associated with the trade)						
55	Depreciation to date						
56	TOTAL FIXED TANGIBLE ASSETS (50 to 54-55)		57.71	71.56	111.67	95.71	103.71
57	Stock (raw materials)	(k)	52.42	185.62	70.54	47.89	11.61
58	Stock (WIP)	(k)	11.11	13.02	14.78	11.95	-
59	Stock (finished goods)		4.11	6006	115.26	66.34	34.43
60	Trade debtors (less provision for bad debts)	Stores & Spares Trade debtors	66.74 76.86	56.26 62.25	348.52 217.88	150.55 133.23	84.11 166.77
61	Cash		37.08	32.58	1.66	0.52	01.0
62	Other easily realisable assets		85.60	78.50	99.23	149.82	152.37
62	TOTAL CURRENT ASSETS (57 to 62)		333.32	434.44	867.87	561.00	451.19
64	Tax due				93.07	92.57	
65	Interest due on loan				71.66	17.96	76.38
66	Bank overdraft				467.62	217.08	173.91
67	Dividends due and provisions other liabilities				231.01	274.40	169.35
68	Trade creditors						
69	TOTAL CURRENT LIABILITIES (64 to 68)		318.45	387.71	863.36	602.01	419.64
70	Issue ordinary shares		39.26	39.26	39.26	39.26	39.26
71	Issued preference shares						
72	Long term loan, debentures, etc.		-	44.20	64.80	86.54	99.71
73	Retained earnings and reserves		55.17	34.09	12.13	(50.90)	21.84
74	TOTAL LONG TERM FUNDS (70 to 73)		94.43	118.15	116.19	74.90	160.82
75	Outside minority interests in subsidiary companies.						
76	Goodwill, patents, trademarks, etc.						
77	Number of ordinary shares issued						
DERIVED FIGURES:		Derivation					
80	Net worth	70+71+73	94.43	73.35	51.39	(11.64)	61.10
81	Working Capital	61-69	14.87	46.58	4.51	(41.01)	31.55
82	Equity shareholders funds	70+73	94.43	73.35	51.39	(11.64)	61.10
83	Total asset (tangible)	56+63	391.03	505.85	979.54	656.71	554.90
84	Capital employed	83-69	72.59	118.5	116.19	75.04	160.99
85	Operating assets	83-(51+54)	391.03	505.85	979.54	656.71	554.90
86	Liquid assets	60+61+62	199.54	173.43	318.77	284.27	319.24

MONNO (OLD) TEX. MILLS

value trends over 5 yrs

Name of the company

Ref	Derivation	Ratios	value trends over 5 yrs					Explanation of ratios
			83	84	85	86	87	
General	A	$\frac{35}{85}$	<u>net profit before tax</u> capital employed	78.53	63.72	(83.06)	38.31	return on capital
	B	$\frac{10}{84}$	<u>sales</u> capital employed	9.02	9.45	6.02	8.36	4.11 turnover of capital - number of time
	C	$\frac{25}{10}$	<u>net profit before tax</u> sales x 100%	8.64	7.37	10.63	(10.04)	% profit margin
	D	$\frac{74}{85}$	<u>operating profit</u> operating assets x 100%	12.87	8.89	7.25	(2.13)	9.31 Guide to managerial performance in using asset available to management
	E	$\frac{32}{85}$	<u>added value</u> operating asset	0.75	0.46	0.05	0.34	0.67 added value per sq. ft. operating asset-use sales if added value not available. Indication of asset utilisation.
	F	$\frac{39}{59}$	<u>Cost of sales</u> stocks	4.38	2.21	1.14	2.32	4.28 Indicates turnover of stocks; high rate guards against obsolescence (note 365 ÷ F denotes days of stocks).
	G	$\frac{12}{56}$	<u>added value</u> fixed asset					Utilisation of fixed assets.
	H	$\frac{12}{3}$	<u>added value</u> no. employees					Utilisation of staff & labour
	I	$\frac{56}{3}$	<u>fixed asset</u> no. employees					Indicates whether capital intensive.
	J	$\frac{10}{81}$	<u>sales</u> working capital	4.31	13.70	154.82	20.98	High rate indicates overtrading-low rate indicates poor use of working capital
Managerial performance	K	$\frac{57+58+59}{81}$	<u>stock</u> working capital					high rate indicates vulnerability to trade fluctuations and cash shortage.
	L	$\frac{60}{31}$	<u>trade debtors</u> av. daily sales	2.73	5.5	14.7	77.92	92.5 Collection period days credit allowed to debtors; indicates capital tied up. Use sales on credit if available.
	M	$\frac{61}{69}$	<u>current assets</u> current liabilities	1.05	1.12	1.00	0.93	2.07 Cur. ratio Cur. liabilities must be paid from current assets. -ratio 2 + satisfactory.
	N	$\frac{36}{69}$	<u>liquid asset</u> current liabilities	0.42	0.45	0.37	0.17	0.74 shows whether sufficient cash etc. to pay creditors. Ratio 1 + satisfactory.
	O	$\frac{17}{34}$	<u>contribution</u> operating profit					sales vulnerability - shows extent of commitment to fixed overhead & hence vulnerability to fall in sale
	P	$\frac{71+72}{84}$	<u>fixed interest capital</u> capital employed					"Financial gearing"
	Q	$\frac{17}{24}$	<u>ordinary earning (net)</u> gross ordinary dividend					Ord. dividend cover - shows how company can maintain dividend paid - should be about 2
	R	$\frac{36}{80}$	<u>net profit after tax</u> net worth x 100%	60.63	64.72	144	101.1	Shows profitability shareholders capital earnings power from shareholders point of view
Rating as an investment								

Ref	Derivation	Ratios	value (T. trends over 5 yrs)					Name of company	Explanation of ratios
			18 83	19 84	19 85	19 86	19 87		
S	$\frac{13}{10+(11 \times 3/2)}$	$\frac{\text{material \& B.O. parts}}{\text{sales} + \text{se}^*} \times 100\%$	63.92	62.67	74.45	55.91	44.37	Cost break down Note: se is the sales value equivalent of the increase/decrease in stocks, estimated by adding 50% to item II to cover on-cost (increase+decrease)	
T	$\frac{14}{10+(11 \times 3/2)}$	$\frac{\text{labour}}{\text{sales} + \text{se}^*} \times 100\%$	13.37	16.79	19.97	28.05	27.34		
	$\frac{15}{10+(11 \times 3/2)}$	$\frac{\text{production overheads}}{\text{sales} + \text{se}^*} \times 100\%$	10.03	10.73	11.72	10.31	11.63		
V	$\frac{16}{10+(11 \times 3/2)}$	$\frac{\text{R \& D Overhead}}{\text{sales} + \text{se}^*} \times 100\%$							
W	$\frac{17}{10+(11 \times 3/2)}$	$\frac{\text{selling, dist. overhead}}{\text{sales} + \text{se}^*} \times 100\%$							
X	$\frac{18}{10+(11 \times 3/2)}$	$\frac{\text{general admn. overhead}}{\text{sales} + \text{se}^*} \times 100\%$	3.19	3.36	4.28	7.82	6.09		

FINANCIAL ANALYSIS CONSULTANCY TECHNIQUES - CALCULATION SHEET.

QUADERIA TEXTILE MILLS

TAK. IN LAKH

		Profit and Loss Account Information					
Year ended		1983	1984	1985	1986	1987	
Ref	Accounts Items	000	000	000	000	000	
10	Sales	573.77	614.56	526.07	527.85	548.17	
11	Inventory Increase + or decrease	(0.62)	(1.96)	(82.91)	(76.26)	13.54	
12	Other Income	19.62	13.43	21.37	1.43	6.28	
13	Materials & B.O. parts	424.86	415.81	374.11	320.65	257.35	
14	Labour	64.61	81.07	95.88	127.58	141.58	
15	Production Overheads	63.50	68.70	66.45	79.73	76.86	
16	R & D Overheads						
17	Selling & Distribution Overheads						
18	General Admn. Overheads	22.70	30.38	100.16	94.19	91.98	
19	Depreciation	1.70	3.30	2.84	4.35	4.77	
20							
21	Interest		1.92		51.10	35.74	
22	Corporation Tax						
23	Preference dividend						
24	Ordinary dividend						
25	Increase in retained earnings and reserves	(83.16)	(72.52)	(107.93)	(186.03)	(188.24)	
	DERIVED FIGURES	Derivation					
30	Total Revenue	10 + 12	593.39	627.99	548.04	629.28	554.45
31	Average daily sales	$10 \div 365$	1.56	1.68	1.44	1.72	1.50
32	Added value	$10 - 13 + 11$	149.53	196.79	69.65	230.94	304.36
33	Contribution	$10 + 11 - (13 + 14 + 15)$	21.42	50.94	73.14	22.84	79.71
34	Operating Profit/Loss	$10 + 11 - (13 \text{ to } 19)$	(1.28)	20.06	(27.02)	71.35	(12.27)
35	Net profit before tax and interest	34 + 12	18.34	33.49	(5.65)	(69.92)	(5.99)
36	Net profit after tax and interest	35 - 21 - 22	10.34	33.49	(5.65)	(69.72)	(5.99)
37	Ordinary earnings	36 - 23					
38	Cash flow	25 + 19	(81.92)	(69.22)	(105.34)	(65.67)	(183.47)
39	Cost of sales	13 - 11 + 15 + 1	523.25	513.53	453.23	605.01	465.46

Dhaka University Institutional Repository

		Financial Year ending date	Name of Company				
Balance Sheet Information							
		Year	1983	1984	1985	1986	1987
Ref	Accounts Items	(Notes)	Taka	000	000	000	000
50	Land & Bld.(at cost)	(i)					
51	Plant & Machinery(at cost)	(i)					
52	Vehicles(at cost)						
53	Interest in other companies (associated with the trade)						
54	Long term investment(not associated with the trade)		0.35	0.35	8.52	6.03	6.03
55	Depreciation to date						
56	TOTAL FIXED TANGIBLE ASSETS (50 to 54-55)		36.49	42.39	45.26	61.39	93.69
57	Stock:(raw materials)	(k)	33.22	69.22	67.39	34.42	44.57
58	Stock:(WIP)	(k)	15.30	15.62	11.53	10.74	7.91
59	Stock:(finished goods)		3.30	6.28	93.23	17.02	30.56
60	Trade debtors(less provision Stores & spares for bad debts) Trade debtors		79.56 14.43	149.63 16.25	214.01 15.95	131.09 18.27	74.66 32.38
61	Cash		52.40	90.21	49.32	64.35	61.43
62	Other easily realisable assets		157.94	163.97	168.18	179.28	171.91
63	TOTAL CURRENT ASSETS (57 to 62)		356.71	511.12	619.64	455.17	423.42
64	Tax due		146.69	164.75	138.07	138.07	156.98
65	Interest due on loan						
66	Bank overdraft				56.14	55.56	55.48
67	Dividends due and provisions Other liabilities		248.70	386.02	519.89	140.49	381.09
68	Trade creditors		49.10	38.39	0.08	22.15	13.69
69	TOTAL CURRENT LIABILITIES(64 to 68)		449.49	589.15	734.13	623.62	607.18
70	Issue ordinary shares		20.00	20.00	20.00	20.00	20.00
71	Long term preference shares Govt. Advance Equity		12.22	17.22	27.22	63.24	45.95
72	Long term loan, debentures, etc.						
73	Retained earnings and reserves		(83.16)	(72.52)	(107.98)	(186.03)	(188.24)
74	TOTAL LONG TERM FUNDS(71 to 73)		(50.94)	(35.30)	(60.76)	(102.79)	(112.29)
75	Outside minority interests in subsidiary companies.						
76	Goodwill, patents, trademarks, etc.						
77	Number of ordinary shares issued						
DERIVED FIGURES		Derivation					
80	Net worth	74-71+73	(50.94)	(35.30)	(60.76)	(102.79)	(112.29)
81	Working Capital	63-69	(87.78)	(78.04)	(114.54)	(168.45)	(183.76)
82	Equity shareholders funds	71+73	(63.16)	(52.52)	(60.76)	(166.03)	(168.24)
83	Total asset(tangible)	56+63	393.20	553.51	664.90	516.56	517.11
84	Capital employed	83-69	(50.94)	(35.30)	(60.76)	(101.03)	(115.09)
85	Operating assets	83-(53+54)	392.85	553.16	656.38	510.53	511.08
86	Liquid assets	60+61+62	224.78	270.37	233.89	261.94	265.72

IMPORTANT: Check that 74=56+01-75

ANNEXURE-V

VALUES FROM THE YEAR 1983

NAME OF THE COMPANY

Code	Derivation	Ratio	1983	1984	'85	'86	'87	Explanation of ratios	
General	A	$\frac{35}{85}$	Negative Working Capital					turn on capital	
	B	$\frac{10}{84}$				-40		turnover of capital - number of time	
	C	$\frac{35}{10}$						% profit margin	
	D	$\frac{34}{85}$						Guide to managerial performance in using asset available to management	
Managerial performance	E	$\frac{32}{85}$						added value per % of operating asset-use sales if added value not available. Indication of asset utilisation.	
	F	$\frac{39}{57+58+59}$						Indicates turnover of stocks: high rate guards against obsolescence (note 365 + F denotes days of stocks).	
	G	$\frac{32}{56}$						Utilisation of fixed assets.	
	H	$\frac{32}{3}$						Utilisation of staff & labour	
	I	$\frac{56}{3}$						Indicates whether capital intensive.	
	J	$\frac{10}{81}$						High rate indicates overtrading-low rate indicates poor use of working capital	
	K	$\frac{57+58+59}{81}$						high rate indicates vulnerability to trade fluctuations and cash shortage.	
	L	$\frac{60}{31}$						Collection period days credits allowed to debtors: indicates capital tied up. Use sales on credit if available.	
	M	$\frac{63}{69}$						Cur. ratio Cur. liabilities must be paid from current assets. -ratio 2 + satisfactory.	
	Rating as an investment	N	$\frac{63}{69}$						shows whether sufficient cash etc. to pay creditors. Ratio 1 + satisfactory.
O		$\frac{33}{34}$						sales vulnerability - shows extent of commitment to fixed overhead & hence vulnerability to fall in sale	
P		$\frac{71+72}{84}$						"Financial gearing"	
Q		$\frac{37}{24}$						Ord. dividend cover - shows how company can maintain dividend mid- should be about 2	
R		$\frac{36}{80}$						Shows profitability shareholders capital earnings power from shareholders point of view.	

Ref	Derivation	Ratios	value (₹. trends over 5 yrs)					Name of company	Explanation of ratios
			1985	1986	1987	1988	1989		
S	$\frac{14}{10+(11 \times 3/2)}$	material & B.O. parts sales + se ² * 100%	74.14	67.58	71.10	51.03	46.96	Cost break down Note: se is the sales value equivalent of the increase/decrease in stocks, estimated by adding 50% to item II to cover on-cost (increase+decrease)	
T	$\frac{14}{10+(11 \times 3/2)}$	labour sales + se ² * 100%	11.16	11.07	18.22	20.25	25.83		
U	$\frac{15}{10+(11 \times 3/2)}$	production overheads sales + se ² * 100%	11.16	24.26	12.63	12.71	15.14		
V	$\frac{16}{10+(11 \times 3/2)}$	R & D Overhead sales + se ² * 100%	-	-	-	-	-		
W	$\frac{17}{10+(11 \times 3/2)}$	selling, dist. overhead sales + se ² * 100%	-	-	-	-	-		
X	$\frac{18}{10+(11 \times 3/2)}$	general admn. overhead sales + se ² * 100%	3.96	5002	19.01	14.99	16.78		

FINANCIAL ANALYSIS CONSULTANCY TECHNIQUES - CALCULATION SHEET.

SATRANG TEXTILE

Taka in lakh

Profit and Loss Account Information							
Year ended		19 83	1984	19 85	19 86	19 87	
Ref	Accounts Items	000	000	000	000	000	
10	Sales	475.28	530.96	523.56	588.23	512.79	
11	Inventory Increase + or decrease	(2.77)	3.22	(73.04)	(80.74)	7.34	
12	Other Income	4.05	13.79	9.74	1.71	2.89	
13	Materials & B.O. parts	304.01	309.60	325.86	308.72	260.33	
14	Labour	58.22	71.68	83.87	111.29	125.19	
15	Production Overheads	95.56	57.50	57.88	57.37	68.83	
16	R & D Overheads						
17	Selling & Distribution Overheads						
18	General Admn. Overheads	22.98	87.54	95.96	104.75	75.26	
19	Depreciation	4.26	3.43	3.33	4.46	8.45	
20							
21	Interest	46.42			57.22	20.68	
22	Corporation Tax						
23	Preference dividend						
24	Ordinary dividend						
25	Increase in retained earnings and reserves.	(332.93)	(331.94)	(320.08)	(392.64)	(411.81)	
	DERIVED FIGURES	Derivation					
30	Total Revenue	10 + 12	479.33	544.75	528.30	589.94	515.68
31	Average daily sales	10 ÷ 365	1.30	1.45	1.43	1.61	1.40
32	Added value	10 - 13 - 11	168.50	224.58	124.66	198.77	259.80
33	Contribution	10 - 11 - (13+14+15)	10.16	88.96	128.99	35.22	64.48
34	Operating Profit	10+11-(13 to 19)	(12.82)	1.42	33.03	(69.53)	64.48
35	Net profit before tax and interest	34+12	(8.77)	15.21	37.77	(67.82)	(7.89)
36	Net profit after tax and interest	35-21-22	(8.77)	15.21	37.77	(67.82)	(7.89)
37	Ordinary earnings	36-23					
38	Cash flow	25+19	(328.67)	328.51	(316.75)	(388.18)	(403.16)
39	Cost of sales	13+14+15-11	465.12	442.00	394.57	553.01	448.31

Important: Check Unit 25 = 36-(23+24)

Financial Year ending date		Name of Company						
Balance Sheet Information								
Ref	Accounts Items	Year (Notes)	19 83	1984	19 85	1986	1987	
			000	000	000	000	000	
50	Land, Bld. (at cost)	(i)						
51	Plant & Machinery (at cost)	(i)						
52	Vehicles (at cost)							
53	Interest in other companies (associated with the trade)							
54	Long term investment (not associated with the trade)		6.27	5.21	6.27	6.27	6.27	
55	Depreciation to date							
56	TOTAL FIXED, TANGIBLE, ASSETS (50 to 54-55)		58.86	54.59	53.25	58.71	67.97	
57	Stock (raw materials)	(ii)	26.57	78.32	52.75	57.05	47.07	
58	Stock (WIP)	(ii)	13.97	4.80	3.09	8.20	8.24	
59	Stock (finished goods)		6.68	6.89	81.64	0.90	8.24	
60	Trade debtors (less provision for bad debts)	Stores & spares Trade debt---	55.49	45.75	48.70	65.46	88.59	
61	Cash		70.85	20.55	26.72	29.59	43.79	
62	Other easily realisable assets		82.89	42.21	102.97	99.18	17.49	
63	TOTAL CURRENT ASSETS (57 to 62)		47.02	48.91	49.79	75.07	52.94	
64	Tax due		243.47	247.43	365.68	335.45	265.01	
65	Interest due on loan		74.97	46.83	100.46	100.63	100.41	
66	Bank overdraft		0.02	0.02	0.02	-	-	
67	Dividends due and provision other liabilities		377.21	331.26	374.94	381.14	263.81	
68	Trade creditors		24.24	33.63	1.85	21.44	20.47	
69	TOTAL CURRENT LIABILITIES (64 to 68)		476.37	412.24	477.27	483.21	384.69	
70	Issue ordinary shares		38.76	38.76	38.76	38.76	38.76	
71	Next Advances to equity		113.45	176.28	216.28	246.28	302.59	
72	Long term loan, debentures, etc.							
73	Retained earnings and reserves		(319.98)	(329.99)	(307.13)	(371.21)	(411.61)	
74	TOTAL LONG TERM FUNDS (70 to 73)		(167.77)	(114.62)	(52.09)	(86.17)	(48.83)	
75	Outside minority interests in subsidiary companies.							
76	Goodwill, patents, trademarks, etc.							
77	Number of ordinary shares issued.							
DERIVED FIGURES			Derivation					
80	Net worth	70+71+73	(167.77)	(114.62)	(52.09)	(86.17)	(48.83)	
81	Working Capital	63-69	(232.90)	(164.81)	(111.61)	(147.76)	(119.68)	
82	Equity shareholders funds	70+73	(281.22)	(291.23)	(52.09)	(86.17)	(70.26)	
83	Total asset (tangible)	56+63	302.33	303.02	418.91	394.16	332.98	
84	Capital employed	83-69	(167.77)	(103.95)	(52.09)	(89.05)	(51.71)	
85	Operating assets	83-(53+54)	216.06	296.75	412.64	387.89	326.71	
86	Liquid assets	60+61+62	140.76	111.67	179.48	203.84	114.22	

THE BALANCE SHEET: Check that 74=56+81-75

ANNEXURE-VI

No.	Derivation	Ratios	value trends over 5 yrs					Name of the company	Explanation of ratios
			83	84	85	86	87		
General	A	$\frac{35}{85}$							% return on capital
	B	$\frac{10}{84}$							annual turnover of capital - number of time
Managerial performance	C	$\frac{35}{10}$							% profit margin
	D	$\frac{34}{85}$							Guide to managerial performance in using asset available to management
	E	$\frac{32}{85}$							added value per \$ of operating asset-use sales if added value not available. Indication of asset utilisation.
	F	$\frac{39}{57+58+59}$							Indicates turnover of stocks: high rate guards against obsolescence (note 365 ÷ F denotes days of stocks).
	G	$\frac{32}{56}$							Utilisation of fixed assets.
	H	$\frac{32}{3}$							Utilisation of staff & labour
	I	$\frac{56}{3}$							Indicates whether capital intensive.
	J	$\frac{10}{81}$							high rate indicates overtrading-low rate indicates poor use of working capital
	K	$\frac{57+58+59}{81}$							high rate indicates vulnerability to trade fluctuations and cash shortage.
	Financial performance	L	$\frac{60}{31}$						
M		$\frac{61}{69}$							Cur. ratio Cur. liabilities must be paid from current assets. -ratio 2 + satisfactory.
N		$\frac{86}{69}$							shows whether sufficient cash etc. to pay creditors. Ratio 1 + satisfactory.
O		$\frac{33}{34}$							sales vulnerability- shows extent of commitment to fixed overhead & hence vulnerability to fall in sale
P		$\frac{71+72}{84}$							"Financial gearing"
Rating as an investment	Q	$\frac{17}{24}$							Ord. dividend cover- shows how company can maintain dividend paid- should be about 2
	R	$\frac{36}{60}$							Shows profitability shareholders capital earnings power from share-

Ref	Derivation	Ratios	value (₹ trends over 5 yrs)					Name of company
			1983	1984	1985	1986	1987	Explanation of ratios
S	$\frac{13}{10+(11 \times 3/2)}$	$\frac{\text{material \& B.O. parts}}{\text{sales} + \text{se}^*} \times 100\%$	64.00	75.73	62.14	52.38	50.78	
T	$\frac{14}{10+(11 \times 3/2)}$	$\frac{\text{labour}}{\text{sales} + \text{se}^*} \times 100\%$	12.21	14.38	16.03	18.87	24.41	Cost break down
U	$\frac{15}{10+(11 \times 3/2)}$	$\frac{\text{production overheads}}{\text{sales} + \text{se}^*} \times 100\%$	20.63	11.64	11.09	9.75	13.67	Note: se is the sales value equivalent of the increase/decrease in stocks, estimated by adding 50% to item II to cover on-cost (increase+decrease)
V	$\frac{16}{10+(11 \times 3/2)}$	$\frac{\text{R \& D Overhead}}{\text{sales} + \text{se}^*} \times 100\%$						
W	$\frac{17}{10+(11 \times 3/2)}$	$\frac{\text{selling, dist. overhead}}{\text{sales} + \text{se}^*} \times 100\%$						
X	$\frac{18}{10+(11 \times 3/2)}$	$\frac{\text{general admn. overhead}}{\text{sales} + \text{se}^*} \times 100\%$	4.83	17.57	18.34	17.68	14.64	

Cost Breakdown Ratios

FINANCIAL ANALYSIS CONSULTANCY TECHNIQUES - CALCULATION SHEET.

CHITTAGONG JUTE MFG. COMPANY LIMITED

Profit and Loss Account Information							
Year ended		1983	1984	1985	1986	1987	
Ref	Accounts Items	000	000	000	000	000	
10	Sales	346573	303503	458545	462081	443678	
11	Inventory Increase + or decrease -	33300	37594	61407	57888	60462	
12	Other Income	656	1440	2208	1314	1302	
13	Materials & B.O. parts	133538	157420	397499	156324	179129	
14	Labour	102464	108806	130133	167429	193183	
15	Production Overheads	69168	76656	78823	11983	112134	
16	R & D Overheads	-	-	-	-	-	
17	Selling & Distribution Overheads	3432	2467	2530	3310	6221	
18	General Admn. Overheads	8783	2031	1425	15891	8041	
19	Depreciation	3192	3479	3423	3724	4016	
20		-	-	-	37595	32457	
21	Interest	13457	16649	32039	-	-	
22	Corporation Tax	-	-	-	-	-	
23	Preference dividend	-	-	-	-	-	
24	Ordinary dividend	-	-	-	-	-	
25	Increase in retained earnings and reserves.	(15477)	(50186)	(178698)	(256069)	(285078)	
DERIVED FIGURES		Derivation					
30	Total Revenue	10 + 12	347229	304743	460733	463395	448980
31	Average daily sales	10 ÷ 365	949	830	1256	1269	1215
32	Added value	10 - 13 ÷ 11	246335	183477	122453	363647	325011
33	Contribution	10 - 11 - (13+14+15)	25601	(24145)	(123390)	(70873)	(15387)
34	Operating Profit	10+11-(13 to 19)	22168	(26608)	(125920)	(74184)	(21608)
35	Net profit before tax and interest.	34+12	35725	(25167)	(123710)	(72870)	(20306)
36	Net profit after tax and interest.	35-21-22	22268	(41816)	(155751)	(77362)	(32427)
37	Ordinary earnings	36-23	22268	(41816)	(155751)	(77362)	(32427)
38	Cash flow	25+19	(12285)	(46437)	(175275)	(252336)	(284462)
39	Cost of sales	13+14+15 ÷ 11	275062	327448	581936	377846	416604

Annexure VII

Financial Year ending date		Name of Company CJM Taka in thousands					
		Balance Sheet Information					
Ref	Accounts Items (Notes)	19 83	19 84	19 85	19 86	19 87	
		000	000	000	000	000	
50	Land & Bld. (at cost) (i)						
51	Plant & Machinery (at cost) (i)						
52	Vehicles (at cost)						
53	Interest in other companies (associated with the trade)						
54	Long term investment (not associated with the trade)	686	686	686	734	864	
55	Depreciation to date	70949	74429	77848	81475	84434	
56	TOTAL FIXED TANGIBLE ASSETS (50 to 54-55)	79765	21421	21524	20738	27000	
57	Stock (raw materials) (k)						
58	Stock (JIF) (k)						
59	Stock (finished goods)	33332	156269	237948	168804	173040	
60	Trade debtors (less provision for bad debts)	53046	28408	37416	24721	42807	
61	Cash	1081	5780	1316	2404	10585	
62	Other easily realisable assets	15831	7322	21858	27417	26771	
63	TOTAL CURRENT ASSETS (57 to 62)	107624	221685	323984	223342	253211	
64	Tax due	4124	3896	3491	10206	10206	
65	Interest due on loan	-	-	-	-	-	
66	Bank overdraft	68740	145766	310946	19993	382896	
67	Dividends due and other liabilities	40749	41471	73322	84581	97723	
68	Trade creditors	4593	7366	42452	17299	14369	
69	TOTAL CURRENT LIABILITIES (64 to 68)	117936	198652	430372	427543	502157	
70	Issue ordinary shares	25000	25000	25000	25000	25000	
71	Deferred liabilities	1343	1343	1343	-	-	
72	Long term loan, debentures, etc.	13099	13460	12460	13460	26611	
73	Retained earnings and reserves	(2160)	(50186)	(178698)	(242743)	(275161)	
74	TOTAL LONG TERM FUNDS (70 to 73)	37282	10385	(139895)	(204283)	(223550)	
75	Outside minority interest in subsidiary companies	-	-	-	-	-	
76	Goodwill, patents, trademarks, etc.	2500000	2500000	2500000	2500000	2500000	
77	Number of ordinary shares issued						
DERIVED FIGURES		Derivation					
78	Net worth	70+71+73	24283	(23843)	(139895)	(217743)	(250161)
79	Working Capital	61-69	(10315)	23033	106388	(204201)	(248946)
80	Equity shareholders funds	70+73	28840	(25186)	(114895)	(179283)	(250161)
81	Total asset (tangible)	56+63	127439	243106	345508	244080	280211
82	Capital employed	83-69	9500	44454	(84864)	(83463)	(221946)
83	Operating assets	83-(53+54)	124753	242520	344822	243346	279347
84	Liquid assets	61+61+62	49958	41510	60590	54542	80169

		value trends over 5 yrs					Name of the company GJMC
Derivation	Ratios	83	84	85	86	87	Explanation of ratios
General	$\frac{35}{85}$	$\frac{\text{net profit before tax}}{\text{capital employed}} \times 100\%$		Negative			% return on capital
	$\frac{10}{84}$	$\frac{\text{sales}}{\text{capital empl yod}}$					Annual turnover of capital - number of time
	$\frac{35}{10}$	$\frac{\text{net profit before tax}}{\text{sales}} \times 100\%$					% profit margin
	$\frac{34}{85}$	$\frac{\text{operating profit}}{\text{operating assets}} \times 100\%$					Guide to managerial performance in using asset available to management
	$\frac{32}{85}$	$\frac{\text{added value}}{\text{operating asset}}$					added value per % of operating asset-use sales if added value not available. Indication of asset utilisation.
	$\frac{39}{57+58+59}$	$\frac{\text{Cost of sales}}{\text{stocks}}$					Indicates turnover of stocks; high rate guards against obsolescence (note 365 + F denotes days of stocks).
	$\frac{32}{56}$	$\frac{\text{added value}}{\text{fixed asset}}$					Utilisation of fixed assets.
	$\frac{32}{3}$	$\frac{\text{added value}}{\text{no. employees}}$					Utilisation of staff & labour
	$\frac{56}{3}$	$\frac{\text{fixed asset}}{\text{no. employees}}$					Indicates whether capital intensive.
	$\frac{10}{81}$	$\frac{\text{sales}}{\text{working capital}}$		Negative			High rate indicates overtrading-low rate indicates poor use of working capital
Managerial performance	$\frac{57+58+59}{81}$	$\frac{\text{stock}}{\text{working capital}}$		Negative			high rate indicates vulnerability to trade fluctuations and cash shortage.
	$\frac{60}{31}$	$\frac{\text{trade debtors}}{\text{av. daily sales}}$					Collection period days credit allowed to debtors indicates capital tied up. Use sales on credit if available.
	$\frac{63}{69}$	$\frac{\text{current assets}}{\text{current liabilities}}$					Cur. ratio Cur. liabilities must be paid from current assets. -ratio 2 + satisfactory.
	$\frac{36}{69}$	$\frac{\text{liquid asset}}{\text{current liabilities}}$					shows whether sufficient cash etc. to pay creditors. Ratio 1 + satisfactory.
	$\frac{31}{34}$	$\frac{\text{contribution}}{\text{operating profit}}$					sales vulnerability- shows extent of commitment to fixed overhead & hence vulnerability to fall in sale
	$\frac{71+72}{85}$	$\frac{\text{fixed interest capital}}{\text{capital employed}}$		Negative			"Financial gearing"
	$\frac{37}{24}$	$\frac{\text{ordinary earning (net)}}{\text{gross ordinary dividend}}$					Ord. dividend cover- shows how company can maintain dividend paid- should be about 2
	$\frac{36}{80}$	$\frac{\text{net profit after tax}}{\text{net worth}} \times 100\%$		Negative			Shows profitability shareholders capital earnings power from shareholders point of view.

Ref	Derivation	Ratios	over 5 yrs)					Name of company	Explanation of ratios
			83	84	85	86	87		
S	$\frac{13}{10+(11 \times 3/2)}$	$\frac{\text{material \& H.O. parts}}{\text{sales + se}^*} \times 100\%$	38.53	51.90	86.68	33.82	40.37		
T	$\frac{14}{10+(11 \times 3/2)}$	$\frac{\text{labour}}{\text{sales + se}^*} \times 100\%$	29.56	35.87	28.37	43.54	36.23	Cost break down	
	$\frac{15}{10+(11 \times 3/2)}$	$\frac{\text{production overheads}}{\text{sales + se}^*} \times 100\%$	19.95	25.27	17.18	24.23	25.27	Note: se is the sales value equivalent of the increase/decrease in stocks, estimated by adding 50% to item II to cover on-cost (increase+decrease)	
V	$\frac{16}{10+(11 \times 3/2)}$	$\frac{\text{R \& D Overhead}}{\text{sales + se}^*} \times 100\%$	-	-	-	-	-		
W	$\frac{17}{10+(11 \times 3/2)}$	$\frac{\text{selling, dist. overhead}}{\text{sales + se}^*} \times 100\%$	0.99	0.81	0.55	0.72	1.40		
X	$\frac{18}{10+(11 \times 3/2)}$	$\frac{\text{general admn. overhead}}{\text{sales + se}^*} \times 100\%$	3.45	0.66	0.31	4.24	2.72		

FINANCIAL ANALYSIS CONSULTANCY TECHNIQUES - CALCULATION SHEET.

VICTORY JUTE PRODUCTS LTD.

Taka in thousand

		Profit and Loss Account Information					
Year ended		19 83	19 84	19 85	1986	19 87	
Ref	Accounts Items	000	000	000	000	000	
10	Sales	98373	86054	140292	135710	123039	
11	Inventory Increase + or decrease -	4565	14665	43381	16685	20442	
12	Other Income	191	27	755	18	122	
13	Materials & H.O. parts	36052	42456	108911	49706	44701	
14	Labour	24816	26925	40374	48225	56881	
15	Production Overheads	26819	27923	17797	22133	19648	
16	R & D Overheads						
17	Selling & Distribution Overheads	680	505	866	970	1187	
18	General Admn. Overheads	2978	5156	3872	5287	3754	
19	Depreciation	1348	1224	1264	1440	1298	
20							
21	Interest	6127	7772	12868	14056	13361	
22	Corporation Tax						
23	Preference dividend						
24	Ordinary dividend						
25	Increase in retained earnings and reserves.	(25728)	(76184)	(72578)	93396	(98211)	
	DERIVED FIGURES	Derivation					
30	Total Revenue	10 + 12	93564	86081	141047	135728	123161
31	Average daily sales	10 ÷ 365	255	235	384	372	337
32	Added value	10 - 13 + 11	61886	58263	35719	102619	73455
33	Contribution	10 + 11 - (13 + 14 + 15)	10251	3590	(16063)	(26541)	(12848)
34	Operating Profit	10 + 11 - (13 to 19)	464	(9843)	(33670)	(27512)	(14036)
35	Net profit before tax and interest.	34 + 12	640	(985)	(32914)	(21290)	(5223)
36	Net profit after tax and interest.	35 - 21 - 22	640	(985)	(32914)	(21290)	(5223)
37	Ordinary earnings	36 - 23					
38	Cash flow	25 + 19	(24380)	(68412)	(71314)	91956	(96915)
39	Cost of sales	13 + 14 + 15 + 16 + 17 + 18 + 19	83122	82639	210468	103397	100788

Important: Check total

Financial Year ending date		Name of Company					
Date of Report Information							
Ref	Accounts Items	(Notes)	19 83	19 84	19 85	19 86	19 87
			000	000	000	000	000
50	Land & Bld. (At cost)	(i)					
51	Plant & Machinery (at cost)	(i)					
52	Vehicles (at cost)						
53	Interest in other companies (associated with the trade)						
54	Long term investment (not associated with the trade)		7	7	7	7	7
55	Depreciation to date			20090	10591	24047	33508
56	TOTAL FIXED TANGIBLE ASSETS (50 to 54-55)		12176	11446	10644	10496	33508
57	Stock (raw materials)	(k)			8111	15337	19744
58	Stock (JIT)	(ic)		1035	10895	9294	13840
59	Stock (finished goods)		38647		43400	16685	20442
60	Stores & spares				9924	14501	15883
	Trade debtors		5925	5297	8384	6885	5716
61	Cash		2525	131	1705	6860	1180
62	Other easily realisable assets		12052	10075	11213	13817	12204
63	TOTAL CURRENT ASSETS (57 to 62)		59153	70763	98806	86052	92716
64	Tax due						
65	Interest due on loan						
66	Bank overdraft		32267	42692	85381	104971	132376
67	Dividends due and accrued	Other liabilities	40516	18892	27322	36057	43201
68	Trade creditors		1667	20252	46593	10350	8568
69	TOTAL CURRENT LIABILITIES (64 to 68)		74953	81836	159299	170821	189019
70	Issue ordinary shares		12014	12013	12014	12014	12014
71	Issued preference shares			1853	1853	1853	1853
72	Long term loan, debentures, etc.		3480	3606	3606	3603	3603
73	Retained earnings and reserves		(18686)	(82569)	(65536)	(89957)	(93396)
74	TOTAL LONG TERM FUNDS (70 to 73)		(3197)	(15097)	(48063)	(72484)	(75925)
75	Outside minority interest in subsidiary companies.						
76	Goodwill, patents, trademarks, etc.						
77	Number of ordinary shares issued						
DERIVED FIGURES		Der					
80	Net worth	70+73	(6672)	(18703)	(51669)	(58617)	(79529)
81	Working Capital	57-69	(15300)	(11294)	(60493)	(84769)	(78105)
82	Equity shareholders funds	70+73	(6672)	(20556)	(53522)	(77943)	(81582)
83	Total asset (tangible)	56+63	71529	81988	109450	10099	116763
84	Capital employed	83-69	(3624)	152	(49849)	(60722)	(54058)
85	Operating assets	83-(53+54)	71322	81981	109443	110092	116756
86	Liquid Assets	60+61+62	20502	19638	26468	30627	17085

IMPORTANT: Check that 74=56+(1-75)

ANNEXURE-VIII

of the company

Ref	Derivation	Ratios	1983	1984	1985	1986	1987	Explanation of ratios				
General	A	$\frac{35}{85}$	$\frac{\text{net profit before tax}}{\text{capital employed}} \times 100\%$						% return on capital			
	B	$\frac{10}{84}$	$\frac{\text{sales}}{\text{capital employed}}$						Annual turnover of capital - number of time			
	C	$\frac{35}{10}$	$\frac{\text{net profit before tax}}{\text{sales}} \times 100\%$						% profit margin			
	J	$\frac{34}{85}$	$\frac{\text{operating profit}}{\text{operating assets}} \times 100\%$						Guide to managerial performance in using asset available to management			
Managerial performance	-	$\frac{32}{85}$	$\frac{\text{added value}}{\text{operating asset}}$						added value per % of operating asset-use sales if added value not available. Indication of asset utilisation.			
	F	$\frac{39}{57+58+59}$	$\frac{\text{Cost of sales}}{\text{stocks}}$						Indicates turnover of stocks: high rate guards against obsolescence $365 \div F$ denotes days of stocks.			
	e	32/56	added value/fixed asset				3.37	4.27	2.19	Utilisation of fixed assets.		
	H	$\frac{32}{3}$	$\frac{\text{added value}}{\text{no. employees}}$						Utilisation of staff & labour			
	I	$\frac{56}{3}$	$\frac{\text{fixed asset}}{\text{no. employees}}$						Indicates whether capital intensive.			
	J	$\frac{10}{81}$	$\frac{\text{sales}}{\text{working capital}}$						High rate indicates overtrading-low rate indicates poor use of working capital			
	K	$\frac{57+58+59}{81}$	$\frac{\text{stock}}{\text{working capital}}$						high rate indicates vulnerability to trade fluctuations and cash shortage.			
	L	$\frac{60}{31}$	$\frac{\text{trade debtors}}{\text{av. daily sales}}$				23	22	22	18	16	Collection period days credit allowed to debtors: indicates capital tied up. Use sales on credit if available.
	M	$\frac{63}{69}$	$\frac{\text{current assets}}{\text{current liabilities}}$.86	.62	.50	.54	Cur. ratio Cur. liabilities must be paid from current assets. -ratio 2 + satisfactory.
	Rating as an investment	N	$\frac{65}{69}$	$\frac{\text{liquid asset}}{\text{current liabilities}}$.24	.17	.18	.11	shows whether sufficient cash etc. to pay creditors. Ratio 1 + satisfactory.
O		$\frac{33}{34}$	$\frac{\text{contribution}}{\text{operating profit}}$								sales vulnerability-	
P		$\frac{71+72}{84}$	$\frac{\text{fixed interest}}{\text{capital employed}}$								shows extent of commitment to fixed overhead & hence vulnerability to fall in sale "Financial gearing"	
Q		$\frac{27}{24}$	$\frac{\text{ordinary earning (net)}}{\text{gross ordinary dividend}}$								Ord. dividend cover-shows how company can maintain dividend paid- should be about 2	
R		$\frac{36}{80}$	$\frac{\text{net profit after tax}}{\text{net worth}} \times 100\%$								Shows profitability shareholders capital earnings power from shareholders point of view.	

Ref.	Derivation	Ratios	value (₹) trends over 5 yrs)					Name of company	Explanation of ratios
			10 83	10 84	10 85	19 86	19 87		
S	$\frac{13}{10+(11x3/2)}$	$\frac{\text{material \& B.O. costs}}{\text{sales} + \text{se}^*} \times 100\%$	38.61	49.33	77.63	36.62	36.34	Cost break down Note: se is the sales value equivalent of the increase/decrease in stocks, estimated by adding 50% to item II to cover on-cost (increase+decrease)	
T	$\frac{14}{10+(11x3/2)}$	$\frac{\text{labour}}{\text{sales} + \text{se}^*} \times 100\%$	26.57	31.28	28.72	35.53	46.23		
U	$\frac{15}{10+(11x3/2)}$	$\frac{\text{production overheads}}{\text{sales} + \text{se}^*} \times 100\%$	28.72	32.44	12.68	16.30	15.97		
V	$\frac{16}{10+(11x3/2)}$	$\frac{\text{R \& D Overhead}}{\text{sales} + \text{se}^*} \times 100\%$							
W	$\frac{17}{10+(11x3/2)}$	$\frac{\text{selling, dist. overhead}}{\text{sales} + \text{se}^*} \times 100\%$	0.72	0.58	.62	.71	.96		
X	$\frac{18}{10+(11x3/2)}$	$\frac{\text{general admin. overhead}}{\text{sales} + \text{se}^*} \times 100\%$	3.18	5.99	3.66	4.95	4.10		

FINANCIAL ANALYSIS CONSULTANCY TECHNIQUES - CALCULATION SHEET.

NOAPARA JUTE MILLS LTD

Profit and Loss Account Information							
Year ended		1983	1984	1985	1986	1987	
Ref	Accounts Items	000	000	000	000	000	
10	Sales	75512	89348	134475	96537	121899	
11	Inventory Increase + or decrease-	1985	9404	2209	3906	(11530)	
12	Other Income	8	11	75	258	160	
13	Materials & H.O. parts	265565	44241	85193	44771	36514	
14	Labour	16857	19215	23587	32454	24638	
15	Production Overheads	28968	24884	34070	36461	40218	
16	R & D Overheads						
17	Selling & Distribution Overheads		1127	1749	1772	943	
18	General Admn. Overheads	1352	2723	3295	3452	3916	
19	Depreciation	3828	3820	4080	1828	4075	
20							
21	Interest						
22	Corporation Tax						
23	Preference dividend						
24	Ordinary dividend						
25	Increase in retained earnings and reserves	(99913)	(38209)	(55173)	(65042)	(58974)	
	DERIVED FIGURES	Derivation					
30	Total Revenue	10 + 12	75520	89359	134550	96795	122059
31	Average daily sales	10 ÷ 365	206	244	368	264	333
32	Added value	10 - 13 + 11	50932	54511	51491	55672	73855
33	Contribution	10 + 11 - (13 + 14 + 15)	5107	10412	(15290)	9184	(4933)
34	Operating Profit	10 + 11 - (13 to 19)	(3573)	(2162)	(17039)	(19128)	3161
35	Net profit before tax and interest	34 + 12	(3565)	(2151)	(16963)	(9869)	3321
36	Net profit after tax and interest	35 + 21 - 22	(3565)	(2151)	(16963)	(9869)	3321
37	Ordinary earnings	36 - 23					
38	Cash flow	25 + 19	(36085)	(34389)	(51093)	(63214)	(54039)
39	Cost of sales	13 + 14 + 15 + 11	70405	78936	149766	105722	116965

Important: Check that (36-23)

Financial Year ending date		Date of Statement					
Ref	Accounts Items (Notes)	Year					
		83	19 84	1985	1986	19 87	
		000	000	000	000	000	
50	Land & Bld. (nt cont)	(i)					
51	Plant & Machinery (nt cont)	(i)					
52	Vehicles (nt cost)						
53	Interest in other companies (associated with the trade)						
54	Long term investment (not associated with the trade)						
55	Depreciation to date						
56	TOTAL FIXED TANGIBLE ASSETS (50 to 54-55)						
57	Stock (raw materials)	(k)	22055	20560	18365	14877	8847
58	Stock (WIP)	(k)					
59	Stock (finished goods)		31063	44643	60827	61669	39533
60	Trade debtors (less provision for bad debts)		7981	2922	2051	7958	9529
61	Cash		332	813	2325	3922	6176
62	Other easily realisable assets		6567	24023	30064	27048	25355
63	TOTAL CURRENT ASSETS (57 to 62)		45943	78042	95267	100597	80593
64	Tax due						
65	Interest due on loan						
66	Bank overdraft		13995	38314	38656	65384	41653
67	Dividends due and provisions		13979	16137	24597	24036	28845
68	Trade creditors		149		1407	1730	153
69	TOTAL CURRENT LIABILITIES (64 to 68)		28063	54451	64660	91150	70651
70	Issue ordinary shares		44158	44158	44158	44158	44398
71	Issue preference shares						
72	Long term loan, debentures, etc.		35567	38082	39848	45067	33232
73	Retained earnings and reserves		39913	38209	55173	64909	58841
74	TOTAL LONG TERM FUNDS (70 to 73)		89812	82367	89001	114134	102571
75	Outside minority interest in subsidiary companies.						
76	Goodwill, patents, trademarks, etc.						
77	Number of ordinary shares issued		425000	425000	425000	425000	425000
DERIVED FIGURES		Date					
80	Net worth	70-74	4245	5949	(11015)	(20751)	(14443)
81	Working Capital	83-87	17880	23591	30607	9447	9942
82	Equity shareholders funds	70-77	4245	5949	(11015)	(20751)	(14443)
83	Total asset (tangible)	56-63	67998	98602	113632	115474	89440
84	Capital employed	83-88	39935	44151	48972	24324	18789
85	Operating assets	83-(53+57)	67998	98602	113632	115474	89440
86	Liquid Assets	60+61+62	14880	27758	34440	38928	41060

IMPORTANT: Check that 74=56+71-75

Ref	Derivation	Ratios	value (₹. trands over 5 yrs)					Name of company	Explanation of ratios
			83	84	85	86	87		
S	$\frac{13}{10+(11 \times 3/2)}$	$\frac{\text{material R.O. parts}}{\text{sales} + \text{se}^*} \times 100\%$	35.17	49.51	63.35	46.37	29.95		
T	$\frac{14}{10+(11 \times 3/2)}$	$\frac{\text{labour}}{\text{sales} + \text{se}^*} \times 100\%$	22.32	21.50	17.54	33.61	20.21	Cost break down	
U	$\frac{15}{10+(11 \times 3/2)}$	$\frac{\text{production overheads}}{\text{sales} + \text{se}^*} \times 100\%$	38.36	27.85	27.37	37.77	32.99	Note: se is the sales value equivalent of the increase/decrease in stocks, estimated by adding 50% to item II to cover on-cost (increase+decrease)	
V	$\frac{16}{10+(11 \times 3/2)}$	$\frac{\text{R \& D Overhead}}{\text{sales} + \text{se}^*} \times 100\%$							
W	$\frac{17}{10+(11 \times 3/2)}$	$\frac{\text{selling, dist. overhead}}{\text{sales} + \text{se}^*} \times 100\%$		1.26	1.30	1.83	0.77		
X	$\frac{18}{10+(11 \times 3/2)}$	$\frac{\text{general admin. overhead}}{\text{sales} + \text{se}^*} \times 100\%$	1.79	3.04	2.45	3.57	3.21		

FINANCIAL ANALYSIS CONSULTANCY TECHNIQUES - CALCULATION SHEET.

ASHRAF TEXTILE MILLS LTD.

Take in thousand

Profit and Loss Account Information						
Year ended		19 83	19 84	19 85	19 86	19 87
Ref	Accounts Items	000	000	000	000	000
10	Sales		104703	150296	220219	238018
11	Inventory Increase + or decrease-		1146	1521	1654	2098
12	Other Income		2082	1305	944	1047
13	Materials & B.O. Parts		62371	71947	66085	62017
14	Labour		15700	13205	27652	31058
15	Production Overheads		12806	13835	16071	7678
16	R & D Overheads					
17	Selling & Distribution Overheads		57		81	-
18	General Admn. Overheads		3864	6665	7271	7678
19	Depreciation		402	417	511	9342
20						
21	Interest		387	527	491	213
22	Corporation Tax		5976	8751	4442	2702
23	Preference dividend					
24	Ordinary dividend		3600	5400	7200	8100
25	Increase in retained earnings and reserves.		2	5353	17188	25479
	DERIVED FIGURES	Derivation				
30	Total Revenue	10 + 12	106785	151601	221163	238122
31	Average daily sales	$10 \div 365$	349	500	734	1933
32	Added value	$10 - 13 + 11$	43478	79870	155688	176105
33	Contribution	$10 + 11 - (13+14+15)$	14972	31927	44833	54810
34	Operating Profit	$10+11-(13 \text{ to } 19)$	9871	22137	25165	34913
35	Net profit before tax and interest.	$34+12$	11953	23442	26109	35961
36	Net profit after tax and interest.	$35-21-22$	5590	14164	21176	33046
37	Ordinary earnings	$36-23$	5590	14164	21176	33046
38	Cash flow	$25+19$	402	5770	17699	42388
39	Cost of sales	$13+14+15+16+17+18+19$	89731	102466	108254	98655

Important

		Financial Year ending date	Formation				
		Year	1983	1984	1985	1986	1987
Ref	Accounts Items	(Notes)			000	000	000
50	Land & Bld. (at cost)	(i)					
51	Plant & Machinery (at cost)	(i)					
52	Vehicles (at cost)						
53	Interest in other companies (associated with the trade)				585	585	438
54	Long term investment (not associated with the trade)				2889	2889	2189
55	Depreciation to date				18451	28779	
56	TOTAL FIXED TANGIBLE ASSETS (50 to 54-55)		9385	12283	94902	100768	
57	Stock (raw materials)	(k)	34231	25012	49690	31813	
58	Stock (WIP)	(k)	19921	1808	2146	3344	
59	Stock (finished goods)		1146	1521	1545	2098	
60	Trade debtors (less provision for doubtful debts)	Stores & spares Trade debtors	19984 2603	16586 1401	25282 3461	32660 3624	
61	Cash		71	97	1996	714	
62	Other easily realisable assets		7816	7819	18244	40478	
63	TOTAL CURRENT ASSETS (57 to 62)		64846	72294	111640	118076	
64	Tax due		9496	7772	10735	9158	
65	Interest due on loans other Liabilities		10901	12121	29422	5906	
66	Bank overdraft		14555	3938	29260	51736	
67	Dividends due and provisions		19600	17224	14643	11322	
68	Trade creditors		2491	2163	235	327	
69	TOTAL CURRENT LIABILITIES (64 to 68)		57048	43222	84300	78453	
70	Issue ordinary shares		36000	36000	36000	36000	
71	Issue preference shares						
72	Long term loan, debentures, etc.						
73	Retained earnings and reserves		2	5355	25917	16750	
	TOTAL LONG TERM FUNDS (70 to 73)		36000	41355	61917	52750	
74	Outside minority interests in subsidiary companies						
75	Goodwill, patents, trademarks, etc.						
76	Number of ordinary shares issued						
	ASSETS FIGURE	Derivation					
	Net worth	70+71+73	36002	41355	61917	52750	
	Working Capital	61-69	7798	29072	27340	39623	
	Total available funds	70+73	36002	41355	61917	52750	
	Fixed Assets (at cost)	56+63	74231	84577	206542	218844	
	Fixed Assets (at book value)	83-69	17183	41355	122242	140391	
	Fixed Assets (at replacement cost)	83-(53+54)	17183	58466	113502	137764	
	Fixed Assets (at current market value)	50+61+62	10490	9317	23701	44816	

Let	Derivation	Ratios	Average (over 5 yrs)					Name of company	Explanation of ratios
			83	84	85	86	87		
S	$\frac{13}{10+(11x3/2)}$	$\frac{\text{material \& B.O. parts}}{\text{sales + se}^*} \times 100\%$	-	59.56	47.87	30.00	26.00	Cost break down Note: se is the sales value equivalent of the increase/decrease in stocks, estimated by adding 50% to item II to cover on-cost (increase+decrease)	
T	$\frac{14}{10+(11x3/2)}$	$\frac{\text{labour}}{\text{sales + se}^*} \times 100\%$	-	14.99	12.1	12.55	13.05		
U	$\frac{15}{10+(11x3/2)}$	$\frac{\text{production overheads}}{\text{sales + se}^*} \times 100\%$	-	10.32	9.20	7.30	3.22		
V	$\frac{16}{10+(11x3/2)}$	$\frac{\text{R \& D Overhead}}{\text{sales + se}^*} \times 100\%$	-	-	-	-	-		
W	$\frac{17}{10+(11x3/2)}$	$\frac{\text{selling, dist. overhead}}{\text{sales + se}^*} \times 100\%$	-	.05	-	.05	-		
X	$\frac{18}{10+(11x3/2)}$	$\frac{\text{general admn. overhead}}{\text{sales + se}^*} \times 100\%$	-	3.69	4.43	3.30	3.22		

ANNEXURE-XI

FINANCIAL ANALYSIS CONSULTANCY TECHNIQUES - CALCULATION SHEET.

CHAND TEXTILE (SPINNING) MILLS LTD, DHAKA,

Profit and Loss Account Information							
Year ended		1983	19 84	1985	1986	19 87	
Ref	Accounts Items	000	000	000	000	000	
10	Sales	59023	110220	109136	114065	116295	
11	Inventory Increase + or decrease -	(4602)	(8754)	1039	(749)	(176)	
12	Other Income	283	378	270	2492	2868	
13	Materials & B.O. parts	35861	63185	69846	63879	63831	
14	Labour	6841	14087	16036	22964	24126	
15	Production Overheads	7710	17561	15589	12317	19661	
16	R & D Overheads	-	-	-	-	-	
17	Selling & Distribution Overheads	3	73	27	22	15	
18	General Admn. Overheads	666	2819	3919	3999	4008	
19	Depreciation	787	712	626	642	1237	
20		-	-	-	-	-	
21	Interest	2528	5130	5571	8584	10789	
22	Corporation Tax	1653	2094	2378	2094	2160	
23	Preference dividend	-	-	-	-	-	
24	Ordinary dividend	-	-	-	-	-	
25	Increase in retained earnings and reserves.	142093	16173	18298	20267	22374	
	DERIVED FIGURES	Derivation					
30	Total Revenue	10 + 12	59306	110598	109306	116557	119163
31	Average daily sales	10 ÷ 365	161	303	299	312	318
32	Added value	10 - 13 ± 14	18560	38281	40329	49437	52288
33	Contribution	10 ± 11 - (13 + 14 + 15)	4009	6634	8702	14102	5474
34	Operating profit	10 + 11 - (13 to 20)	2723	3816	4586	1697	1452
35	Net profit before tax and interest.	34 + 12	3006	4194	4756	4189	4320
36	Net profit after tax and interest.	35 - 21 - 22	1353	2097	2378	2094	2160
37	Ordinary earnings	36 - 23	-	-	-	-	-
38	Cash flow	25 + 19	14690	16885	18589	20909	23611
39	Cost of sales	13 + 14 + 15 ± 11	55014	103587	100432	99909	110644

Important: Check that 25 = (23 + 21)

		Financial Year ending date	Name of Company				
Balance Sheet Information							
		Year	1983	1984	1985	1986	1987
Ref	Accounts Items	(Notes)	000	000	000	000	000
50	Land & Bld. (At cost)	(i)					
51	Plant & Machinery (at cost)	(i)					
52	Vehicles (at cost)						
53	Interest in other companies (associated with the trade)						
54	Long term investment (not associated with the trade)		150	150	150	150	150
55	Depreciation to date		15391	15964	16474	17282	18600
56	TOTAL FIXED TANGIBLE ASSETS (50 to 54-55)		9188	8527	6029	10182	15772
57	Stock (raw materials)	(k)					
58	Stock (WIP)	(k)					
59	Stock (finished goods)		40988	50834	57881	92344	82577
60	Trade debtors (less provision for bad debts)		23454	19594	12348	11676	14055
61	Cash		5816	12570	21084	28846	25110
62	Other easily realisable assets		13190	19156	20663	23071	26610
63	TOTAL CURRENT ASSETS (57 to 62)		82848	102154	111976	155939	148352
64	Tax due		13549	15646	18024	20119	22280
65	Interest due on loan						
66	Bank overdraft		3070	16381	13481	47140	32418
67	Other liabilities (current)		51509	55060	79029	70906	79429
68	Trade creditors		3769	1421	1343	1335	1416
69	TOTAL CURRENT LIABILITIES (64 to 68)		71897	88508	99853	139500	135543
70	Issue ordinary shares		6000	6000	6000	6000	6000
71	Issued preference shares						
72	Long term loan, debentures, etc.						
73	Retained earnings and reserves		14242	16321	18298	20267	22692
74	TOTAL LONG TERM FUNDS (70 to 73)		20242	22321	24298	26267	28692
75	Outside minority interests in subsidiary companies.						
76	Goodwill, patents, trademarks, etc.						
77	Number of ordinary shares issued		600694	600694	600694	600694	600694
DERIVED FIGURES		Derivation					
80	Net worth	70+71+73	20242	22321	24298	26267	28692
81	Working Capital	63-60	10951	13646	12123	16439	12809
82	Equity shareholders funds	70+73	20242	22321	24298	26267	28692
83	Total asset (tangible)	56+63	91672	110681	118005	166121	164124
84	Capital employed	83-69	19775	22173	18152	26621	28581
85	Operating assets	83-(53+54)	11522	11053	117855	165971	163974
86	Liquid Assets	60+61+62	12460	51320	66443	63593	65775

ANNEXURE-XI

Ratio	Derivation	Ratios	value trends over 5 yrs					Name of the company	Explanation of ratios
			83	84	85	86	87		
General	A	$\frac{35}{85}$	$\frac{\text{net profit before tax}}{\text{capital employed}} \times 100\%$	15.20	18.91	26.20	15.73	15.11	% return on capital
	B	$\frac{10}{84}$	$\frac{\text{sales}}{\text{capital employed}}$	2.98	4.97	6.01	4.28	4.06	Annual turnover of capital - number of time
	C	$\frac{35}{10}$	$\frac{\text{net profit before tax}}{\text{sales}} \times 100\%$	5.09	3.80	4.35	3.67	3.71	% profit margin
	D	$\frac{34}{85}$	$\frac{\text{operating profit}}{\text{operating assets}} \times 100\%$	2.97	3.45	5.89	1.02	0.88	Guide to managerial performance in using asset available to management
	E	$\frac{32}{85}$	$\frac{\text{added value}}{\text{operating asset}}$	0.20	0.34	0.54	0.29	0.31	added value per \$ of operating asset-use sales if added value not available. Indication of asset utilization.
Managerial performance	F	$\frac{39}{57+58+59}$	$\frac{\text{Cost of sales}}{\text{stocks}}$	1.36	2.03	1.75	1.08	1.33	Indicates turnover of stocks; high rate guards against obsolescence (note 365 ÷ F denotes days of stocks).
	G	$\frac{32}{56}$	$\frac{\text{added value}}{\text{fixed asset}}$	2.02	4.48	6.68	4.85	3.31	Utilisation of fixed assets.
	H	$\frac{32}{3}$	$\frac{\text{added value}}{\text{no. employees}}$						Utilisation of staff & labour
	I	$\frac{56}{3}$	$\frac{\text{fixed asset}}{\text{no. employees}}$						Indicates whether capital intensive.
	J	$\frac{10}{81}$	$\frac{\text{sales}}{\text{working capital}}$	5.38	8.07	9.00	6.93	9.07	High rate indicates overtrading-low rate indicates poor use of working capital
Financial performance	K	$\frac{27+58+59}{81}$	$\frac{\text{stock}}{\text{working capital}}$	3.68	3.72	4.77	5.61	6.44	high rate indicates vulnerability to trade fluctuations and cash shortage.
	L	$\frac{60}{31}$	$\frac{\text{trade debtors}}{\text{av. daily sales}}$	146	64	41	37	44	Collection period days credit allowed to debtors; indicates capital tied up. Use sales on credit if available.
	M	$\frac{61}{69}$	$\frac{\text{current assets}}{\text{current liabilities}}$	1.15	1.15	1.12	1.11	1.09	Cur. ratio Cur. liabilities must be paid from current assets. -ratio 2 + satisfactory.
	N	$\frac{56}{60}$	$\frac{\text{liquid asset}}{\text{current liabilities}}$	.59	.57	.66	.45	.48	shows whether sufficient cash etc. to pay creditors. Ratio 1 + satisfactory. sales vulnerability-
	O	$\frac{33}{34}$	$\frac{\text{contribution}}{\text{operating profit}}$						shows extent of commitment to fixed overhead & hence vulnerability to fall in sale
Rating as an investment	P	$\frac{71+72}{84}$	$\frac{\text{fixed interest capital}}{\text{capital employed}}$	.12	.23	.30	.31	.57	"Financial gearing"
	Q	$\frac{37}{24}$	$\frac{\text{ordinary earning (net)}}{\text{gross ordinary dividend}}$						Ord. dividend cover-shows how company can maintain dividend paid- should be about 2
	R	$\frac{36}{80}$	$\frac{\text{net profit after tax}}{\text{net worth}} \times 100\%$	6.68	9.59	9.78	7.97	7.52	Shows profitability shareholders capital earnings power from shareholders point of view.

Ref	Derivation	Ratios	over 5 yrs					Name of company	Explanation of ratios
			1984	1985	1986	1987	1988		
S	$\frac{13}{10+(11 \times 3/2)}$	$\frac{\text{material \& B.O. parts}}{\text{sales + se}^*} \times 100\%$		60.75	57.32	63.99	56.01	54.88	
T	$\frac{14}{10+(11 \times 3/2)}$	$\frac{\text{labour}}{\text{sales + se}^*} \times 100\%$		11.59	12.78	14.69	20.13	20.74	Cost break down
U	$\frac{15}{10+(11 \times 3/2)}$	$\frac{\text{production overheads}}{\text{sales + se}^*} \times 100\%$		13.06	15.93	14.28	10.79	16.90	Note: se is the sales value equivalent of the increase/decrease in stocks, estimated by adding 50% to item II to cover on-cost (increase+decrease)
V	$\frac{16}{10+(11 \times 3/2)}$	$\frac{\text{R \& D Overhead}}{\text{sales + se}^*} \times 100\%$							
W	$\frac{17}{10+(11 \times 3/2)}$	$\frac{\text{selling, dist. overhead}}{\text{sales + se}^*} \times 100\%$		.005	.06	.02	.01	.01	
X	$\frac{18}{10+(11 \times 3/2)}$	$\frac{\text{general adm. overhead}}{\text{sales + se}^*} \times 100\%$		1.12	2.55	3.59	3.50	3.44	

FINANCIAL ANALYSIS CONSULTANCY TECHNIQUES - CALCULATION SHEET.

RAZ TEXTILE MILLS LTD.

Profit and Loss account information							
Year ended		19 83	19 84	19 85	19 86	19 87	
Ref	Accounts Items	000	000	000	000	000	
10	Sales	50623	57689	62819	67964	65290	
11	Inventory Increase + or decrease	(652)	695	574	135	(771)	
12	Other Income	176	77	40	79	156	
13	Materials & B.O. parts	32 726	36630	39573	35276	40798	
14	Labour	5425	6594	9497	12430	13334	
15	Production Overheads	6592	7479	7849	6934	7265	
16	R & D Overheads						
17	Selling & Distribution Overheads	55	36	51	83	133	
18	General Admn. Overheads	5268	6204	7384	7344	8528	
19	Depreciation	2329	2299	2110	1557	1712	
20							
21	Interest						
22	Corporation Tax	321	1722	551	-	-	
23	Preference dividend						
24	Ordinary dividend						
25	Increase in retained earnings and reserves.	(4537)	(3243)	(4835)	8822	17582	
DERIVED FIGURES		Derivation					
30	Total Revenue	10 + 12	50799	57766	62859	58043	65446
31	Average daily sales	10 ÷ 365	138	158	172	158	179
32	added value	10 - 13 + 11	17245	21754	23820	22823	23721
33	Contribution	10 + 11 - (13 + 14 + 15)	5790	9608	8499	2619	165
34	Operating Profit	10 + 11 - (13 to 19)	466	3367	1063	(4808)	(8496)
35	Net profit before tax and interest.	34 + 12	643	3444	1103	(4729)	(8496)
36	Net profit after tax and interest.	35 - 21 - 22	321	1722	551	(4729)	(8339)
37	Ordinary earnings	36 - 23	321	1722	551	(4729)	(8339)
38	Cash flow	34 + 19	321	1722	551	(4729)	(8339)
39	Cost of sales	13 + 14 + 15	44852	48081	54320	55344	63124

Important:

		Financial Year ending date	Name of Company				
Balance Sheet Information							
Ref	Accounts Items	(Notes)	1983	1984	1985	1986	1987
			000	000	000	000	000
50	Land; Bld. (at cost)	(i)					
51	Plant & Machinery (at cost)	(i)					
52	Vehicles (at cost)						
53	Interest in other companies (associated with the trade)						
54	Long term investment (not associated with the trade)						
55	Depreciation to date						
56	TOTAL FIXED TANGIBLE ASSETS (50 to 54-55)		27523	27721	25747	23009	21305
57	Stock (raw materials)	(k)	10238	30182	9644	8346	9432
58	Stock (JIP)	(k)					
59	Stock (finished goods)		4280	6454	24742	39859	7997
60	Trade debtors (less provision for bad debts)		43	45	1745	1647	1397
61	Cash		336	8822	4045	872	279
62	Other easily realisable assets		6581	1364	3503	6115	10583
63	TOTAL CURRENT ASSETS (57 to 62)		21481	46971	43681	56841	29690
64	Tax due						
65	Interest due on loan						
66	Bank overdraft				18524	16767	9828
67	Dividends due and provisions		24160	29084	29958	31466	41133
68	Trade creditors		419	5	5	3	3
69	TOTAL CURRENT LIABILITIES (64 to 68)		24160	51132	51083	50805	51489
70	Issue ordinary shares		10936	11028	10901	9773	9773
71	Issue preference shares		-	-	151	21212	-
72	Long term loan, debentures, etc.		16162	34242	10588	6284	5777
73	Retained earnings and reserves		(2999)	(1705)	(3297)	(8284)	(16044)
74	TOTAL LONG TERM FUNDS (70 to 73)		24099	43563	18343	28985	(494)
75	Outside minority interests in subsidiary companies.						
76	Goodwill, patents, trademarks, etc.						
77	Number of ordinary shares issued						
DERIVED FIGURES		Derivation					
80	Net worth	70+71+73	7937	9320	7755	22701	(6271)
81	Working Capital	63-60	(3422)	15839	(7402)	6036	(21799)
82	Equity shareholders funds	70+73	7937	9320	7604	1489	(6271)
83	Total asset (tangible)	56+63	29004	74692	69428	79850	50995
84	Capital employed	83-69	4844	43560	18345	29045	(494)
85	Operating assets	83-(53+57)	29004	74692	69428	79850	50995
86	Liquid assets	61+62+66	6960	10331	9293	8634	12259

ANNEXURE-XIII

REPORT OF THE
STUDY GROUP TO FRAME GUIDELINES
FOR
FOLLOW-UP OF BANK CREDIT

RESERVE BANK OF INDIA
BOMBAY
1975

NORMS FOR INVENTORY AND RECEIVABLES

- 5.1 The rationale of norms and the need to link credit with production requirements is to us was fairly clear; and we envisage that eventually the entire system of credit planning will be dovetailed with production planning, both to make good use of bank credit and also to create better management of cash, materials and receivables.
- 5.2 Industry representatives in their discussions with us generally agreed that it was necessary to prescribe some norms but they were doubtful about our ability to fit the wide spectrum of industry adequately into what we lay down. Their solution was that the norms should be applied flexibly.
- 5.3 While we realise that norms will have to be applied flexibly and not rigidly, responsive to any major change in environment and within the industry, we are unable to accept that uncertainties can be regarded as a reason for not laying down norms, an argument that some, happily not many, placed before us. In fact, the greater the uncertainties, the more is the need for planning.
- 5.4 Our first attempt at norms was in our Interim Report to the Reserve Bank. We suggested norms for inventory and receivables for ten major industries. The objective was to introduce a discipline and improvement in the maintenance of reasonable inventory and receivables levels consistent with encouragement of production on the basis of a helpful relationship between the banker and the customer.
- 5.5 The Reserve Bank accepted the suggested norms and advised all scheduled commercial banks to apply the norms in respect of these ten industries, both to the existing and new borrowers, on an experimental basis, and to furnish it with a feed-back of the experience. A copy of the Interim Report and the Reserve Bank circular letter are furnished in Annexures-III and IV.
- 5.6 The approach for prescribing norms for inventory and receivables bristles with a variety of problems. We are, therefore, anxious that should be an understanding of the total problem and a firm but helpful approach built into the suggested norms and their implementation.

5.7 We have now suggested norms taking into account the following:

- (i) company finance studies made by the Reserve Bank,
- (ii) process period in the different industries,
- (iii) discussions with experts in the industries concerned,
- (iv) general discussions with the industry interests,
- (v) need for ensuring smooth production, depending upon the availability of the materials, seasonality, etc. and
- (vi) reactions and feed-back on Interim Report.

5.8 We have extended our exercise to a total of 15 major industries, covering about one half of industrial advances of banks, and certain norms earlier suggested have been revised in the light of the feed-back received. The norms represent the maximum levels for holding inventory and receivables in each industry. Borrowers are not expected to hold more than these levels. Neither is the norm an entitlement to hold inventories or receivable upto this level. If a borrower has managed with less in the past, he should continue to do so. The suggested norms are as follows:

SUGGESTED NORMS FOR INVENTORY AND RECEIVABLES

Industry	Raw Materials (including stores and other items used in the process of manufacture)	Stocks-in-process	Finished goods	Receivables* and bills purchased and discounted
(1)	(2)	(3)	(4)	(5)
(i) Cotton and Synthetic Textiles	2 Cotton (Bombay and Ahmedabad areas) 3 (Eastern areas—Bihar, Orissa, West Bengal and Assam) 2½ (Other than the above areas) 2 Other raw materials	1 (Composite textile mills) 1 (other mills)	—	—
(ii) Man-made Fibre	1½	—	—	—
(iii) Jute Textiles	2½	1	1 (For domestic sales) and 1½ (For exports)	1½
(iv) Rubber Products	2	—	—	—
(v) Fertilisers (a) For nitrogenous plants	1 (Units near refinery) 1½ (Units away from refinery)	Negligible	1 (Where stocks are in plant site) 1½ (Where stocks are also in upcountry centres)	1½
(b) For Phosphatic plants	2 (Units in port areas) 3 (Units away from port areas)	Negligible	1 (Where stocks are in plant site) 1½ (Where stocks are also in up-country centres)	1½
(vi) Pharmaceuticals	2½	1	—	1½
(vii) Dyes and Dyestuffs	2½	1	—	2½

SUGGESTED NORMS FOR INVENTORY AND RECEIVABLES

Industry	Raw Materials (including stores and other items used in the process of manufacture)	Stocks-in-process	Finished goods	Receivables* and bills purchased and discounted
(1)	(2)	(3)	(4)	(5)
(viii) Basic Industrial Chemicals	2½	1	1	1½
(ix) Vegetable and Hydrogenated Oils	1	Negligible	—	—
(x) Paper	2-6 Bamboo and Wood (To be built up in stages from November to May and thereafter to be brought down)	—	1 (For controlled sales) and 1 (For free sales)	—
(xi) Cement	2½ Chemicals 2½ Gypsum 1½ Limestone 1½ Coal 1½ Packing materials	1	—	—
(xii) Engineering—Automobiles and Accessories	2½	1	—	—
(xiii) Engineering—Consumer Durables	2	—	—	—
(xiv) Engineering—Agricultures	2	1	—	—
(xv) Engineering—Machinery and other Capital Equipment Suppliers (other than Heavy Engineering)	2½	1½	—	—

Notes: (i) Raw materials are expressed as so many months' consumption. They include stores and other items used in the process of manufacture.

CIRCULAR OF BANGLADSH BANK

Estimate of working capital for
jute mills of 250 narrow looms
during jute season for the year 1988-89

For 2nd shift

1. Capacity utilisation : Hessian - 7.5 pound/looms/hours
Sacking - 20 pound/looms/hours

(Taka in lakh)

	Tied up period	Hessian (125 looms) 2 shifts (16 hrs.)	Sacking (125 looms) 2 shifts (16 hrs.)
2.(a) i. Raw jute	9 months	157.88	240.25
ii. Finished goods	90 days	149.81	236.61
iii. Work-in-process	3 weeks	34.96	55.21
Total stock(i+ii+iii)		342.65	532.07
(b) Stores and Stores			
i. Local purchase	3 months	4.95	4.95
ii. Imported	Actual	39.62	39.62
(i + ii)		44.57	44.57
3. Value of total stock & stores (2a + 2b)		387.22	576.64

	Tied up period	Hession (125 looms) 2 shifts (16 hrs.)	Sacking (125 looms) 2 shifts (16 hrs.)
		-----	-----
4. Total loan required for stocks and stores excluding 10% margin		348.90 =====	518.97 =====
5. Loan required per loom on the basis of two shifts.		Tk. 2,79,120.00 =====	Tk. 15,176.00 =====

Notes: Raw jute price is estimated as follows:

Hession - Tk. 300 per maund
Sacking - Tk. 214 "

Average selling price:
Hession -Tk.24,465 per
M.T.

Work-in-process as
per valuation:

Sacking - Tk.14,490 M.T.

Hession Tk.24,465 per M.T.
Sacking Tk.14,490 per M.T.

CIRCULAR OF BANGLADESH BANK

Estimate of working capital for
jute mills of 250 narrow looms
during jute season for the year 1988-89

For 2nd shift (7.5 hrs.)

1. Capacity utilisation : Hessian - 7.5 pound/looms/hours
Sacking - 20 pound/looms/hours

(Taka in lakh)

	Tied up period	Hessian (125 looms) 3 shifts	Sacking (125 looms) 3 shifts
2. (a) i. Raw jute	9 month	74.00	112.61
ii. Finished goods	90 days	70.22	110.916
iii. Work-in-process	3 weeks	16.39	25.88
Total	stock (i+ii+iii)	160.61	249.40
=====			
2. (b) <u>Stores and Stores</u>			
i. Local purchase	3 months	2.32	2.32
ii. Imported	Actual	18.57	18.57
(i + ii)		20.89	20.89
=====			
3. Value of total stock & stores (2a + 2b)		189.50	270.29
=====			

Dhaka University Institutional Repository

	Tied up period	Hession (125 looms) 2 shifts (16 hrs.)	Sacking (125 looms) 2 shifts (16 hrs.)
4. Total loan required for stocks and stores excluding 10% margin		163.35	243.26
5. Loan required per loom on the basis of two shifts		Tk. 1,30,680.00	Tk. 1,94,608.00

Notes: Raw jute price is estimated as follows:

Hession - Tk. 300 per maund
Sacking - Tk. 214 "

Average selling price:
Hessian -Tk.24,465 per
M.T.

Work-in-process as
per valuation:

Sacking - Tk.14,490 M.T.

Hession Tk.24,463 per M.T.
Sacking Tk.14,490 per M.T.

ANNEXURE - XV

QUESTIONNAIRE

1. Name

2. Age Year of Experience

3. Academic qualification(Please mention Degrees only)
.....
.....

4. Professional qualification(if any)

5. Please mention your present designation with the name of your Enterprise/Corporation.
.....
.....

6. Is there problems of working capital management in the Enterprise/ Corporation in which you are working?

Yes

No

7. Problems of working capital management in the public sector Enterprises in Bangladesh may be use to following reasons:-

a) Lack of proper working capital policy(please tick one).

1
 Agree

2
 Stron-
gly
Agree

3
 Dis-
agree

4
 Stron-
gly
dis-
agree

5
 Un-
decided

b) Inefficiency in the management of the components of working capital i.e.

i) Lack of proper inventory management.

1	2	3	4	5
Agree	Strongly Agree	Disagree	Strongly disagree	Undecided

ii) Lack of proper Accounts Receivable Management.

1	2	3	4	5
Agree	Strongly Agree	Disagree	Strongly Disagree	Undecided

iii) Cash Management.

1	2	3	4	5
Agree	Strongly Agree	Disagree	Strongly Disagree	Undecided

iv) Short Term Investments & Advances Management.

1	2	3	4	5
Agree	Strongly Agree	Disagree	Strongly Disagree	Undecided

c) Inherited liquidity gap on the day of nationalisation.

1	2	3	4	5
Agree	Strongly Agree	Disagree	Strongly Disagree	Undecided

d) Problems owed to poor cash flow indogenous to the industry itself.

1	2	3	4	5
Agree	Strongly Agree	Disagree	Strongly Disagree	Undecided

e) Too much dependence on Cash Credit of the Commercial Banks as a major source of Working Capital.

1	2	3	4	5
Agree	Strongly Agree	Disagree	Strongly Disagree	Undecided

- f) Too much dependence on the development budget of the Government for the long-term Project Financing.

1	2	3	4	5
Agree	Strongly Agree	Disagree	Strongly Disagree	Undecided

- g) Lack of proper Capital Structure.

1	2	3	4	5
Agree	Strongly Agree	Disagree	Strongly Disagree	Undecided

- h) Too much political pressure (since nationalisation) and other environmental constraints are also responsible for the proper management of working capital.

1	2	3	4	5
Agree	Strongly agree	Disagree	Strongly Disagree	Undecided

- i) Lack of proper cost accounting, cost control and cost reduction systems are also responsible for the poor management of working capital.

1	2	3	4	5
Agree	Strongly agree	Disagree	Strongly Disagree	Undecided

- j) Lack of co-ordination between sales and production planning.

1	2	3	4	5
Agree	Strongly agree	Disagree	Strongly Disagree	Undecided

- k) Improper pricing policies/administered pricing policies is also responsible for poor management of working capital.

1	2	3	4	5
Agree	Strongly agree	Disagree	Strongly Disagree	Undecided

- l) Lack of proper organisation structure of finance department of public enterprises is also responsible for inefficient management of working capital.

1	2	3	4	5
Agree	Strongly agree	Disagree	Strongly Disagree	Undecided

- m) In competency and lack of modern financial management knowledge on the part of the financial executives are also responsible for poor working capital management of Public enterprises in Bangladesh.

1	2	3	4	5
Agree	Strongly agree	Disagree	Strongly Disagree	Undecided

- n) Absence of written guideline by the corporation bosses is also responsible for poor management of working capital.

1	2	3	4	5
Agree	Strongly agree	Disagree	Strongly Disagree	Undecided

- o) Stress on production rather than sales due to the faulty policy of the Govt., also responsible for poor working capital management.

1	2	3	4	5
Agree	Strongly agree	Disagree	Strongly Disagree	Undecided

- p) Lack of sales planning and demand analysis is also responsible for proper management of working capital.

1	2	3	4	5
Agree	Strongly agree	Disagree	Strongly Disagree	Undecided

QUESTIONNAIRE ON INVENTORY MANAGEMENT
SCHEDULE-II

(Please tick in box)

1. a) Do you have separate "Inventory Management Department"?

Yes

No

- b) If yes, how is it constituted?

2. Do you classify and codify stores

Yes

No.

3. How do you estimate the requirements of different groups of Inventory? (please state the facts)

a) Raw Material

b) Work-in-Process

c) Finished Goods

d) Stores & Spares

4. Do you have any standard norms or guidelines in determining the above-mentioned each group of inventory separately.

Yes

No

If yes, please state it clearly

5. a) Do you face any administrative difficulty while Planning for inventory?
- Yes No
- b) If yes, please state these
6. What are the factors influencing the size of inventory?
- i) Production Cycle
 - ii) Terms of Purchase
 - iii) Cost of Purchase
 - iv) Safety Stock
 - v) Lead Time
 - vi) Availability of materials
 - vii) Cost of Carrying
 - viii) Forecast of Demand
 - ix) Others(specify)
7. Do you follow which of the following modern techniques of Inventory Management?(Please tick)
- i) Minimum level
 - ii) Maximum level
 - iii) Re-order level
 - iv) Economic Order Quantity
 - v) Perpetual Inventory System
 - vi) ABC analysis for Stores Items
 - vii) Inventory Audit
 - viii) Standardisation and variety reduction
 - ix) Others

8. Do you follow the Inventory norms on the following basis ?
 i.e. i) Process period; ii) Need for smooth production;
 iii) Availability of raw materials; v) Availability of
 Stores and Spares; v) Demand of goods.

If not, please state the reasons...

9. Please tick which should be the appropriate norms for holding
 Inventory for Maximum period.

a) Raw Material

Local Max(Months)	Min. (Months)	Imported Maximum period (months)
1		
2		2
2½		3
3		4
3½		5
4		6
4½		
5	or others	or others
5½	(specify)	
6		
Others		

b) Work-n-Process (Please tick)

10 days | 15 days | 20 days | 25 days | 30 days

c) Finished Goods

For Domestic sale

For Export sales

10 days | 15 days | 1 month | 1½m | 2m | 2½m | 3m
 1½m | 2m | 2½m | 3 month | 3½m | 4m

d) Stores & Spares

Local (Months)

Imported (Months)

1 | 2 | 2½ | 3 | 2 | 3 | 4 | 5 | 6
 3½ | 4 | 7 | 8 | 9 | 10 | 11 | 12

10. Does the centralised buying of raw cotton complicate the working capital management problem of BTMC enterprises ?

1
Yes

2
No.

If yes, state reasons.

11. Does the low purchasing power of the poorer section of population and clamour for foreign goods by richer section of customers, a huge of finished goods accumulate in cotton textile mills ?

1
Yes

2
No

If yes, state it clearly.

QUESTIONNAIRE ON
ACCOUNTS RECEIVABLES MANAGEMENT
SCHEDULE-III

(please tick where applicalbe)

1. a) Do you have Accounts Receivables management policy
 Yes No.
- b) If yes, how it is constituted?
2. a) What factors are considered while formulating credit & collection policy?
- b) Who are the executives entrusted with the task of implementing the policy ?
- c) What is the policy of the concern regarding accounts receivables?
i) Strict, ii) Soft iii) flexible
- d) What is the effect of such policy ?
3. What are the sources of Information to assess the credit worthiness of the prospective debtors?
i) Trade Reference ii) Bank Reference
iii) Purchase accounts iv) Direct Information by sales executive & salesman.
4. Do you allow discount for prompt payment Yes No
- a) If yes, what are the terms of discount ?
- b) What is the effect of such policy ?

5. Do you charge any penal interest for non-payment of receivables within stipulated time ?

 Yes

 No

If yes, what is the effect of such policy.

6. Please tick, which should be the appropriate norms for collection of receivables (Maximum period).

For Domestic Sales
(months)

For Export Sales
(Months)

<input type="checkbox"/> ½ m	<input type="checkbox"/> 1	<input type="checkbox"/> 1½	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 1½	<input type="checkbox"/> 2	<input type="checkbox"/> 2½
<input type="checkbox"/> 2½	<input type="checkbox"/> 3			<input type="checkbox"/> 3	<input type="checkbox"/> 3½	<input type="checkbox"/> 4	
				<input type="checkbox"/> 5	<input type="checkbox"/> 6		

7. What are your overall suggestions to increase the efficiency of accounts receivables management.

10. Whether there is any verification of stores
(a) Monthly (b) Half yearly (c) Yearly (d) others.
11. What is the policy of your organisation about the value of stock limit of -
(a) Raw material (b) Work-in-Progress (c) Finished Goods
(d) Stores & Spares.
12. How does you will fix the norm of different types of inventory holding?
13. What are the problems of Inventory Management in your mill or organisation?
14. What are your overall suggestion for the better management of your inventory in your mill or organisation ?

QUESTIONNAIRE ON CASH MANAGEMENT
SCHEDULE-IV

1. a) Is there separate Cash Management department Yes No
b) If yes, what are its functions.
- 2) a) How do you forecasts cash inflows and outflow?
b) What factors influence Cash forecasting ?
3. a) Do you prepare Cash Budget Yes No
b) If yes, when & how such budget is prepared ?
c) What period is covered by Cash budget ?
d) Do you have monthly Cash Budget: Yes No
e) Do you have internal control system for Cash ?
Yes No
4. a) Do you require to submit cash budget/report to the Corporation and the Ministry of finance ?
 Yes No
b) If yes, when

5. a) How do you assess the adequacy of Cash balance to kept ?
- b) What are the factors that influence the above policy ?
6. a) Do you invest excess cash in short-term securities ?
- Yes No
- b) If yes, what factors are considered while purchasing different of securities?
- i) Profitability ii) Liquidity iii) Safety
- iv) others.
- c) How is such excess determined ?
7. Please tick which should be the appropriate norms for holding cash for maximum period of time.

 5 days 10 days 15 days 20 days 25 days 30 days

8. How much cash credit your organisation was granted by the bank during the last six years as follows:

Tk.(lakh)

1981-82

1982-83

1983-84

1984-85

1985-86

1986-87

9. How much interest you have paid during the last six years on cash credit?

Tk.(lakh)

1981-82

1982-83

1983-84

1984-85

1985-86

1986-87

10. What are your overall suggestion to increase the efficiency of Cash Management ?

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