

FINANCIAL MANAGEMENT IN TEXTILE MILLS IN KERALA

*Thesis submitted for the award of the Degree of
Doctor of Philosophy in Commerce*

By
K. K. MOHAMED

Under the Supervision of:
Dr. K. C. VIJAYAKUMAR
Professor and Head

**DEPARTMENT OF COMMERCE AND MANAGEMENT STUDIES
UNIVERSITY OF CALICUT
KERALA, INDIA
JUNE 1997**

Dr. K.C. VIJAYAKUMAR
Professor and Head.

Department of Commerce and
Management Studies,
University of Calicut,
Kerala.

CERTIFICATE

This is to certify that this thesis on “Financial Management in Textile Mills in Kerala” is an authentic record of the bonafide research carried out by Mr. K.K. Mohamed under my guidance and that no part of it has been presented before for any Degree, Diploma or other similar title.

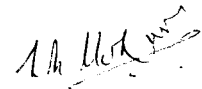
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DECLARATION

I, K.K. Mohamed, do hereby declare that this thesis entitled "Financial Management in Textile Mills in Kerala" is a bonafide record of research work done by me under the guidance of Dr. K.C. Vijayakumar, Professor and Head, Department of Commerce and Management Studies, University of Calicut.

I also declare that this thesis has not been submitted by me fully or partially for the award of any Degree, Diploma, Title or Recognition before.



K. K. MOHAMED

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LIST OF ABBREVIATIONS

Acc. DEP	: Accumulated Depreciation.
ACP	: Average Collection Period.
AIHP	: Average Inventory Holding Period.
AM	: Accounts Manager.
CR	: Current Ratio.
AT	: Asok Textiles.
ATCM	: Alagappa Textiles (Cochin) Mills Ltd.
ATIRA	: Ahamedabad Textile Industry Research Associations.
BEP	: Break-Even Point.
CA	: Current Assets.
D/E	: Debt - Equity.
DHCR	: Double Hank Cross Reeling.
DPHR	: Double Hank Plain Reeling.
DSCR	: Debt Service Coverage Ratio.
EBDIT	: Earnings Before Depreciation Interest and Taxes.
EBIT	: Earnings Before Interest and Taxes
ECP	: Energy Conservation Programme.
EI	: Eurospin Industries Ltd.
ET	: Edarikkode Textile Ltd.
F.M	: Finance Manger.
FGCP	: Finished Goods Conversion Period.
GATT	: General Agreement on Tariffs and Trade.
GM	: General Manager.
GOC	: Gross Operating Cycle.
GPM	: Gross Profit Margin.
HO	: Head Office.
ICMF	: Indian Cotton Mills Federation Ltd.
ITR	: Inventory Turnover Ratio.
JIT	: Just-in-Time.
K.S.T.C	: Kerala State Textile Corporation Ltd.
KCM	: Kathayee Cotton Mills Ltd.
Kd	: Cost of Debt.
Ke	: Cost of Equity.
KLM	: Kerala Lakshmi Mills Ltd.
Kp	: Cost of Preferred Stock.
Kr	: Cost of Retained Earnings.
KT	: Kottayam Textile Ltd.
MCSM	: Malappuram Co-operative Spinning Mills Ltd.

MCSM	: Malappuram Co-operative Spinning Mills Ltd.
MD	: Managing Director.
MFA	: Multi Fibre Arrangement.
MS	: Madras Spinners Ltd.
NOC	: Net Operating Cycle.
NPM	: Net Profit Margin.
NTC	: National Textile Co-operation.
O.C.F	: Operating Cash Flow.
O.P	: Operating Profit.
OC	: Operating Cycle.
PDP	: Payment Deferral Period.
PM	: Prabhuram Mills Ltd.
PM	: Production Manager.
QCSM	: Quilon Co-operative Spinning Mills Ltd.
QR	: Quick Ratio.
R.OA	: Return on Assets.
RCP	: Receivable Conversion Period.
RMCP	: Raw Material Conversion Period.
ROCE	: Return on Capital Employed.
ROE	: Return on Equity.
ROI	: Return on Investments.
RTR	: Receivable Turnover Ratio.
S	: Sales.
SBT	: Sri Bhagavati Textiles Ltd.
Sec	: Secretary.
SIMA	: South Indian Mills Association.
SITRA	: South India Textile Research Association.
SPHR	: Single Hank Plain Reeling.
TA	: Total Assets.
TCM	: Trichur Cotton Mills Ltd.
TCSM	: Trichur Co-operative Spinning Mills Ltd.
TSM	: Trivandrum Spinning Mills Ltd.
VT	: Vanaja Textiles Ltd.
WC	: Working Capital.
WIPC	: Work-in-Progress Conversion Period.
WTR	: Working Capital Turnover Ratio.

INTRODUCTION

K. K. Mohamed “Financial management in textile mills in Kerala ” Thesis.
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CHAPTER I

INTRODUCTION

INTRODUCTION

The textile industry is the oldest and largest single manufacturing industry among the organised industries of India. For long, this industry has served as a mother industry. Having helped foster many other industries, the textile industry has promoted the industrialisation process of the country. Textiles fulfil one of the basic necessities of life. Besides creating vast avenues of employment, this industry makes rich contribution to the exchequer by way of various taxes and duties. It has the single largest weight in the country's index of industrial production. It is also the nation's largest foreign exchange earner. Thus, the textile industry plays a predominant role in shaping the economy of India. But this industry has been passing through a deep crisis for a long period. It is saddled with old age and technical obsolescence. Weakness and sickness are fast spreading over the industry. Apart from a large number of mills being closed, even modernised mills with commendable track record for several years are facing a critical situation. In spite of these, the textile industry has vast opportunities in the context of the changed world trade scenario and closure of textile mills in Japan and Europe consequent upon increasing labour costs.

Over the years, Kerala has achieved excellent growth in the social front; however, she encounters industrial backwardness, unemployment and poverty. It was the textile industry, one of the traditional industries of Kerala that laid the foundation for the industrialisation in this State also. As the textile industry has the capacity to generate enormous employment opportunities, it helps tackle mounting unemployment problems and facilitates the industrialisation of Kerala. As is pertinent to the national scenario, this industry earns much valuable foreign exchange besides making substantial contribution to the State exchequer in various forms. Considering the crucial role of the textile industry in the economy of Kerala, its successful working is of utmost importance. Of the various problems faced by the industry, financial difficulties are more severe. In spite of the huge amount of funds made available by the government and financial institutions, the textile mills in Kerala are not able to deliver goods as expected from them. The success or failure of any enterprise depends on how effectively its resources are being deployed. The effective management of funds is all the more crucial in this process because most of the management decisions influence the commitment of funds and affect the profitability of the business. One

possible reason for the disappointing performance of the mills is their poor financial management. Therefore, it is quite proper to analyse the existing financial management practices in these mills in the light of accepted theories and see how far they are responsible for their present state of affairs.

The Problem

The profitable working of the textile industry in Kerala is of great importance in the context of her industrial backwardness, increasing unemployment and low per capita income. In the pilot study, finance has been identified as one of the major problems faced by the textile mills in Kerala. In fact, financial management becomes increasingly pertinent to the general management of the mills. Financial decisions are crucial for the well being of the mills because they determine the ability of the mills to obtain funds when required to procure necessary amount of inventories and to meet their obligations when due. The textile **mills** in the state are gripped in a plethora of financial problems such as erosion of equity base, acute shortage of working capital, high interest costs, poor debt servicing and absence of funds for modernisation and replacements. It is against this background that the

study “Financial Management in Textile Mills in Kerala” assumes special significance.

Objectives

This study sets the following specific objectives.

- i) To evaluate the present position of the textile industry,
- ii) To have inter sectoral analysis of the financial management practices,
- iii) To compute the cost of capital in the mills,
- iv) To identify the working capital ratio/s that exert/s greater influence on the profitability of the mills and to develop a model for predicting profitability using such ratio/s,
- v) To profile the profitability and analyse the cost structure,
- vi) To identify the most significant component of cost that determines profit and to develop a model to predict profit using that variable; and
- vii) To offer feasible suggestions for effective financial management in the light of the findings.

Scope.

The cotton textile industry consists of organised or mill and decentralised sectors. The spinning mills and the composite mills come under organised sector. The khadi, handlooms and powerlooms constitute the decentralised sector. The spinning mills produce yarn, while the composite mills are engaged in spinning, weaving and processing. This study confines to the spinning mills coming under the organised sector (mill industry) only. It proposes to review the financial management practices relating to funds flow, capital structure design, cost of capital, capital budgeting, working capital management, profitability and cost behaviour of the textile mills in Kerala. In the process, an attempt is made to highlight healthy financial management practices and suggest ways for the better performance of the select mills.

Time Span

This study covers a period of five years from 1988-89 to 1992-93. The year 1992-93 was chosen as the end period because the published data on which this study is based on is available up to 1992-93.

Methodology

The textile industry in Kerala comprises of the Khadi, handlooms, and mills. The mills come under the organised sector and the rest under the unorganised sector. The mill industry consists of spinning, weaving and composite mills. In Kerala there are thirty two organised mills of which twenty five are spinning mills. Only spinning mills of the mill industry are covered in this study. The spinning mills spread over all districts except Kasaragod, Wyanad, Idukki and Pathanamthitta are organised under private, public, co-operative and government sectors. Twelve spinning mills come under private sector, four mills each under co-operative, National Textile Corporation (NTC) and Kerala State Textile Corporation (KSTC) and one under Kerala government. The twenty five mills constitute the population of this study. Stratified sampling technique is employed for selecting sample mills. The population is divided into five sub populations namely KSTC, Co-operative, NTC, private and Kerala government. Three mills each of KSTC and Co-operative sector both together constituting 75 percent of the population, two NTC mills representing 50 percent of the population and seven private mills covering 58 percent of the population are selected for this study. The lone spinning mill under Kerala government

also comes under the purview of this work. In all, 16 spinning mills constituting 64 percent of the population covering all districts except Kannur are highlighted.

Data Base

This is an empirical study. Both primary and secondary data were collected for the purpose of this study. For primary data collection, a pre-tested structured questionnaire given in appendix I was sent to the select mills. Difficulties were experienced to administer the questionnaire due to nonresponse of the primary data base. In spite of repeated requests, some mills did not respond at all. Therefore, in order to cover up the non-respondent mills and to supplement information already received, though inadequate for the study, personal interviews were conducted with the Finance Managers and the Chief Executives of the mills. They were clearly informed of the purpose of this study and were assured of the confidentiality of their disclosures. Data were also collected from a variety of secondary sources based largely on published reports of the mills, official publications of the Govt. of India, Ministry of Textiles, the ICMF, Textile Research Associations and quite a large number of unofficial data sources.

Hypotheses

The following hypotheses have been formulated and tested

H₁: The ownership pattern of textile mills in Kerala has no influence on the capital structure,

H₂: In the context of uncertainty surrounding earnings and the low or no interest tax shield in the textile industry, greater dependability on debt creates adverse impact on the cost of capital,

H₃: The poor management of inventory and receivables are the causal factors for the ineffective management of working capital; and

H₄: The shorter span of operating cycle need not always reflect the effectiveness in the management of working capital.

Tools of Analysis

The data drawn from various sources have been analysed with the help of various mathematical, accounting and statistical techniques.

Measures of central tendency, measures of dispersion, simple

correlation, multiple correlation, multiple regression, F test, ANOVA and ANCOVA are the different statistical techniques employed for analysis and interpretation of data.

Survey of Literature

As the textile industry is the oldest and largest manufacturing industry in India, several studies on this industry, both official and unofficial have been brought out. In general these studies can be demarked as pre-fifties and post-fifties studies. The land mark of the pre-fifties studies is their historical, institutional and descriptive character and that of post-fifties studies is their systematic and analytical nature refined and fortified by quantitative analysis.

Studies in Pre-fifties

A large number of historical and narrative studies appeared during the pre- fifties period. Works by Lokanathan (1935) , Gandhi (1940) , Sastry (1943) , M.L. Dantwala (1948) , N.H. Thakkar (1949) , M.M. Mehta (1949) etc, are some studies of pre-fifties worth mentioning. These studies were chiefly concerned with issues like the Managing

Agency System, location, structure, size and integration of units in the industry.

Studies in Post-fifties

As stated earlier, the post fifties studies witnessed a shift from the traditional narrative style to a more scientific and analytical treatment. The RBI studies (1958 and 1959), Sen (1960), Bhalla (1964), Singh (1964), Nayyar (1973), Dharmakumar *et al.*, (1965), Morris (1965), M. Padmanabhan (1974), Arvind Lalbhai (1982), V. Shanbhag (1984), ATIRA (1984), A.R. Garde (1985) are some significant studies which dealt with various problems faced by the industry.

Though studies on the general problems of the industry are plenty, the literature on different aspects of financial management is scanty. V.K. Sastry (1966), J. Purnananda and K.S Hanumantha Rao (1966), K. Krishnamurthy and D.V Sastry (1970), A.G Kulkarni, N.K Sharma, K.K Bansal, S. Gopal Lal, R.R.Barthwal (1977), Dinesh Chandra, V.G. Rao *et al.* (1977), P.R. Ojha (1978), The Textile Association, India (1984), Dhulasi Brindha (1985), ATIRA (1985), B.H. Desai (1986), H.P Bhattacharya (1986), K.K. Mohamed (1987), C.S Rayudu (1987), Kevin

(1989), N. Dey (1989), N.B Ghargle (1992), B. Krishna Reddy and C. Sivarami (1990), SITRA (1992,1993,1994 and 1995) and V.Y. Thamhane (1994) have conducted studies on the various aspects of financial management in textile industry.

In this context, the important studies on different facets of Indian textile industry are reviewed here. Some of the analytical studies mainly focus on sickness, financial management, productivity, cost structure and personnel management in textile industry. As sickness is one of the important and grave problems haunting Indian textile industry, it has drawn the attention of many textile technologists, academics, analysts and researchers. As a result several studies have been conducted on the aspect of sickness. It is, therefore, relevant to give a brief description of some important studies on sickness in textile industry.

M. Padmanabhan (1974)¹ analyses the problem of sickness in the mill sector and identifies some predictors of sickness. According to him, the current ratio and equity/debt ratios are predictors of short-term solvency and long-term solvency of the mills respectively.

Arvind N. Lalbhai (1982) ² examines the problem of sickness in textile industry and contends that the sickness of the mill sector is attributable to the discriminating policy of the Government of India against the mill sector.

V. Shanbhag (1984) ³ examines the question of turn around of sick mills and suggests cost effectiveness of cotton fabrics to be the basic strategy to counter it. He advocates that cost effectiveness can be achieved through internal measures like maximum productivity and restructuring of the distribution system of fabrics. He affirms that external measures by the Government like cotton price stabilisation and removal of excise differential between different sectors in the industry could be initiated for improving sick mills

ATIRA's Study (1984) on sickness reveals that considerable gap exists between potential and actual productivity performance with the given machinery in many mills.

A.R. Garde (1985) ⁴ estimates that about 25% of the mills are sick and that the causes of sickness are due to the operation of internal

and external factors . He considers man-machine productivity and wastages as internal factors. He argues that the profitability of the mills can be improved considerably by effectively managing internal factors. He defines sickness as to the presence of any one of the following conditions.

- i) Making losses (after interest and depreciation) for three consecutive years,
- ii) Having accumulated losses of more than Rs. 350 per spindle; and
- iii) The reserves having completely wiped out.

P.R. Ojha⁵ analyses the profitability of 51 cotton textile companies for the period 1960-67 and finds that mills in Ahmedabad region earned highest profits , mills in Bombay and southern region earned medium profits and those in Northern region earned the lowest. He also observes that the mills managed by the Managing Agents showed highest profitability while those managed by the Government Controllers showed poorest profitability. According to him, older mills are more stable and profitable than the new mills.

Dhulasi Birundha(1985)⁶ examines the inter mill variations in profits between years and concludes that the technology and modernisation have greater impact on profitability of mills and that a positive correlation between profitability and growth exists in textile mills.

Nageshwar Rao and Omiji Gupta (1985) ⁷ attempt to study the profitability of the N.T.C mills and its subsidiaries for the period from 1980-81 to 1992-93. They evaluate the performance of the mills on the basis of net profits and contend that performance of public sector textile mills in terms of profitability is not satisfactory as their prime task has been to rehabilitate and / modernise the sick mills that were taken over by the Government. In order to tone up the poor profitability position of the N.T.C mills, they suggest concrete steps like modernisation, revamping of product profile according to the customer preferences, change in debt-equity ratio to 1:2 and stabilisation of cotton cost.

ATIRA's Study (1985) ⁸ reveals that the variation in profitability in any given year between individual mills is very large mainly because of variation in machine utilisation and productivity. It suggests that the

mills must maintain spindle utilisation at a maximum level so as to minimise the cost of overheads.

K.K Mohamed (1987) ⁹ examines the working of textile mills in Malappuram District in Kerala for seven years from 1979-80 to 1985-86. Evaluating profitability and financial soundness of the mills, it is ascertained that the profitability of the mills are very unsatisfactory and that the short-term and long-term solvency of the mills are very weak. It is observed that the absence of internal generations have resulted in the erosion of equity base of mills and consequently they lean heavily on debt financing. The financial management of the mills was found to be ineffective.

C.S Rayudu (1987) ¹⁰ has undertaken a case study of co-operative spinning mills. The main findings of his study are that the co-operative spinning mills are running at losses and are trading more on borrowed funds as their equity base are very thin. According to him, professional financial management is conspicuously absent in co-operative spinning mills.

N.B Gharjale (1992) ¹¹ undertakes a case study of co-operative spinning mill in Latur District in Maharashtra and observes that the performance of this co-operative spinning mill in terms of productivity is very poor.

Kevin (1989) ¹² studies the working of textile mills in Kerala ascertaining that the mills are mostly financed by debt. He affirms significant correlation between wages and gross profit margin and also establishes that interest cost is a factor that contributes to variations in operating profits among mills.

B. Krishna Reddy and C. Sivarama Reddy (1990) ¹³ endeavour to study the financing pattern and utilisation of fixed assets in 6 private cotton textile mills in Andhra Pradesh covering a period of 9 years from 1977-86. They observe that as the net worth of the mills are weak, they depend more on short-term debt to finance fixed assets.

South Indian Textile Research Association (SITRA) has made numerous studies on different problems faced by the textile industry. Those studies throw considerable light on the various factors that affect

costs and profits. Some of the SITRA studies are, therefore, reviewed here.

SITRA Study (1992) ¹⁴

It attempts to appraise the cost implications of the various technical and operational decisions and suggests some methods of cost assessment and more rational apportioning of costs over different counts of yarn. It also discusses a number of operational problems normally encountered by the mills.

SITRA's Study (1993) ¹⁵

This study on yarn productivity assessment describes the methods of assessing productivity in spinning and develops the conversion factors to be applied to find out the standard production per spindle and HOK in different counts.

SITRA Study (1995) ¹⁶

It analyses the financial performance of 84 spinning mills for 1990-1995 and lays down broad norms for various cost components as

well as key financial ratios. It also suggests the short-term and long-term measures that the mills should take in order to improve profits.

N. Dey (1989)¹⁷ surveys available official reports and other literature on the development of cost accounting practices in cotton textile industry in the major textile producing countries in the world in general and in India in particular. Again, in 1990 he attempts to identify basic requirements needed for effective management control of a composite cotton textile mill. He suggests flexible budgetary control and standard costing as the most effective tools to be applied for cost control.

S. Seshadri and T.V. Ratnam (1994)¹⁸ analyse the cotton yarn conversion cost. According to them, low levels of profit margins and the large inter mill variations in costs are indicative of the fact that controls should be exercised on all cost components in order to operate the mill soundly.

National Productivity Council (1994)¹⁹. The research division of National Productivity Council analyses the production structure of

textiles and finds that the Government policy has been tilted towards unorganised sector. They point out that India's export performance is not satisfactory because of her declining market share vis-a-vis its Asian counterparts. The policy induced structural transformation towards higher production share for the unregulated (decentralised) sector, inspite of improving overall exports, may be inferred as the major reason for decline in India's export share in the world market. They suggest technological upgradation and productivity improvement as a remedy for the disappointing export performance of Indian textile industry.

Omkar Goswamy²⁰ examines the demand and supply in the cotton textile industry and concludes that the per capita demand for textiles has been stagnant, the shift from cotton to man-made has been remarkable and that the elasticities of demand for synthetic and blended cloth have been greater than those of cotton. On the supply side, there has been a shift in the relative market share of mills, powerlooms and handlooms. Again in 1990 he has examined the patterns and determinants of house hold demand for clothing concluding that the per capita demand of textiles is low. He advocates systematic reduction in

tariffs to increase per capita demand of textiles. He also looks in to the position of powerlooms vis-a-vis mills and handlooms, rationalisation of work forces in the mill sector and the myth of modernisation. To him, the options that exist are closely linked to rationalising the labour force, which, in turn, requires a definite policy decision, by the Government. He holds that there is very little hope for nationalised composite mills in the face of stiff competition from powerlooms with its striking cost advantage.

Some studies related to this area of labour are also worth mentioning.

T. S. Papola (1968)²¹ explains the criterion of wage determination in cotton textile industry.

The Textiles Association, India (1984)²² in its study sees wide gap in labour productivity between the mills in India and those in developed countries proving that the productivity in Indian mills is only 1/4 to 1/6 of that of developed countries.

V. Y. Tamhane (1994) ²³ feels that the success of a market economy in sustaining high levels of productive efficiency and technological change depends in large measures on industrial relations and the attitude of workers. He believes that mills and labour will have to work hand in hand to face the challenges thrown up by the liberalisation of the economy. He also lays stress on labour co-operation for improved productivity and fault free and flawless production.

Most of the studies on the textile industry in Kerala are confined to different facets of the handloom sector. The literature on the mill industry in general are few and the studies on the area of financial management are very few. As per the available information, only two studies* are conducted on the area of financial management of the mill industry in Kerala. These studies do not deal with the areas like cost of capital, the most dominant constituent of capital, operating cycle analysis of working capital, identification of the crucial variables influencing the profitability of the mills etc., Thus, apart from the time lag, there are a number of gaps in these studies. It is these gaps that suggest the need to have a fresh look at the financial management practices in the different sectors of the mill industry in Kerala

Limitations.

Although this study covers fairly a large number of textile mills in Kerala, some of the required records of the mills are not available for scrutiny while some of the available records are inaccessible for reference branding them as “confidential” and a few mills have not cooperated with this study. Further, for most part of the analysis data up to 1992-93 are only analysed as the Annual Reports of many of the mills are not available beyond 1992-93. Time and resources are other restricting factors. Given these constraints, every effort has been made to deal exhaustively with some important issues and to make the study more exact and meaningful.

Organisation of the work

This work is divided into seven Chapters.

Chapter I focusses on introduction, research problem, research design, objectives, scope, hypotheses, survey of literature and limitations. Chapter II is designed to give an overview of the textile industry. The analysis of funds flow statements, capital structure, cost

of capital and financing pattern of the select mills are presented in Chapter III. An in-depth analysis of working capital management is given in Chapter IV. The Chapter V profiles profitability of the select mills. The cost structure is discussed in Chapter VI and the Chapter VII summarises the findings and suggestions.

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* Studies by K.K.Mohamed and Kevin.

THE TEXTILE INDUSTRY

K. K. Mohamed “Financial management in textile mills in Kerala ” Thesis.
Department of Commerce and Management Studies , University of Calicut,
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CHAPTER II

THE TEXTILE INDUSTRY

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THE TEXTILE INDUSTRY

The textile industry is one of the oldest manufacturing industries in the world. It is the oldest and largest single industry in India. Besides satisfying the basic human need of clothing, this industry offers employment to many millions and earns much wealth to our exchequer. In recent years textile industry has emerged as India's biggest foreign exchange earner. Thus the textile industry occupies a unique position in the economy of India.

This Chapter is divided in to two sections. Section I gives a short account of Indian textile industry and Section II presents an overview of the textile industry in Kerala.

SECTION I

The term 'textile' derived from Latin word "texere" (to weave) originally applied to only woven fabrics, has become a general term for fabrics, yarns and other materials that can be made into fabrics and for fabrics produced by interlacing or any other construction method ¹. The

cluster of activities extending from the cotton field through the textile mill is some times referred to as the “cotton” and cotton textile industry². Cotton, wool, and flax fibres were used as textile materials in ancient Egypt. Silk production is mentioned in Chinese chronicles dating to about 3000 B.C. Specimen of dyed fabrics has been found in Roman ruins of second century B.C. There is evidence of production of printed textiles in India during the third century B.C. In Sicily, after the Arab conquest in A.D 827, beautiful fabrics were produced in the palace workshops at Palermo.

The textile industry has often been considered as a purely traditional and hence static, rather than a dynamic industry since it is labour intensive rather than capital intensive. Such an image of the industry might have been true until the 1950s, due to a long spell of technological stagnation. However, during the last four and half decades, increasing wage costs and scarcity of labour in the West have compelled development of textile industry. The technological advancement has been rapid leading to increase in production rates, reduction in the processing stages and to automation.

Development of Indian Textile Industry

There is reason to believe that cotton, the white gold, was first grown and put to use in India before anywhere else in the world. Indian handloom fabrics have a hoary past. The discovery of red dyed cotton cloth and twine at Mohanjo-Daro has proved beyond doubt that the art of weaving and dyeing was mastered here five thousand years ago. Centuries ago when Western Europe, the birth place of modern science and technology, had little industrial production to boast of, India was famous for the high artistic skill of her craftsman. The artisans who spun the yarn and wove the fabrics there from possessed extra ordinary skills in creating intricate designs and patterns unknown to their counterparts in other countries. So dextrous did the artisans for the famous "Dacca Muslin" turn out the yarn that it was called the web of the woven wind. In ancient times, Indian cotton textiles were in universal demand for their beauty and fineness. The calicoes of Calicut and muslins of Dacca had earned worldwide reputations³. Mummies in Egyptian tomb have been found wrapped in muslins of finest quality even in 2000 B.C. Foreign travellers like Marco Polo in the thirteenth century and Tavernier in the seventeenth century wrote with enthusiasm

about the supreme excellence of Indian cotton fabrics ⁴. Places like Dacca and Varanasi in the north and Kanjeevaram and Madurai in the south were famous for their products and from where the fabrics were exported to other countries ⁵. During the Mughal period, India was the major supplier of textiles - not just fine cloths, but every day wear for the masses - to the whole of south - east Asia, Iran, the Arabian countries and the east Africa ⁶. The Indian exports consisted of more than two hundred varieties of cotton textiles, the manufacture of which was scattered throughout India. Different regions specialised in the production of certain well-known varieties of cloth. The first place among the piece goods went to Dacca Muslin of Bengal. South India specialised in plain and printed cloth to such an extent that Calicut gave its name to Calicoes ⁷. After the Industrial Revolution in Europe, cheap machine-made fabrics from factories in England flooded Indian market and this almost completely destroyed Indian handlooms.

Development of Textile Mills

The Indian cotton textile mill owes its genesis to some early British pioneers and entrepreneurs. Factory cotton manufacture in

India, as with industry in general, was introduced by the British in the wake of political conquest of the sub continent. In the beginning, most of the mills were spinning mills, spinning coarse yarn. British traders, Parsi community, the adventurers among the agriculturists, and money lending class were the early starters. The earliest beginning of textile manufacture on a factory scale dates back to 1818 when the Fort Golster Mills was established by Mr. Henry Googer, an English merchant at Fort Golster, 15 miles away from Calcutta, which was later known as Bowreah Cotton Mills Co. Ltd.,⁸. But it did not turn out to be a commercial success. In south India, the French Ambassador General of Pondichery set up a cotton mill known as Blin and Deibrick Hill⁹. Another mill known as Savanna Mill in Pondichery started working in 1830. The first Indian to start a cotton mill was Mr. Cowasjee Nanabhoy Davar. He set up a mill in Bombay in 1854 with an English man as his partner. It was Davar's mill, which laid the foundation for a strong and growing mill in Bombay. Thus Bombay took the lead in establishing a large number of mills since 1854. The Broach Cotton Mill near Ahmedabad was set up in 1855¹⁰. Up to 1925 the cotton textile industry of India was predominantly localised in the

city and island of Bombay. But later the industry was decentralised to a number of other states. In Coimbatore Sir Robert Stanes a European, started the first textile mill in the year 1890. There were only 5 mills in Coimbatore till 1930. However, there was an acceleration of industrial activity from 1930 onwards and between 1930 and 1939, when the Second World War broke out, 27 spinning mills were established almost all of them by agriculturists. Now Coimbatore has the largest concentration of textile mills in the country with 485 textile mills, of which 463 are spinning mills. Because of the predominance of textile mills in Coimbatore, this city is known popularly as 'Texcity'. Coimbatore is the largest supplier of yarn to the decentralised sector. The noteworthy aspect of the mills in Coimbatore is that they attach greater importance to technological excellence.

Since independence, we have witnessed the marvellous growth of Indian Textile industry. A significant highlight of this growth is modernisation of its old and established facilities and setting up of new mills covering a wider range of areas. Table 2.1 shows the growth of the mill industry from 1951 to 1993. The spindleage increased from 11

million in 1951 to 28.09 million in March 1993, rotors increased from 45 thousand in 1989 to 127 thousand in March 1993. In the organised sector, however, the loomage declined from 210 thousand in 1989 to 158 thousand in March 1993. Of 1227 cotton / man-made fibre textile mills, 188 mills are in public sector, 124 mills are in the co-operative sector and 915 mills are in the private sector.

As can be seen from the Table 2.1 the number of the textile mills have increased from 378 in March 1951 to 1142 in March 1993, while the number of spinning mills and spindles registered an increase throughout the period, the number of composite mills and the loomage showed a declining trend.

Table 2.1

Growth of the Organised Mills

Year (As on March end)	No. of Mills			Installed No. of		
	Spinning	Composite	Total	Spindles (Mn.)	Rotors ('000)	Looms ('000)
1951	103	275	378	11.00	---	195
1961	192	287	479	13.66	---	199
1971	373	291	664	17.88	---	208
1981*	400	291	691	21.08	---	208
1982	442	281**	723	21.78	---	210
1983	525	280	805	22.53	---	210
1984	595	280	875	23.82	---	210
1985	674	281	955	25.57	---	210
1986	702	282	984	26.02	---	208
1987	744	283	1027	26.12	---	208
1988	752	283	1035	26.25	---	199
1989	769	282	1051	26.46	45	184
1990	770	281	1051	26.59	60	181
1991	777	285	1062	26.67	67	178
1992	846	271	1117	27.82	113	169
1993	874	268	1142	28.09	127	158

* Figures since 1981 excludes waste spinning units

** Reduction in the number of composite mills is due to reclassification of 10 composite mills into spinning mills.

Source: ICMF Journals and Ministry of Textiles, Annual Reports (various years)

Distribution of Indian Textile Industry

Table 2.2 gives the distribution of Indian textile industry.

Table 2.2
Distribution of Textile Industry in India
 (As on 31.03.1993.)

States/Union Territory	No. of Textile Mills
STATES	
Andhra Pradesh	72
Assam	5
Bihar	9
Goa	1
Gujarat	121
Haryana	16
Himachal Pradesh	7
Jammu & Kashmir	2
Karnataka	46
Kerala	30
Madya Pradesh	31
Maharashtra	137
Manipur	1
Orissa	14
Punjab	25
Rajasthan	34
Tamil Nadu	485
Uttar Pradesh	55
West Bental	39
UNION TERRITORIES	
Delhi	3
Pondichery	9
Grand Total	1142
Ahmedabad	68
Bombay	54
Coimbatore	219

Source: Compendium of Textile Statistics 1993,
 Ministry of Textiles, Govt. of India.

Though the textile industry is scattered all over the country the Tamil Nadu has the largest number of mills with 485 mills, followed by Maharashtra and Gujarat with 137 and 121 mills respectively. Among spinning mills also the Tamil Nadu tops first with 463 mills followed by Andhra Pradesh and Maharashtra with 70 and 62 spinning mills respectively. In the case of composite mills, Gujarat has largest number of such mills, that is, 87 composite mills followed by Maharashtra and Tamil Nadu with 75 and 22 mills respectively. Thus our textile mills are concentrated in three cities of Coimbatore, Ahmedabad and Bombay. There are 219 textile mills in Coimbatore alone.

Table 2.3 shows the capacity of spindles, rotors, looms and the number of workers in different states.

Table 2.3
**Installed Capacity and Workers on Roll of Cotton / Man- made
 Fibre Textile Mills As on 31.03.1993**

State / Union Territory	Spindles	Rotors	Looms	Workers
STATES				
Andhra Pradesh	1609968	7320	1246	36087
Assam	111096	----	156	4600
Bihar	184148	----	596	4310
Goa	25916	----	----	527
Gujarat	4038160	12624	52892	181199
Haryana	323006	1584	261	17061
Himachal Pradesh	157840	1312	----	7526
Jammu & Kashmir	47149	992	----	3303
Karnataka	1116536	5880	4656	37831
Kerala	767276	----	1324	19696
Madhya Pradesh	816073	4200	7492	49214
Maharashtra	4964878	21768	55298	206210
Manipur	16416	----	----	475
Orissa	352680	2600	1048	19420
Punjab	698637	5784	1245	39829
Rajasthan	835400	2744	2320	48201
Tamil Nadu	8740461	51238	7919	176077
Uttar Pradesh	1777706	5294	12078	94392
West Bengal	1197604	1496	7299	57812
Union Territories				
Delhi	111624	168	545	6558
Pondicherry	197144	1680	1861	9359
Grand Total	8089718	126684	158236	1019687
Ahmedabad	2608912	6200	39753	125271
Bombay	2865628	14640	44721	121103
Coimbatore	3715175	18742	3010	66648

Source : Compiled from Compendium for Textile Statistics, 1993,
 Ministry of Textiles, Govt. of India.

It is evident from Table 2.3 that the Tamil Nadu occupies the highest position in respect of spindle capacity with 87,40,461 spindles ; Maharashtra has the second position with 49,64,878 spindles and Gujarat the third place with 40,38,160 spindles. Maharashtra has the highest loomage in the country with 55298 looms; followed by Gujarat with 52892 looms and U.P with 12078 looms. As Tamil Nadu mills are mostly spinning mills, its loomage is comparatively low. The rotors represent most modern spinning technology. As on 31.03.1993 Tamil Nadu inducted 51238 rotors, Maharashtra 21768 rotors and Gujarat 12624 rotors. Though Tamil Nadu has the largest number of mills, because of their technological excellence, their labour complement is comparatively low. It has only the third place in respect of employment generation, the first and second place, as regards employment potential, go to Maharashtra and Gujarat mills.

The Structure of Indian Textile Industry

The Indian Textile Industry is complex in structure comprising the organised and the decentralised sectors. In the organised sector, there are spinning mills, weaving mills and composite mills. The

composite mill is one where spinning, weaving and processing is carried out under one roof. The decentralised sector consists of khadi, handlooms and power looms.

The share of production of cloth in India, sector-wise is presented in Table 2.4

Table 2.4

Sector-wise Production Share of Cloth in India

Year	Organised Sector	Unorganised Sector		Total
	Mills	Handlooms	Powerlooms	
1980-81	36.43	24.98	38.59	100
81-82	32.39	24.75	42.86	100
82-83	25.72	27.68	46.60	100
83-84	27.87	26.16	45.97	100
84-85	26.52	26.86	46.62	100
85-86	20.59	24.02	55.39	100
86-87	19.42	24.00	56.58	100
87-88	17.68	24.31	58.01	100
88-89	14.50	19.95	65.55	100
89-90	12.95	19.05	68.00	100
90-91	11.29	18.73	69.98	100
91-92	10.52	18.25	71.23	100
92-93	7.98	20.84	71.18	100

Source : Compiled from Compendium of Textile Statistics, 1993,
Ministry of Textiles, Govt. of India.

Since 1980, the organised mill sector ceased to occupy the 'commanding heights' of Indian textile industry and that role has been taken over by the decentralised powerlooms which account for 72 percent of the country's textile output, with the organised mill sector coming a poor third.

The textile industry the world over has undergone a sea change since the World War II with some of the newly industrialised developing countries having made spectacular progress in establishing the most modern textile mills. The developed countries in order to save their textile industry, intensified their efforts towards forging a multi-fibre and multi-process industry by carrying out structural adjustments aimed at optimising the operations. On the other hand, the organised textile industry in India had to face disintegration with an unchecked proliferation of powerlooms aided by unimaginative fiscal policies. Among the composite mills, two-thirds or more of the units are indubitably sick and have been incurring cash losses.¹¹

Handlooms.

Handlooms go back to antiquity. It forms part of the heritage of India and exemplifies the artistry of weavers. Cotton weaving accounts for 90 per cent of the weaving activity in terms of number of handlooms. The handloom sector plays a very important role in the country's economy. It is the largest economic activity after agriculture providing direct and indirect employment to more than 30 lakh weaver households and about 124 lakh weavers ¹². The production of handloom fabrics registered more than ten-fold increase from a level of 500 million square metres in the early fifties to 5851 million Sq.metres in 1993-94 ¹³. India exports large quantities of handloom fabrics and garments to over 100 countries. Exports of cotton handlooms have a promising future as markets in developing countries are increasingly conscious of ecology. Cotton fabrics, therefore, are highly favoured and 'hand woven' ensured a profitable market. There should be a constant and continuous endeavour to produce new designs, textures, weaves and blends. This is because the strength of handlooms lies in their adaptability and flexibility to quickly produce new type of fabrics in response to market trends.

Powerlooms.

The decentralised powerloom sector started in a modest way in western India in early 1960s. By 1981 this sector has grown considerably ¹⁴. The decentralised powerloom sector plays a pivotal role in meeting the clothing needs of the country. It now contributes about 72 per cent of the total cloth production (excluding khadi, silk and wool) in the country ¹⁵. The major spurt in powerloom capacities occurred in the first half of 1980s especially during the protracted Bombay Textile Strike of 1982. Powerlooms have several advantages over the mill sector. Their wages are much lower, and overheads are practically non-existent. They can hire and fire employees freely and hence there is a greater sense of discipline amongst their workers. Unlike mills, they can close down their establishment when operations become uneconomic. Besides, they enjoy additional benefit of high productivity, better quality and excise advantage. Powerlooms enjoy the advantage of high productivity and better quality when compared to handlooms and excise advantage plus cost effectiveness when compared to the mills sector.

Organisation of the Textile Mills.

Textile industry is perhaps one of the few industries where three sectors - public, private and co-operative - exist side by side and compete in the same market. As on 31.03.1993, there are 73 spinning mills and 115 composite mills in the public sector (both central and state) with 59,39,131 spindles 1514 rotors and 66968 looms, 683 spinning mills and 151 composite mills in the private sector with 1,91,58,314 spindles, 1,18,954 rotors and 90,978 looms and 118 spinning mills and 2 composite mills in the co-operative sector with 29,92,273 spindles, 6216 rotors and 290 looms. The labour complement of textile mills under public, private and co-operative sectors are 2,56,977 , 6,59,977 and 1,02,733 respectively. Thus, with respect to spindleage and loomage, the private sector occupies the premier position in the organised mill sector. In this context, the co-operative mills and public sector mills deserve special mention.

Co-operative Mills.

Co-operative mills are of relatively recent origin. In 1942, the Fact Finding Committee on Handloom Industry suggested the setting up of co-operative spinning mills to supply yarn to the handlooms. Accordingly, the first co-operative spinning mill was established at Guntakkal in 1954 by the Madras State Handloom Weavers Federal Co-operative Society. With the growth of the decentralised sector, it became essential to develop a full fledged spinning sector, as a support primarily in the rural and semi-urban areas to cater to the needs of the small and scattered weavers both in handloom and powerloom sectors. As on 31.03.1993 there are 120 co-operative textile mills of which 118 are spinning mills. In the co-operative sector, Maharashtra has the largest concentration of spinning capacity with 39 co-operative spinning mills. Tamil Nadu ranks next with 19 spinning mills followed by U.P with 11 mills. There are only two composite mills in the co-operative sector. They are in Assam and in Gujarat. More co-operative spinning mills are likely to be started in the near future. Hence co-operative spinning mills are an emerging sector. Table 2.5 shows the State-wise distribution of co-operative mills.

Table 2.5
State-wise Distribution of Co-operative Mills
(As on 31 .03.1993.)

State / Union Territory	Spinning	Composite	Total
<u>STATES</u>			
Andhra Pradesh	9	-	9
Assam	-	1	1
Bihar	3	-	3
Goa	-	-	-
Gujarat	4	1	5
Haryana	1	-	1
Himachal Pradesh	-	-	-
Jammu & Kashmir	-	-	-
Karnataka	9	-	9
Kerala	4	-	4
Madhya Pradesh	2	-	2
Maharashtra	39	-	39
Manipur	-	-	-
Orissa	6	-	6
Punjab	6	-	6
Rajasthan	3	-	3
Tamil Nadu	19	-	19
Uttar Pradesh	11	-	11
West Bengal	1	-	1
<u>Union Territories</u>			
Delhi	-	-	-
Pondicherry	1	-	1
Grand Total	118	2	120

Source : Compendium of Textile Statistics 1993,
 Ministry of Textiles , Govt.of India.

National Textile Corporation Ltd. (NTC)

The NTC was set up in the year 1968 with the objective of taking over sick mills, which had been closed down. But as more and more mills closed down, there was pressure from the state governments for the quick take over of these mills. In order to facilitate such take over and enable the state governments to participate in the running of these mills, State Textile Corporations (STCs) were set up in those states in which a sizeable number of mills were closed down. The take over of closed mills was mainly intended as an unemployment relief scheme for the benefit of workers who were thrown out of employment. It was also proposed to modernise those mills and to rehabilitate the employees in order to make them economically viable. At present there are 124 mills under the fold of NTC. With a view to ensuring effective management on decentralised basis, NTC has formed 9 subsidiary corporations. The paid up capital of NTC as on 31.03.1994 stands at Rs. 457.85 crores¹⁶. The entire net worth has been eroded as its net accumulated losses amounted to Rs. 3652.64 crores¹⁷ as on

31.03.1994. The capacity of NTC as on 31.03.1994 was 36.5 lakh spindles and 37385 looms¹⁸. Eight out of nine subsidiary corporations of NTC have been referred to BIFR, which declared them to be sick industrial companies under the provisions of SICA 1985. A Turn around Plan for revival of the NTC mills is currently under examination of the government. To keep the NTC mills going, the Government sunk, from time to time, Rs.1860 crores by way of reimbursements. In addition, Government waived subsidised interest of Rs. 1049 crores on loans provided to the NTC for working capital¹⁹.

The Key Role of Textile Industry in the Indian Economy

Next to food, clothing is the most important item of family expenditure in India, accounting for about 10 per cent²⁰. In spite of considerable industrialisation that has taken place in India, the textile industry still occupies a key position in the economy of the country. This industry has an important role to play both in the economic prosperity of the country and in the supply of an essential commodity for the entire population.

The cotton textile industry is the forerunner of India's transformation from an agrarian economy to the industrial advancement. It laid the foundation for the development of a number of allied industries and services. The Indian entrepreneurship had its training ground in textile manufacture and the subsequent proliferation into manifold avenues of industrial progress and economic venture was made possible by the pioneering efforts of the textile industry. In terms of size, India is the biggest with 29.10 million spindles. It is the largest in the country as it accounts for 20 to 25 per cent in the total industrial production index. It employs about 20 million people²¹.

The pre-eminent place of this industry in the national economy is obvious from the fact that it caters to the clothing needs of the vast population, contributing over Rs. 5000 crores to the Central and State exchequers by way of indirect taxes. The textile industry contributes about one-third of the foreign exchange earnings to the country while the import intensity of textile production is minimal²². Textile exports during 1993-94 amounted to Rs. 21,314 crores. During 1993-94 the exports registered 30 per cent increase over the previous year. The item-

wise exports in terms of Rupees and US Dollars for 1992-93, 1993-94, and targets for 1994-95 are shown in Table 2.6. The export performance of cotton yarn and fabrics from 1970 to 1991 are given in Table 2.7. Though textile industry is the biggest foreign exchange earner of India, its share in international textile market is hardly 2 per cent.

Table 2.6
Export of Textiles-Provisional
Rs. Crores and Million US\$

Sl No.	Item	Exports (1992-93)	
		Rs.	US\$
1.	(a) Cotton Fabrics & Made-ups (MM/PL)	2661.53	918.95
	(b) Cotton Fabrics & Made-ups (HL)	1033.64	356.89
	(c) Cotton Yarn	1166.61	402.80
	TOTAL	4861.78	1678.64
2.	Readymade Garments	8840.75	3052.47
3.	Wool and Woollens	422.85	146.00
4.	Silk	734.22	253.51
5.	Man-made Textiles	1436.32	495.92
6.	Coir	95.95	33.13
	TOTAL	16391.87	5659.67

Source : Export Promotion Councils and Commodity Boards.

MM : Mill made PL : Powerloom HL : Handloom

Table 2.7
Export Performance of Cotton Yarn and Fabric

Year	As a % Total export earnings		Total volume of export (Mn. KG)	Total Export earning (Rs. Crore)	Total Export earning (Mn. Dollars)
	Fabric %	Yarn %			
1970	73.27	26.73	89.65	100.57	134.09
1971	85.50	14.50	68.61	88.84	118.45
1972	81.03	18.97	86.39	119.90	157.97
1973	92.77	7.23	106.21	180.85	233.66
1974	90.77	9.23	81.36	210.00	259.26
1975	95.54	4.46	55.33	140.16	167.26
1976	91.44	8.56	104.75	268.02	299.13
1977	88.76	11.24	79.80	260.46	298.01
1978	93.25	6.75	58.92	206.80	252.41
1979	93.90	6.10	76.38	282.42	347.55
1980	94.01	5.99	72.95	297.19	377.96
1981	91.91	8.09	60.37	278.21	321.30
1982	89.31	10.69	46.66	255.26	267.15
1983	92.11	7.89	57.99	275.95	273.24
1984	92.21	7.79	90.98	464.51	409.77
1985	90.75	9.25	82.48	476.39	385.15
1986	87.56	12.44	93.26	497.01	392.55
1987	64.71	35.29	189.14	929.37	717.00
1988	75.67	24.33	154.23	972.63	698.88
1989	73.55	26.45	174.02	1189.72	733.22
1990	69.97	30.03	215.44	1599.51	913.80
1991	64.58	35.42	277.16	2439.58	1072.72
1992	NA	NA	NA	NA	NA
1993	NA	NA	NA	NA	NA

NA=Not Available

Source : Handbook of Statistics, ICMF (Various years)

Problems of Indian Textile Industry

There is a saying in industry circle that the textile industry passes through a three year boom, a two year gloom and two year doom. Financial problems, instability in raw material prices, poor or no returns, sickness and closure of mills, obsolete capacity, low capacity utilisation, high incidence of fiscal levies, poor off-take of cloth etc are the major problems haunting the industry.

1. Financial Problems

The situation of the textile industry leaning heavily on debt financing is due to poor or no returns and consequent erosion of equity. Quite often the mills are not able to service the debt and are therefore subject to the risk of insolvency. The mills also face acute liquidity problems consequent upon heavy investments in sluggish inventories and receivables. The textile industry also experiences scarcity of funds to modernise its obsolete facility.

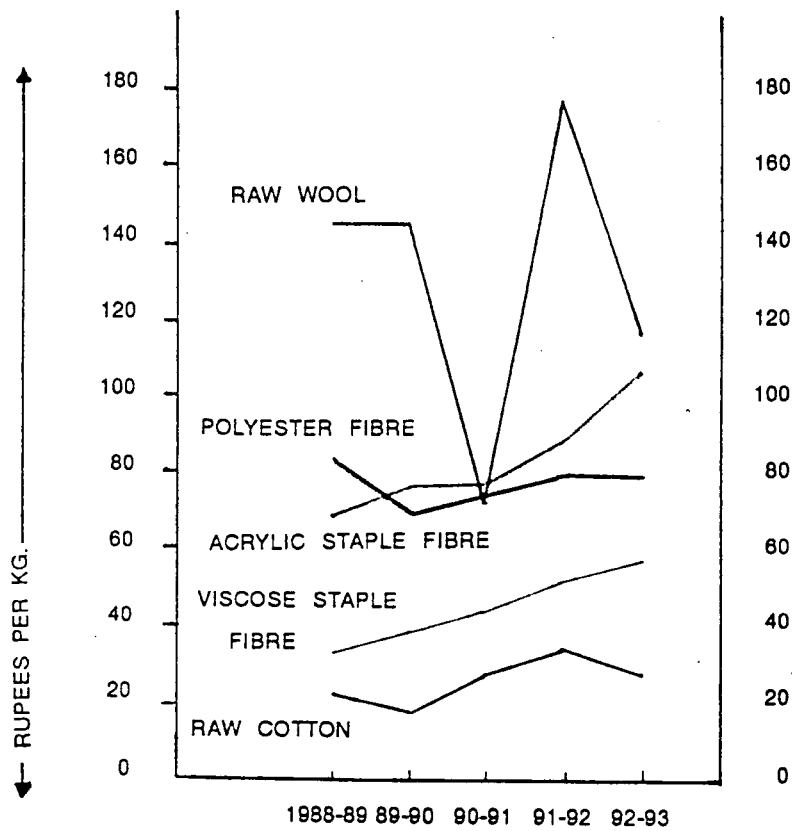
2. Instability in Raw Material Prices

The Indian textile industry is primarily based on agricultural raw material, the cotton. The cotton prices tend to fluctuate a great deal depending on the size of the crop. With widely fluctuating cotton prices, the fortunes of textile industry also swing from year to year. The domestic prices of raw materials for man-made fabrics and filament yarn are very high when compared to their international prices. The high price of polyester and viscose staple fibre is another discouraging factor for the growth of spinning mills. The variations in prices of different raw materials for the period 1988-89 to 1992-93 are represented in Fig. 2.1

3. Poor or No Returns

Mills at large are incurring heavy losses. Compared to other industries, the profitability of Indian textile industry has been low over several years, and it declined in both absolute and relative terms till 1987-88. Since then the industry is picking up. A comparison of the gross profit as a percentage of sales and profit after tax as a percentage of net worth in cotton textile industry and all industry from 1980-81 to 1992-93 is given in Table 2.8

Figure 2.1 Prices of Raw Cotton & Other Fibre.
(In Rupees Kg.)



Source : Compendium of Textile Statistics, Union Ministry of Textiles, 1993.

Table 2.8
Profitability Ratios in Cotton / Man-made Fibre Textile Industry

Year	Gross profit as percentage of sales		Profit after tax as percentage of Net worth	
	Cotton Textile Industry	All Industry	Cotton Textile Industry	All Industry
1980-81	8.3	9.8	17.3	14.2
1981-82	5.2	9.3	3.8	13.4
1982-83	5.6	8.9	4.3	12.1
1983-84	5.9	9.1	2.6	7.2
1984-85	5.1	8.5	1.5	7.9
1985-86	7.3	9.0	5.9	8.3
1986-87	6.4	8.5	(*)	5.7
1987-88	5.9	7.8	(*)	3.5
1988-89	9.1	9.9	3.0	9.4
1989-90	9.7	10.4	6.0	11.7
1990-91	13.7	12.5	11.1	14.9
1991-92	11.1	13.0	15.6	12.5
1992-93	7.4	11.0	(*)	8.2

Source : (*) Numerative Negative

Reserve Bank of India, Quoted in Compendium of Textile Statistics, 1995, Ministry of Textiles, Govt. of India.

4. Sickness and Closure of Mills

As the oldest and largest industry, textile industry has been more prone to sickness than others. Sickness has become more endemic in the mill sector since the 60s. Sickness and the consequent closure of the mills are important problems faced by textile industry. The state-wise position of the Non-S.S.I. sick mills are presented in Table 2.9. As on 31.03.1992, there are 296 sick mills of which 71 are in Gujarat,

70 in Maharashtra and 22 in Tamil Nadu. As on 31.03.1994, 275 mill were registered with BIFR of which 54 are in Gujarat, 52 in Maharashtra , 33 in Tamil Nadu and 32 in U.P

Table 2.9
State-wise Position of Non-SSI Sick Textile Undertakings

States / Union Territory	As on 31.12.88	As on 30.9.89	As on 30.9.90	As on 31.3.91	As on 31.3.92	As on 31.3.93
STATES						
Andra Pradesh	6	11	12	12	14	19
Bihar	3	6	6	4	4	4
Delhi	3	2	2	1	1	1
Goa	1	1	--	--	--	--
Gujarat	57	61	61	63	71	76
Haryana	8	9	9	8	11	12
Himachal Pradesh	--	1	1	--	--	--
Karnataka	13	13	14	15	13	17
Kerala	6	5	5	5	9	9
Madhya Pradesh	8	9	10	9	15	20
Maharashtra	61	75	69	70	70	97
Orissa	1	3	4	5	5	3
Punjab	5	6	6	6	4	6
Rajasthan	16	16	17	15	16	18
Tamil Nadu	24	26	24	24	22	31
Uttar Pradesh	9	13	12	12	21	31
West Bengal	14	17	17	15	18	17
Union Territories						
Chandigarh	2	2	2	3	2	1
Dadra & N. Havely	--	--	--	--	--	1
Pondicherry	--	--	--	--	--	1
TOTAL	237	276	271	267	296	364

Source : Reserve Bank of India , quoted in Compendium of Textile Statistics, 1995, Ministry of Textiles, Govt.of India.

The uneconomic working and sickness of mills have resulted in closure of several mills ending in large displacement of labour and significant reduction of revenue to the exchequer. The closure has also affected a number of ancillary industries. Till October 1994, 130 mills were closed rendering 1,77,000 people unemployed and leaving 36,22,000 spindles, 4432 rotors and 37900 looms idle. Table 2.10 depicts the details of the closed mills for 1986-87 to October 1994.

Table 2.1.10

Closure of Cotton / Man-made Fibre Textile Mills

Year / Month End	No. of Mills			Installed Capacity			Employees on roll (000)
	Spg.	Comp.	Total	Spindles (000)	Rotors No	Looms (00)	
1986-87	49	41	90	2384	—	259	127
1987-88	81	52	133	3358	—	332	161
1988-89	83	59	142	3354	—	379	186
1989-90	66	55	121	3394	—	349	158
1990-91	50	55	105	3126	—	352	161
1991-92	68	62	130	3823	888	409	194
1992-93	64	59	123	3520	1776	366	178

Spg : Spinning., Comp : Composite

Source : Ministry of Textiles, Annual Reports, 1995.

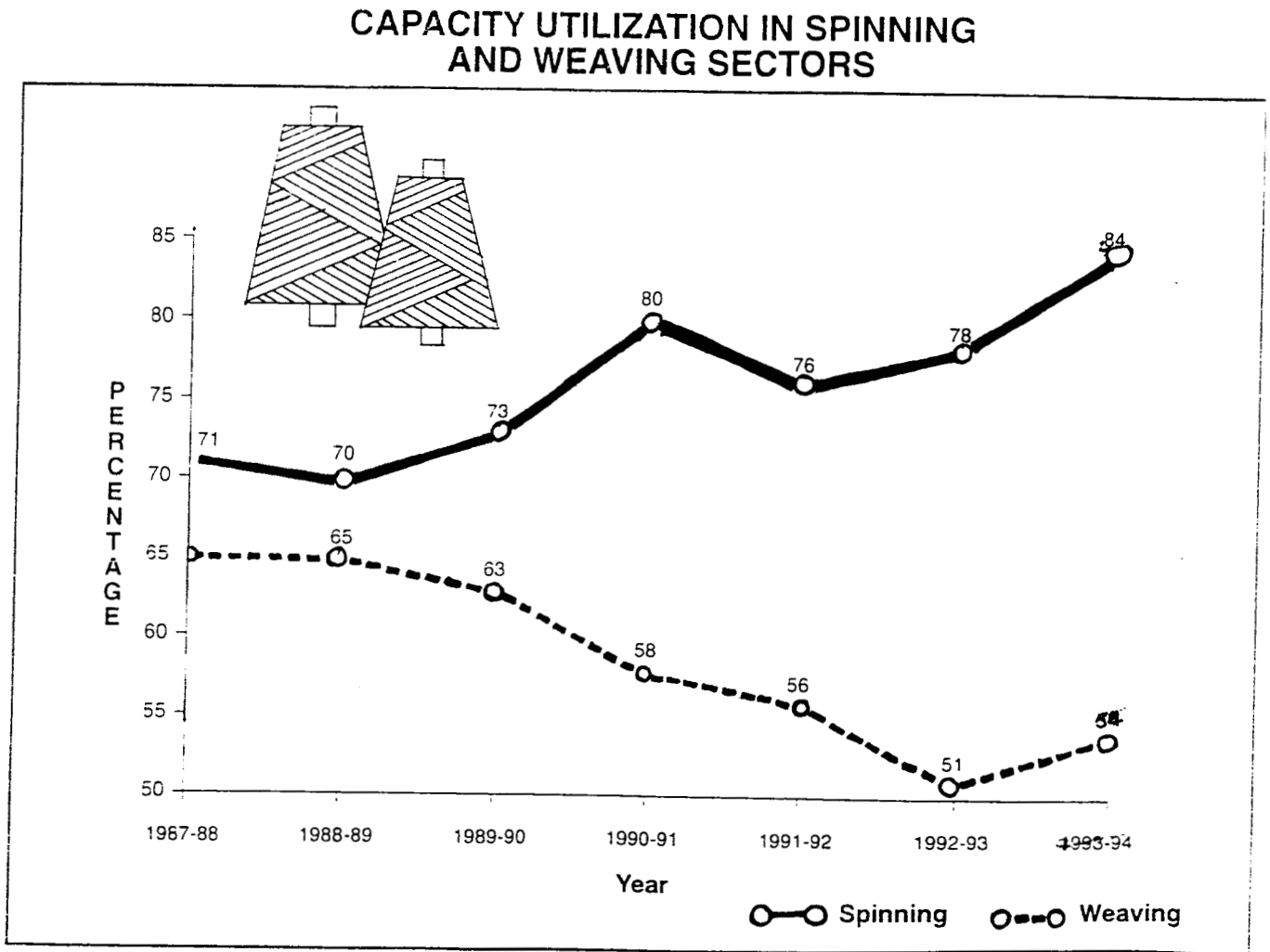
5. Obsolete Capacity

Most of the textile mills in the country are technologically backward and are not in a position to turn out quality products conforming to international standards. Consequent on the phasing out of quota system, tremendous opportunities for exports are opened up. If the mills are not modernised on a continuing basis, we would not be able to take advantage of the opportunities in the world market.

6. Low Capacity Utilisation

Figure 2.2 shows the capacity utilisation in the spinning and weaving sectors. It can be seen that the capacity utilisation declined considerably in the organised weaving sector from 62 % in 1985-86 to 54% in 1993-94. But the spinning mills made significant improvement in the utilisation of capacity, it rose from 69% in 1985-86 to 84% in 1993-94. According to spinning standards, 95 per cent and above is the standard capacity utilisation ²³. In fact the low capacity utilisation also contributes to the ills of the mill industry.

Figure 2.2 Capacity Utilisation in Spinning and Weaving Sectors.



Source : Compendium of Textile, Union Ministry of Textiles, 1995.

7. High Incidence of Fiscal Levies

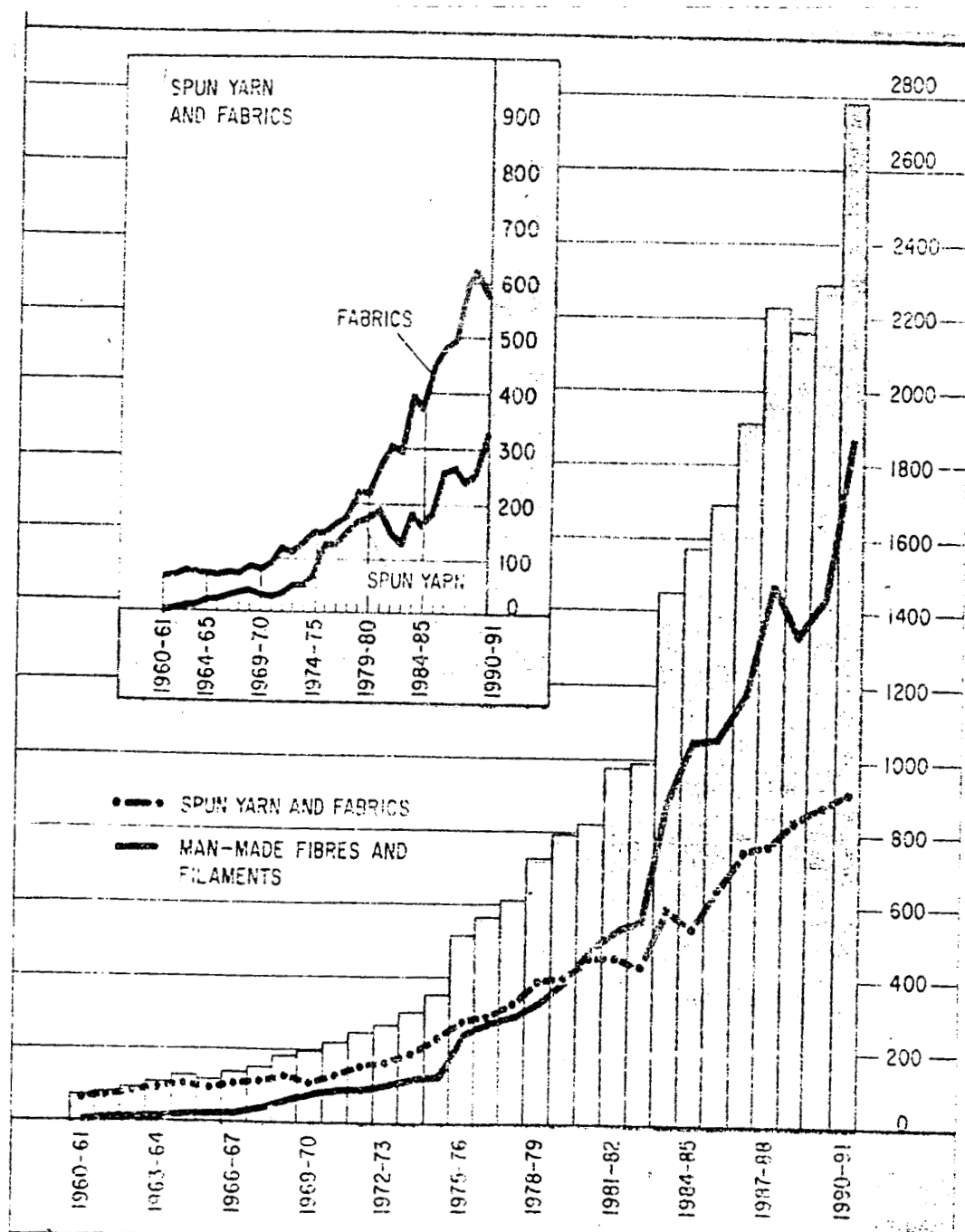
Textiles form a basic item in the consumer basket. With a majority of population in the low income brackets, clothing needs have to be met at a price, which the community can afford. The present structure of excise duty puts constraints in the consumption of textiles. The overall duty incidence on dutiable textile products works out 11 per cent ²⁴. The incidence of excise duty on such an item of mass consumption at this rate is extremely high. There is, therefore, a strong case to reduce excise duty on textiles. The growth of excise duty on textiles from 1960-61 to 1990-91 is exhibited in Figure 2.3. The fiscal levies on textiles in 1993-94 come to 5338.48 crores ²⁵. But it is gratifying to note that recently the Government have taken steps to largely simplify and rationalise the duty structure combined with the reduction in excise duties. As textiles being the mass consumption item, there is a strong case for a programmed reduction in fiscal levies. The duty incidence should be minimal.

8. Poor Off take of Cloth

Because of the limited purchasing power, the consumer is compelled to put off consumption of textiles when general price level

Figure 2.3 Growth of Excise Duty on Cotton and Man-made Textiles

(Rs. Crores)



Source: hand book of statistics, ICMF, Bombay, 1991.

goes up. High incidence of levies leads to the increase in the prices of cloth. Even though production of cloth has not kept pace with the growth rate of population, which is the direct determinant of demand for cloth, the per capita consumption of cloth is always less than per capita availability of cloth. A comparison of per capita availability of cloth and per capita consumption will amply reveal the miss match of supply of cloth. The per capita availability of cloth and consumption are shown in Table 2.11 and Table 2.12 respectively.

Table 2.11
Per Capita Availability of Cloth

Year	Sq.Mtr			
	Cotton	Blended / Mixed fabrics	100% Non cotton fabrics	Total
1980-81	12.84	2.18	2.28	17.30
1981-82	12.17	2.59	2.37	17.13
1982-83	11.81	2.12	2.15	16.08
1983-84	12.60	2.02	2.71	17.33
1984-85	12.57	1.94	2.68	17.19
1985-86	15.37	2.19	3.99	21.55
1986-87	15.21	2.33	4.30	21.84
1987-88	14.04	2.22	4.70	20.96
1988-89	14.99	2.80	5.21	23.00
1989-90	14.63	2.41	5.61	22.65
1990-91	15.05	3.00	6.09	24.14
1991-92	13.71	2.90	6.26	22.87
1992-93	15.57	2.57	6.36	24.50

Source : Compendium of Textile Statistics, 1995, Ministry of Textiles, Govt.of India.

Table 2.12
Per Capita Consumption of Cloth

Years	Mtr			
	Cotton	Non-cotton	Blended/Mixed	Total
1980	10.56	1.21	1.66	13.43
1981	9.57	1.01	1.73	12.31
1982	10.04	1.22	2.26	13.52
1983	10.12	1.44	2.14	13.70
1984	9.93	1.84	2.06	13.83
1985	10.79	2.22	2.44	15.45
1986	10.71	2.36	2.72	15.79
1987	10.75	2.40	3.20	16.35
1988	9.17	2.26	3.44	14.87
1989	8.40	2.82	3.85	15.07
1990	7.44	2.76	3.83	14.03
1991	7.52	2.73	4.14	14.39
1992	7.71	2.21	4.48	14.40
1993	N.A	N.A	N.A	N.A

Source: Compendium of Textile Statistics, 1995, Govt. of India.

The continuing sluggishness in the off-take of cloth leads to heavy accumulation of stock and consequent acute financial crisis. As to the consumption of cloth, there has been a sharp shift towards non-cotton, inspite of such fabrics being more expensive. What is even more remarkable is that an extremely wide cross-section of Indian households has moved away from cotton to synthetic and blended fabrics, though such a shift was originally confined to the rich, of late it

has percolated down to the poor. Table 2.13 shows the percentage consumption of cotton, non-cotton and blended cloth.

Table 2.13
Consumption of Textile Products

Year	Cotton Cloth	Non-cotton Cloth	Blended/ Mixed	Total %
1973	89.10	5.24	5.66	100.00
1974	87.00	5.65	7.34	100.00
1975	88.05	4.66	7.29	100.00
1976	90.14	3.51	6.35	100.00
1977	87.55	5.36	7.09	100.00
1978	85.36	6.18	8.46	100.00
1979	83.96	6.74	9.30	100.00
1980	78.63	9.01	12.36	100.00
1981	77.74	8.20	14.05	100.00
1982	74.26	9.02	16.72	100.00
1983	73.87	10.51	15.62	100.00
1984	71.82	13.29	14.88	100.00
1985	74.91	8.15	16.93	100.00
1986	67.91	14.91	17.18	100.00
1987	65.75	14.68	19.57	100.00
1988	65.75	14.68	19.57	100.00
1989	55.74	18.71	25.55	100.00
1990	53.07	19.61	27.32	100.00
1991	NA	NA	NA	NA
1992	NA	NA	NA	NA
1993	NA	NA	NA	NA

Source : Annual Reports, Ministry of Textile , 1995

Prospects of Indian Textile Industry

In future, the competitive edge of Indian textile industry will depend on the extent to which it can exploit the comparative advantages

that the country enjoys in relation to other countries. Till recently, most of the textile manufacture was located in Europe, U.S and East Asian countries. But rising labour costs have, of late, been displacing the industry to cotton rich countries with low wage rates. Increasing wage costs have eroded the competitiveness of even the East Asian countries like South Korea, Honkong, Taiwan and Malayasia. In Japan also labour cost is on the increase. The significant development on the global front is that China is diverting its land under sericulture to food crops. The comparative advantages of India are availability of one of the finest varieties of cotton in the world, cheap labour, technical and managerial skills and lax pollution control norms. Now the industry is also delicensed. Further, the agreement on textiles and clothing which forms a part of GATT treaty signalled the end of Multi Fibre Arrangement (MFA) in which discriminatory restraints were put up by the developed countries on India. GATT, therefore, means open market and abolition of the quota system. India can thus export its textile goods to 188 countries of the world. In the context of changed world trade scenario and closure of textile mills in Japan and Europe consequent upon increasing labour cost, our textile industry has very

bright future. In short the climate is just right for India to give a boost to her exports.

Conclusion

Indian Textile Industry is the oldest and single largest industry in the country. Considering the supply of clothing needs of the vast population, its contribution to the exchequer, employment generation, industrial production and foreign exchange earnings, the textile industry plays a crucial role in the economy of India. Indian Textile Industry comprises the organised and unorganised sectors. As long as there exists disparity in wage costs, overheads and excise advantages, powerlooms will continue to be the major suppliers of fabrics in India, with handlooms coming poor second and the mills a distant third. The sustained and balanced growth and development of the industry is very vital to the economy as also for the fulfilment of the most essential need of the people. The handlooms can survive if it concentrates on the high value and skill intensive products. Similarly, the composite mills can do well if it produces high value brand named items whereby the mill can earn handsome margins as the competition there is more in terms of

quality, brand images and fashion than prices. Financial problems, poor or no returns, heavy indebtedness and associated problems, sickness, closure, obsolete capacity, low utilisation of capacity, high incidence of fiscal levies, poor off-take of cloth etc. pose severe threat to the industry. Though textile industry is the biggest foreign exchange earner, India's share in international textile market is hardly 2 per cent. With the phasing out of quota system, we can gain entry to the new markets. But the vast opportunity opened before us can be taken advantage of only if our mills are modernised to produce the cloth easily acceptable in the world market at lower prices for which reduction in excise and customs duty on textiles, stability in the price of cotton, reduction in power tariffs etc. are necessary.

Having given a review of the Indian textile industry, it is attempted to examine the growth and development of the textile industry in Kerala in Section II.

SECTION II

Textile Industry in Kerala

Section I highlighted the state of Indian textile industry. This section focuses on the textile industry in Kerala.

Introduction

The Kerala state was formed on November 01, 1956 by joining together the princely states of Travancore and Cochin and the Malabar region of Madras State. Kerala lies between 8°18' and 12° 48' north latitude and 74° 52' and 77° 22' east longitude, walled off by the Western Ghats and watered by the Arabian Sea. The total geographical area of Kerala is 38863 square kilometres which is 1.18 per cent of the total area of the country and accordingly ranks 18th among various states of Indian Union ²⁶. With only a little over one per cent of the geographical size of the country, she houses a population as large as Canada and almost double that of Sri Lanka and ten times that of Costa Rica. Though this little state has attracted world wide acclaim for its

achievements in human development, industry has not been expanding along desired lines. The economy of Kerala is dominated by the service sector, followed by agriculture and industry. Though Kerala presents a healthy picture in the spheres of mass literacy, public health, demographic profile and physical quality of life, her contribution to the national income is low at 3.2 %²⁷. The rate of unemployment is about 11 times more than that of the national average²⁸. At all India level, its share of value addition in the factory sector is very low²⁹. The Industrial base of Kerala comprises of capital intensive, small and traditional industries; of these, the traditional sector is highly labour intensive.

Origin and Development of Textile Industry in Kerala

The textile industry in Kerala consists of both organised and decentralised sectors. Khadi, handlooms, powerlooms, composite mills and spinning mills exist in Kerala. The textile industry of the state has a rich past. The textile item “calicoes” originated from the place Calicut in Kerala. Similarly, the famous cotton ‘crepe’ which is in great demand all over the world for summer wear is a product of the

state of Kerala. Bartholomiyo, the foreign traveller who visited Travancore, Cochin and Malabar during 1776 to 1789 had reported about the existence of handlooms in Kerala during that period. It was the German Basel Mission that brought handlooms to Kannur in 1864. The first factory based unit in Travancore was the textile mill started by an American at Quilon. But the operation of this mill came to a grinding halt with the out break of the World War I. In 1883, the Malabar Spinning and Weaving Mills Ltd. was promoted by Mr. Velayudhan Mudaliar of Kozhikode. This mill, the grand old textile mill in Kerala, is located at Thiruvannur in Kozhikode. It started operations in 1884 with 300 mule spindles, 200 workers and with an initial outlay of Rs. 600,000. But now it is exposed to the weariness and weakness of old age. Presently this mill is managed by the KSTC. The Sitaram Spinning and Weaving Mills, a powerloom factory, was started in 1908 in Trichur District. Due to innumerable problems this mill was placed for public auction by the court and in 1972 the Government of Kerala bought the mill at the public auction and in 1978, it was commissioned as The Sitaram Textiles Ltd., In the thirties, banian factories were started at Feroke and Kozhikode. In

1939, the Aysha Hosiery Factory, a knitting unit was started at Palapparamba in Kannur District. The development of textile industry gained momentum since 1940. Thanks to the invitation of C.P.Ramaswamy Iyer, the Sasoon Group, the reputed textile industrialists of that time, set up a textile mill in 1940 at Kalamassery in Ernakulam District. Later in 1957, it was taken over by the Cakkolas Group by floating a public limited company known as the Chakkolas Spinning and Weaving Mills. In the forties, six textile mills were started of which one was composite mill and among the five spinning mills one was engaged in the manufacture of sewing threads. The development of textile mills was not so fervent in the fifties and only three mills were set up during this time of which one was a composite mill. The sixties witnessed a flurry of activities in the textile scene. Sixteen mills were started during this decade; among them there was only one composite mill. In seventies four mills came up. The remarkable feature in the seventies was that no textile mills were floated in the private sector. Another significant development during this period was the formation of the KSTC. in 1972 with the objective of reviving the closed and sick mills in the state. The Govt. of India

entrusted KSTC with the management of five closed textile mills of Kerala. Later those mills were nationalised and brought under the NTC. In 1984, the Govt. of Kerala nationalised the Malabar Spinning and Weaving Mills , Kozhikode, the Kottayam Textiles , Kottayam and the Prabhuram Mills, Alappuzha under the Kerala Sick Textile Undertakings (Acquisition and Transfer of Undertakings) Act 1984 and put them under the KSTC. In 1986 a unit of the KSTC came up at Edarikkode in Malappuram District. Further, it has taken steps to establish a spinning mill at Uduma in Kasaragod District. The setting up of two co-operative spinning mills at Malappuram and Quilon was another notable development in the seventies. The eighties witnessed the starting of the Trichur Co-operative Spinning mills at Vazhani, Trichur District. The Govt. of Kerala have decided to establish seven spinning mills under the co-operative fold at Meenadam, Alappuzha, Mala, Palai, Kazhakkootam, Kuttippuram and Kasaragod. The Alappuzha Co-operative Spinning Mills will be commissioned soon. A 100% export oriented unit is also coming up in Palakkad District under the private sector.

The Role of the Textile Industry in the Economy of Kerala.

The textile industry plays a key role in the economy of Kerala by supplying the basic needs of clothing to the people , providing employment to many thousands and earning much wealth to the exchequer by way of taxes, excise duty and foreign exchange. Among the industries of Kerala, the textile industry is ranked the second in wage distribution, fourth in value addition, fifth in employment of workers and seventh in investment of capital.³⁰

Distribution of Textile Industry in Kerala

As on 31.03.1993, there are 33 textile mills in Kerala, the distribution of which is shown in Table 2.14

Table 2.14
Distribution of Textile Industry in Kerala

Sl. No.	District	No. of Mills	Percentage to Total
1	Kasaragod	Nil	Nil
2	Kannur	5	15
3	Wynad	Nil	Nil
4	Kozhikode	2	6
5	Malappuram	3	9
6	Palakkad	3	9
7	Thrissur	8	25
8	Ernakulam	5	15
9	Idukki	Nil	Nil
10	Kottayam	1	3
11	Alappuzha	2	6
12	Pathanamthitta	Nil	Nil
13	Kollam	2	6
14	Thiruvananthapuram	2	6
Total		33	100

Source: Compiled from the State Planning Board, Thiruvananthapuram

It is evident from Table 2.13, that the textile mills in the state are distributed in all districts except Kasaragod, Wynad, Idukki, and Pathanamthitta. Of the 33 mills, there are 5 composite mills, one powerloom mill, 25 spinning mills and 2 knitting units. The Thrissur district has the largest concentration of textile mills with 8 units constituting 25% of the total mills, followed by Kannur and Ernakulam Districts with 5 mills each representing 15%. The mills in Kerala fall under Central Government, State Government, co-operative, joint and

private sectors. The sector-wise distribution of the mills with capacity and workers on roll appears in Table 2.15.

Table 2.15
Sector-wise Distribution of Mills with Capacity and Workers on Roll as on 31.03.1993

Particulars	Sectors				Total
	Central	State	Private	Co-operative	
Number of mills	5	7	17	4	33
Spindleage	130208	195664	398548	103120	827540
Loomage	180	336	688	NIL	1204
Workers on roll	3259	4503	10063	2517	20342

Source : Compiled from the Records of State Planning Board,
Thiruvananthapuram.

The sector-wise distribution of the textile industry shows that there are 17 private mills, 7 Kerala Government mills, 5 Central Government mills (NTC), and 4 co-operative mills. Of the Kerala Government mills, 4 mills are under the fold of the KSTC, 2 mills are under the Government of Kerala and the remaining one is under the joint sector.

Capacity Utilisation of the Mills

The capacity utilisation of the textile mills in Kerala is shown in Table 2.16.

Table 2.16
Capacity Utilisation of Textile Mills in Kerala
 (1988-89 to 1992-93)

Year	%	
	Spindleage	Loomage
1988-89	45	47
1989-90	51	51
1990-91	56	55
1991-92	53	65
1992-93	54	49

Source : Compendium of Textile Statistics, 1995,
 Ministry of Textiles, Government of India.

Table 2.16 reveals that the average capacity utilisation of spinning mills during the period under study is 51.80% and that of loomage is 53.67%. From this, it is concluded that the capacity utilisation in the textile industry in Kerala is not at all satisfactory as nearly half of the installed facilities remain untapped. The low capacity utilisation also contributes to the financial ills of the industry.

Production of Yarn

The production of different types of yarn by the textile industry in Kerala during the period under study is presented in Table 2.16. It can be seen that the production of yarn is far below the installed capacity. Of the different types of yarn produced, cotton accounts for

the highest proportion, its share being 90.18 % in 1990-91, 85.73% in 1991-92 and 85.50 % in 1992-93.

Table 2.17
Production of Yarn in Kerala
 (1988-89 to 1992-93)

'000 Kg

Year	TYPES OF YARN			
	Cotton	Blended	100% Non-cotton	All
1988-89	N.A	N.A	N.A	N.A
1989-90	N.A	N.A	N.A	N.A
1990-91	30853	1849	1512	34214
1991-92	29338	3009	1883	34280
1992-93	30296	3705	1431	35432

N.A = Not Available

Source: Compendium of Textile Statistics, 1995, Ministry of Textiles, Government of India.

Increase in Turnover and Assets in Spinning Mills.

The Textile Commissioner has worked out the increase in turnover and assets of spinning mills on the basis of analysis of sample spinning mills in different states. The respective figures relating to Kerala are shown in Table 2.18.

Table 2.18
Increase in Turnover and Assets in Spinning mills in Kerala
 Rs. Crores

Year	Turn over	Assets
1988-89	NA	NA
1989-90	42.97	15.89
1990-91	51.49 (19.80)	23.52 (48.0)
1991-92	71.86 (39.6)	31.85 (35.4)
1992-93	82.05 (14.2)	76.06 (138.8)

NA= Not available

Figures in brackets indicate percentage increase / decrease over previous year.

Source: Compendium of Textile Statistics, 1995

In short, it was the textile industry, one of the traditional industries that laid down the foundation for the industrialisation of Kerala. It has considerably helped the state to reduce the gravity of unemployment and improve the socio-economic conditions of Keralites. This industry contributes greatly to the exchequer by way of taxes and various duties and helps alleviate the mounting unemployment problem of the state. In this way Textile industry plays a significant role in the economy of Kerala. Successful working of the textile industry is, therefore, of paramount importance to the sustained economic development of Kerala, a state marked by industrial

backwardness, large scale unemployment and low per capita income. Further it has greater prospects as the textile production in Kerala is less than 30% of its requirements.

Conclusion

The textile industry is one of the basic industries started in the process of industrialisation in India. It occupies a unique position in the economy of India by virtue of its contributions to supplying man's basic need of clothing, employment generations, foreign exchange earnings and industrial output. Recently the textile industry has emerged as the largest foreign exchange earner in the country. But the industry is gripped in deep crises characterised by weak financial base, heavy indebtedness, inability to service debt, continuing losses, obsolete capacity, growing sickness and closure, shortage of funds for modernisation and replacements etc. In spite of these weaknesses, our textile industry has better prospects. In the context of the changed world trade scenario and closure of textile mills in Japan and Europe, the climate is just right for India to give a boost to her exports. Even though the textile industry plays a significant role in the economy of

Kerala, it is entangled in different problems. Of the various problems faced by the textile industry in Kerala, finance appears to be more grave. Against this broad canvass of the textile industry in India and Kerala it is attempted to focus on the financial management in textile mills in Kerala. Chapter III analyses the capital structure in select mills.

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CAPITAL STRUCTURE

K. K. Mohamed “Financial management in textile mills in Kerala ” Thesis.
Department of Commerce and Management Studies , University of Calicut,
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CHAPTER III

CAPITAL STRUCTURE

CAPITAL STRUCTURE

An overview of the Indian textile industry was presented in Chapter II. As inadequate finance, high interest costs and severe credit crunch are the major problems haunting the textile mills in Kerala, the financial management practices in the mills deserve careful analysis. Therefore, this Chapter focuses on the management of long-term funds. The sources of long-term funds, flow of funds, capital structure, cost of capital, capital budgeting and financing pattern of fixed assets are examined in the light of accepted financial management theory.

Hypotheses

In order to draw valid conclusions, the following hypotheses are formulated and tested.

H₁: The ownership pattern of textile mills in Kerala has no influence on the capital structure; and

H₂: In the context of uncertainty surrounding earnings, and low or no interest tax shield, greater dependability on debt creates adverse impact on the cost of capital.

Sources of Long-term Funds

The textile mills in Kerala raise long-term funds from the following sources:

- i) Equity share capital
- ii) Preference share capital
- iii) Term loans ; and
- iv) Retained earnings

Equity Share Capital

The textile mills in Kerala raise long-term funds through equity. Equity share has the unique features of ownership in the firm, transferability of shares and some pre-emptive rights. The common stock holders receive the benefits of growing streams of earnings, which would increase the value of their ownership interest. Since the common stock holders have the least priority in liquidation, they usually suffer greatest

loss¹. The equity base of the mills is being eroded due to accumulated losses. As most of the mills are not paying dividend, it would be difficult for the mills to raise additional equity funds on favourable funds.

Preference Share Capital

Preference stock financing is a hybrid form of financing, combining features of debt and common stock². The popularity of preference share capital is getting dwindled in the textile industry in Kerala. At present only two private mills are making use of it, that too, to a very negligible extent. The disfavour for the use of preference shares is due to their high explicit cost on account of the inadmissibility of preference dividend for tax purposes.

Debentures and Term Loans

Unsecured long-term claims are called debentures³. Term loan represents borrowings for a period in excess of one year. Debentures and term loans constitute debt financing, the interest payment on which are tax deductible. Greater the level of earnings and lower the downside fluctuations, the better will be for the firm to use greater debt. More debt

the firm has and the higher the interest charges the greater the probability that earnings (EBIT) will not be sufficient to meet these charges ⁴. The mills are not issuing debentures to raise long-term funds; instead, they depend on long-term borrowings. In the absence of internal generations, the mills are resorting to increased borrowings. In fact, in the context of clouded prospects and shaky history of the textile industry, the greater reliance on debt places the mills in a very unfavourable position. The tendency of the mills to employ debt in the absence of reasonable returns threatens their very solvency. Debt financing is worthy only when it proves to be beneficial to the equity shareholders. Unfortunately most of the textile mills in Kerala cannot reap the benefits of leverage because of their low or negative returns; it also incurs heavy financial burden for them.

Retained Earnings

The amount of retained earnings is determined by the amount of earnings and dividend policy of the mills. Financing with retained earnings is advantageous. But owing to negative and / or inadequate returns the mills are not able to retain their earnings.

Leasing has become an increasingly important source of long-term funds for large and small companies ⁵. The cash flow consequences of leasing and borrowing are similar ⁶. But the leasing has not yet become popular with the textile industry in Kerala.

The foregoing discussions on different long-term sources of funds venture to analyse in detail the extent of each of the sources made use of and the ways by which the funds were used by the mills.

Tools of Analysis

The accounting ratios, funds flow analysis, statistical tests like average, coefficient of variation, ANOVA, F test etc. are employed to analyse the effectiveness of long-term financial management in the select textile mills.

Sources and Uses of Funds

The statement showing sources and uses of funds, otherwise known as the flow of funds, is used to analyse changes in financial condition of a firm between two dates. It measures the changes that have taken place in the financial position of a business undertaking between

two balance sheet dates. It summarises the sources from which funds have been obtained and uses to which they have been applied. The sources and uses of funds statement are one of the most useful tools in the financial manager's analytical kit ⁷. The fund flow statement summarises the financial activities for a period of time. It is a report of the financial operation of the business. It shows the ebbs and flow of funds into and out of a business. ⁸

Comparative funds flow statements, covering several years of operations in a firm enables to obtain useful information on financial methods used in the past.

Flow of Funds Statement for the Select Mills

In order to analyse how the activities of the select mills have been financed and how the financial resources have been used; the flow of funds statements for the select mills for the period from 1988-89 to 1992-93 are presented in Table 3.1, 3.2, 3.3 and 3.4.

Table 3.1
Funds Flow Statement for 31.03. 1989 to 31. 03.1990

Rs. Lakhs.

Mill	Sources						Uses						
	Fund from operations	Equity share Capital	Preferred stock	Long-term debt	Sale of Investments	Total	Dividend pay out	Addition to Fixed assets	Addition to Investments	Preferred stock	Long-term Debt repayment	Net change in W/C	Total
KSTC													
ET	19.39	232.56				251.95		6.30			206.08	39.57	251.95
KT	57.30			151.73		209.03		131.31				77.72	209.03
PM	18.50			117.34		135.84		78.95				56.89	135.84
Co-operative.													
MCSM													
QCSM	130.31	10.52				140.83		5.47	2.71		68.50	64.15	140.83
TCSM	38.95	128.27		125.40		292.62		37.13				255.49	292.62
NTC													
ATCM	144.65	36.50		22.34	13.42	216.91		61.89				155.02	216.91
KLM	188.19	35.00		1.72		224.91		16.87				208.04	224.91
Private													
EI	-3.39			67.89		64.50		8.63				55.87	64.50
KCM	0.98			130.43		131.41		72.49	1.26			57.66	131.41
TCM	38.26				10.22	48.48		3.73			6.32	38.43	48.48
AT	74.14			76.26		150.40	7.46	78.06				64.88	150.40
MS	98.29				0.10	98.39	4.50	42.13		5.00	18.61	28.15	98.39
SBT	168.44					168.44	13.00	165.01	0.11		29.20	-38.88	168.44
VT	127.52					127.52	2.79	31.42	18.43		17.87	57.01	127.52
Kerala Govt.													
TSM	12.22			57.45		69.67		1.86				67.81	69.67

Source: Computed

Table 3.2
Funds Flow Statement for 31.03. 1990 to 31.03. 1991

Mill	Sources						Uses							Rs. Lakhs	
	Fund from operations	Equity share Capital	Preferred stock	Long-term debt	Sale of Investments	Total	Dividend pay out	Addition to Fixed Assets	Addition to Investments	Preferred stock	Long term Debt repayment	Net change in W/C	Total		
KSTC															
ET	51.15			12.59		63.74		9.18				54.56	63.74		
KT	76.05	1.00				77.05		-74.56			60.90	-58.41	77.05		
PM	39.75	1.00				40.75		32.46			12.34	-4.05	40.75		
Co-operative.															
MCSM	-47.74	30.00		481.18	14.37	477.81		-1.26				479.07	477.81		
QCSM	126.42	0.62				127.04		5.77			73.68	47.59	127.04		
TCSM	35.29	90.24				125.53		65.63			85.73	-25.83	125.53		
NTC															
ATCM	180.80			47.22		228.02		31.64				196.38	228.02		
KLM	165.59			94.38		259.97		109.46				150.51	259.97		
Private															
EI	32.62			208.14		240.76		176.49	2.34			61.93	240.76		
KCM	28.17	62.50		248.90	1.26	340.83		227.63				113.20	340.83		
TCM	48.57				8.46	57.03		3.11			15.75	38.17	57.03		
AT	75.31			148.50		223.81	7.46	160.79				55.56	223.81		
MS	215.17			59.96		275.13	5.00	222.69	7.79			39.65	275.13		
SBT	166.75			175.65		342.40	13.00	232.18	6.29		21.57	69.36	342.40		
VT	121.67	2.56				124.23	2.79	147.57		2.56	8.57	-37.20	124.23		
Kerala Govt.															
TSM	-24.85	30.00		28.14		33.29		4.16				29.13	33.29		

Source: Computed

Table 3.3
Funds Flow Statement for 31.03. 1991 to 31.03. 1992

Rs. Lakhs.

Mill	Sources						Uses						
	Fund from operations	Equity Share Capital	Preferred stock	Long-term debt	Sale of Investments	Total	Dividend pay out	Addition to Fixed Assets	Addition to Investments	Preferred stock	Long-term Debt repayment	Net change in W/C	Total
KSTC													
ET	15.87			55.24		71.11		11.42				59.69	71.11
KT	61.21			33.22		94.43		33.85				60.58	94.43
PM	11.61			5.85		17.46		35.25				-17.79	17.46
Co-operative													
MCSM	-47.68			142.86		95.18		56.23	1.07			37.88	95.18
QCSM	-22.30			90.67		68.37		4.09				64.28	68.37
TCSM	34.26	60.28				94.54		82.62			14.88	-2.96	94.54
NTC													
ATCM	78.85			110.17		189.02		122.06	0.06			66.90	189.02
KLM	26.33			53.83		80.16		126.51				-46.35	80.16
Private													
EI	35.07	55.00	0.97	49.44		140.48		197.82				-57.34	140.48
KCM	33.82			107.83	2.54	144.19		101.34				42.85	144.19
TCM	-36.29	36.80	8.22		3.01	11.74		1.38			10.36		117.40
AT	45.83	29.85		9.03		84.17	11.94	43.04				29.73	84.71
MS	47.67	25.00		90.55	3.96	167.18	6.25	93.02				67.95	167.18
SBT	106.12					106.12	10.40	73.22	73.01		120.41	-100.92	106.12
VT	122.77			96.21		218.98	3.30	120.99				94.69	218.98
Kerala Govt.													
TSM	-98.45	50.00		11.72		-36.73		2.37				-39.10	-36.73

Source: Computed

Table 3.4
Funds Flow Statement for 31.03. 1992 to 31.03. 1993

Rs. in lakhs.

Mill	Sources						Uses						
	Fund from operations	Equity share Capital	Preferred stock	Long-term debt	Sale of Investments	Total	Dividend Pay out	Addition of Fixed Assets	Addition of Investments	Preferred stock	Long-term Debt	Net change in W/C	Total
KSTC													
ET	25.06					25.06		74.56			18.61	-68.11	25.06
KT	97.12					97.12		50.95			58.39	-12.22	97.12
PM	21.61					21.61		10.30			2.86	8.45	21.61
Co-operative.													
MCSM	-16.22	30.00		71.54	5.78	91.10		15.91				75.19	91.10
QCSM	10.51	0.08		23.61		34.20		0.35	0.70			33.15	34.20
TCSM	16.42	86.70		47.00		150.12		290.11				-139.99	150.12
NTC													
ATCM	-7.05	26.50		62.29	0.07	81.81		66.47				15.34	81.81
KLM	24.23			103.41		127.64		-0.08				127.72	127.64
Private													
EI	63.90	25.00		40.69		129.59		126.90	2.50			0.19	129.59
KCM	89.17			115.57		204.74		76.29	0.05			128.40	204.74
TCM	11.23				2.66	13.89		1.04			2.07	10.78	13.89
AT	-8.08	79.60		102.14		173.86	23.88	141.78	10.96			-2.96	173.66
MS	22.65			194.78		217.43	10.00	118.44	0.96			88.03	217.43
SBT	77.39			22.35	4.79	104.53	10.40	68.64	45.44			-19.95	104.53
VT	71.23			15.65	54.58	141.46	3.30	130.36	7.80				141.46
Kerala Govt.													
TSM	-93.75			97.29		3.54		2.42	17.50			-16.38	3.54

Source: Computed

KSTC Mills**The E.T.**

The uses of funds for this mill for the year 1989-90 were debt repayment (81.79 %), increase in working capital (15.70 %) and additions to fixed assets (2.51%). They were financed primarily by increase in equity (92.3%) and funds from operations (7.70%). In 1990-91, the increases in working capital (85.60 %) and fixed assets (14.40%) were the deployment of funds. The funds from operations (87.30) and long-term debt (18.70%) were the sources of funds during this period. In 1991-92 also the funds were employed primarily for working capital (83.94 %) and fixed assets (12.06 %) which were financed sizeably by term loans (77.68 %) and funds from operations (22.32 %). The only sources of funds during 1992-93 were the funds from operations, which were deployed for discharge of term loans and additions to fixed assets.

The K. T.

The sources of funds of this mill during 1989-90 were borrowings (72.59 %) and funds from operations (27.41%) which were employed for acquisition of fixed assets (62.82 %) and increase in working capital. In 1990-91, funds from operations were the major source of funds and the

additions to fixed assets and the debt repayment accounted for the uses of funds. The funds from operations (64.82 %) and borrowings (35.18%) were the sources of funds for the year 1991-92 and they were deployed for increasing working capital (64.15 %) and fixed assets (35.85 %). In 1992-93 funds from operations were the only source, which were employed for discharge of debt and additions to fixed assets.

The P. M.

The borrowings (86.38 %) and funds from operations (13.62 %) were the sources of funds for this mill during 1989-90 and the funds so obtained were used for increasing fixed assets (58.12 %) and debt repayment (41.88 %). The source of funds for the year 1990-91 was funds from operations and which was used for acquisition of fixed assets and termination of debt. During 1991-92, the funds from operations and term loans constituted the sources of funds. The funds were spent wholly for acquisition of fixed assets. During 1992-93, the fixed assets (47.66%), working capital (39.10%) and debt repayment (13.24 %) accounted for the uses of funds, which were financed, solely by the funds from operations.

Co-operative Mills

The MCSM

In 1990-91, the funds were sourced from equity, debt and sale of investments, which were used for additions to working capital. During 1991-92, the only source of funds was term loans, which was used to increase fixed assets (59.08 %), working capital (39.80%) and purchase of investments (1.12%). The sources of funds for the period 1992-93 were borrowings, equity issue and sale of investments. The funds so obtained were used for raising working capital (82.54%) and fixed assets (17.46%)

The Q.C.S.M.

This mill's principal source for the year 1989-90 came from funds from operations. The debt repayment (48.64 %) and increase in working capital (45.55%) were the major outgo of funds. In 1990-91 also the funds from operations represented the prime source of funds which were deployed for debt discharge (58.00%), increase of working capital (37.46 %) and fixed assets (4.54%) During 1991-92, borrowings were the only source of funds which were mainly deployed for raising working capital (94.02 %). In 1992-93 funds came mainly from borrowings

(69.04 %) and from operations (30.73 %) and were employed for raising working capital (96.93 %).

In the case of the QCSM, throughout the period of study the assets replaced through additions were less than the assets worn out. This is a very grave problem faced by the mill, as it is not investing in replacement and modernisation of its production facility.

The TCSM

The sources of funds for this mill during 1989-90 were equity (43.84 %), borrowings (42.85 %) and funds from operations (13.31%). The funds so secured were primarily used for increase in working capital (87.31 %) and fixed assets (12.69 %). During 1990-91, the funds came mainly from equity (71.89 %), and funds from operations (28.11 %). The funds so derived were deployed for additions to fixed assets and discharge of debt. In 1991-92 also equity (63.76%) and funds from operations (36.34%) were the main sources of funds and additions to fixed assets were the uses of funds. The principal use of funds for the year 1992-93 was the acquisition of fixed assets, which was financed

primarily by equity (57.75%), borrowings (31.30 %) and funds from operations (10.95 %)

NTC Mills

The ATCM

The principal uses of funds for this mill for the year 1989-90 were additions to working capital (71.47 %) and fixed assets (28.53 %) which were chiefly financed by funds from operations (66.69 %), equity (16.83 %) borrowings (10.30 %) and sale of investments (6.18%). During 1990-91, the mill's financing were sourced from funds from operations (79.29 %) and debt (20.71 %). The funds so raised were employed for increasing working capital (86.12 %) and fixed assets (13.88 %). In 1991-92 also the funds came from debt (58.28 %) and from operations (41.72 %) which were employed for increasing fixed assets (64.58 %) and working capital (35.39 %). The mill found its sources of funds from equity and borrowings and the fixed assets (81.25 %) and working capital (18.75%) accounted for the uses of funds during 1992-93.

The K.L.M.

In 1989-90, the principal sources of funds of the mill were funds from operations (83.67%) and equity (15.56%) the major uses of funds were increase in working capital (92.50 %) and fixed assets (7.50%). During 1990-91, the funds were sourced from operations (65.70 %) and borrowings (34.30 %) and increase in working capital (57.90 %) and fixed assets (42.10%) were the uses of funds. In 1991-92, the mill raised funds from borrowings and operations, which were spent on acquiring fixed assets. The mill secured funds from borrowings (81.02%) and from operations (19.98%) in the year 1992-93, which were used, for increasing the working capital.

Private Mills.

The E.I

The chief uses of funds for the mill during 1989-90 were increase in working capital (86.62 %) and fixed assets (13.38 %) which were financed by borrowings alone. In 1990-91, the main sources of funds were term loans (86.45%) and funds from operations (13.55%). Additions to fixed assets (73.31 %) and working capital (25.72 %) were the major outgo of funds.

In 1991-92, equity (39.16 %), borrowings (35.19 %) and funds from operations (24.96%) were the main sources of funds, which were employed for acquiring fixed assets. The mill sourced funds in 1992-93 from operations (49.34 %), borrowings (31.35 %) and equity (19.31%) and the fixed assets accounted for the lone use of funds.

The KCM

In 1989-90, borrowings were the prime source of funds. The increase in fixed assets (55.16%) and working capital (43.88 %) were the major outgo of funds. The borrowings (73.03 %), equity (18.34%) and funds from operations (8.26 %) were the main sources of funds in 1990-91 and the funds were employed for additions to fixed assets (66.79 %) and working capital (33.21 %). During 1991-92, the mill raised funds from borrowings (74.78 %) and operations (23.46 %). The major outgo of funds was for additions to fixed assets (70.28 %) and working capital. The major uses of funds in 1992-93 were additions to working capital (62.71 %) and fixed assets (37.26 %). Borrowings (56.39 %) and funds from operations (43.61 %) primarily financed them.

assets (51.90%), working capital (43.14%) and dividend pay out (4.96%) were the uses of funds. During 1990-91, the mill raised funds from borrowings (66.35 %) and from operations (33.65%). The funds so derived were deployed for additions to fixed assets (71.84 %), working capital (24.83 %) and for dividend pay out (3.33%). The principal uses of funds for the period 1991-92 were additions to fixed assets (50.80 %), working capital (35.10 %) and dividend payment (14.10%). Equity (35.25 %) and borrowings (10.65 %) financed them. The sources of funds in 1992-93 were from borrowings and equity and which were deployed for additions to fixed assets and dividend pay out.

The M. S.

During 1989-90, funds from operations were the only source of funds and additions to fixed assets (42.82 %), working capital (28.61%), termination of debt (18.91 %), redemption of preferred stock (5.08%) and dividend pay out (4.58%) were the uses of funds. In 1990-91, this mill obtained funds from operations (78. 21 %) and borrowings (21.79 %). The funds were deployed for increasing fixed assets (80.94%) working capital (14.41%), purchase of investments (2.83 %) and for dividend pay out (1.82%). The funds for the year 1991-92 came from

borrowings (54.16 %), operations (28.52 %), equity issues (14.95%) and sale of investments (2.37%). The funds were used for acquisition of fixed assets (55.64%), increase in working capital (40.62 %) and for payment of dividend (3.74 %). During 1992-93, borrowings (89.58%) and funds from operations were the sources of funds and they were used for increase in fixed assets (54.47%), working capital (40.40%), dividend pay out (4.60%) and purchase of investments (0.44%)

The S.B.T.

The uses of funds for the mill for the year 1989-90 were acquisition of fixed assets, investments and discharge of debt. The sole source was from operations. In 1990-91 the funds came from borrowings (51.30 %), and funds from operations (48.70%). The funds were used for additions to fixed assets (67.81 %), working capital (20.25%), debt repayment (6.30 %) dividend pay out (3.80 %) and purchase of investment (1.84%). During 1991-92, funds came from operations only and they were utilised for refund of debt, additions to fixed assets, investments and dividend distribution. In 1992- 93, the funds from operations (74.04%), borrowings (21.38 %) and sale of

investments were the sources of funds. They were used for additions to fixed assets and dividend pay out.

The V.T

In 1989-90 the funds came only from operations. The funds were deployed for increasing working capital (44.71%), fixed assets (24.64%), investments (14.45%), refund of debt (14.01%) and dividend pay out (2.19%). The chief sources of funds during 1990-91 was funds from operations which was primarily used for additions to fixed assets, debt repayment, dividend pay out and redemption of preferred stock. In 1991-92, the mill secured funds from operations (56.06%) and borrowings (43.94%). The funds were employed for additions to fixed assets (55.25%), working capital (43.24%) and for dividend pay out (1.51%). The sources of funds for the period 1992-93 were funds from operations (50.35%), sale of investments (38.58%) and borrowings (11.07%). The acquisition of fixed assets (92.15%), investments (5.52%) and dividend distribution (2.33%) were the major outgo of funds.

Kerala Government Mill

The T.S. M.

The borrowings (82.46%) and funds from operations (17.54%) constituted the sources of funds in 1989-90. The major outgo of funds was towards working capital (97.33%). During 1990-91 the borrowings and equity issue were the sources of funds. The funds so raised were committed to working capital (87.50%) and fixed assets (12.50%). In 1991-92, the funds came from equity issue alone and which was used for increasing fixed assets. The funds were sourced from borrowings only during 1992-93 and that were mainly used for purchase of investments.

In the case of this mill assets replacement through additions were less than the assets worn out throughout the period of study.

The analysis of funds flow of the mills reveal that borrowings are the principal sources of funds and that the funds are chiefly employed for meeting working capital requirements. Having examined the flows of funds of the mills, the capital structure of the mills is studied.

Capital structure

The growth and development of the firm is directly related to the finance function. The management must find its strategic design with an appropriate mix of capital sources that will assist in bringing about the

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desired increase in the shareholder value. Therefore, selection of sources of funds and their mix are important concern of financial management. The primary or long-term objective of financial planning is to secure and employ capital resources in the amount and proportions necessary to increase the efficiency of the remaining factors of production⁹. Generally a firm finances its projects through different sources. When a firm is concerned with raising funds several aspects like cost, risk exposure, flexibility, control etc. must be considered and weighed.

For a firm, the capital structure decisions are of crucial importance with long-term financial implications. Capital structure is permanent financing of the firm. It consists basically of equity and debt. According to Joy, capital structure represents long-term sources of funds only¹⁰. The phrases 'capital structure' may be used to cover total combined instrument of the bond holders, including any long-term debts such as mortgage and long-term loans as well as total shareholders' investment including retained earnings as well as original investment¹¹. Thus the term capital structure includes only long-term debt and total shareholders' stake. The design of capital structure is influenced by several considerations. According to Lindsay and Sametz, to magnify

return on risk capital as a measure to satisfy the income hungry investors of the said capital was another reason for adopting complex capital structure.¹² Scott Jr. concluded that financial structure of firms in the various industry classes was significantly different. He, therefore, underlined the importance of financial structure¹³.

Determinants of Capital Structure

In fact, the determinants of capital structure are a subject of controversy. Therefore, a brief exposure of the widely divergent views on determinants of capital structure is given. According to Joshi and Rao, the capital structure should be designed to make use of maximum financial leverage subject to conditions such as flexibility and solvency norms set by financial institutions¹⁴. Some have identified asset composition, corporate size, financial risk, business risk, growth, operating earnings etc., as determinants of capital structure. But some others hold that the above determinants of capital structure are quite irrelevant. An overview of the findings of various studies on the determinants of capital structure is, therefore, of relevance. Chudson¹⁵, Marsh¹⁶, and Rao¹⁷ conclude that assets composition is positively associated with debt-equity ratio. Wguke Schmidt¹⁸, Scott and Martin¹⁹,

Ferri and Jones ²⁰ reported negative association between asset composition and debt ratio. Taub ²¹ found positive association between corporate size and debt ratio. As against this, Remmers *et al.*, ²², Toy *et al.*, ²³ Bhat ²⁴ and Pandey ²⁵ observed that size does not appear to be determinants of debt ratio. Titman and Wessels ²⁶ hold that business risk is not related with leverage. On the contrary, Toy and others ²⁷ found that business risk is positively related to debt ratio. Stomehill and others ²⁸ found that financial risk appears to be the most important debt ratio determinant.

An overview of the findings of various studies on the determinants of capital structure thus exposes the depth of theoretical controversy on the subject. In this context, the capital structure of select mills is examined.

Capital Structure in Select Mills

Structural and coverage ratios serve useful tools for analysing the capital structure. The structural ratios show the extent to which debt financing has been used. Debt-equity ratio and debt-assets ratio are the

important structural ratios. The coverage ratios are used to assess debt capacity.

Debt-Equity (D/E) Ratio.

Financial leverage arises when a firm employs debt in the capitalisation. Debt involves commitment in the form of interest and principal payments, which cannot be postponed without adverse repercussions. Firms depend on debt financing in periods when internal funds are low relative to capital expenditure needs. Firms with heavy debt burden are cornered with low profitability. The higher the proportion of debt in the capital structure, the larger the fixed charges of interest and debt repayments and greater the likelihood of insolvency during adversities. Another important repercussion of employing excessive debt is loss of financial flexibility, that is, ability to raise funds particularly in adverse capital markets. Earnings are the most desirable and reliable sources of funds for the long-term payment of interest and retirement of debt. The basic risk involved in employing heavy doses of debt is the risk of running out cash under conditions of adversity. In fact, debt becomes a double-edged sword when cost of debt exceeds earnings. The D/E ratio measures the relative contribution of funds by

creditors and owners in the total capitalisation. This is a vital ratio to determine efficiency of financial management of a business undertaking²⁹. The D/E ratio equals total debt divided by shareholders' equity. Total debt comprises of both long-term and short-term borrowings. The short-term debt has been included in the total debt as it accounts for a greater share of debt and also as they are continuously being repaid and renewed. If the D/E ratio is too high, the owners' stake in the business becomes so small. A high level of debt introduces inflexibility in the firm's operations as there will be increasing interference from lenders of money. A low D/E ratio implies smaller share of financing by creditors and untapping of the benefits of leverage.

The corporate sector is being increasingly forced of late; to lean heavily on debt as a source of finance as a direct corollary to the stricter credit disciplines imposed by banks. D/E norms would be different for different industries. According to Tandon Committee, it is not possible to legislate absolute standards for these ratios. A standard D/E norm for all industrial units is neither desirable nor practicable, the new approach would indicate D/E ratios for industrial groups based on the type of technology generally used, the quantum of capital normally required and

the gestation lag³⁰. It has often been shown that companies undertaking large capital intensive projects would feature with high debt-equity ratio³¹.

Table 3.5 presents the D/E ratios in the select mills for the period from 1988-89 to 1992-93.

Table 3.5
Debt - equity ratio
(1988-89 to 1992-93)

Mill	Times				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	2.07	0.49	0.53	0.76	0.85
KT	15.36	6.77	3.26	2.68	1.49
PM	-12.04	-27.08	32.44	-9547.25	517.55
Co-operative					
MCSM	-1.91	-1.62	-1.87	-1.83	-1.84
QCSM	-3.29	-0.21	-28.05	-9.80	-10.43
TCSM	-9.21	17.02	5.89	4.32	3.65
NTC					
ATCM	-43.46	6.36	3.69	4.03	4.95
KLM	2.47	1.24	1.37	1.64	1.82
Private					
EI	2.52	18.12	26.17	6.77	4.15
KCM	-11.09	-12.49	50.22	-42.72	-75.21
TCM	-8.43	24.40	11.27	10.86	9.68
AT	2.94	2.70	2.51	2.69	2.87
MS	3.06	1.80	1.58	2.09	2.89
SBT	3.22	2.05	1.96	1.43	1.47
VT	18.77	3.97	2.42	2.49	2.58
Kerala Govt.					
TSM	-1.63	-1.80	-1.91	-1.71	-1.66

Source: Computed.

As a general guide, the debt should not exceed 50 per cent of total sources of funds. It should be less than 50 for a firm in a risky business that produces swings in operating income³² As on this bench mark, the D/E ratio of the mills is very high. The P.M. (KSTC), the MCSM and the QCSM (co-operative) and the TSM (Kerala Govt.) are depending wholly on debt. These mills are living at the mercy of the Government and financial institutions and demand frequent infusion of funds.

The average D/E ratio of private mills ranges between -18.26 and 11.55. In this context, it is worth while to compare the average D/E ratio of 69 textile mills compiled by the ICICI for the period from 1988-89 to 1992-93 with that of the select mills. They are 0.93, 1.22, 0.95, 1.14 and 1.01³³ respectively. The D/E ratio of all the mills except the ET (KSTC) a comparatively new mill, is well above that of the ICICI figures.

The high D/E ratio of the mill is seen to emanate from low internal generations, erosion of equity, consequent difficulties to raise equity and heavy borrowings. In the case of public sector mills, it is the practice of the Govt. to extend debt whenever they are short of funds. As the mills are highly levered, they are in a potentially risky situation and they find it increasingly tough to manage the mountainous debt they have amassed.

Debt to Capitalisation

The ratio of debt to capitalisation is a more refined version of analysis of debt. It equals long-term debt divided by total capitalisation. The total capitalisation represents long-term debt and shareholders' equity. Table 3.6 depicts the debt to capitalisation of the mills for the period under study.

Table 3.6
Long-term Debt to Capitalisation
 (1988-89 to 192-93)

Mill	Times				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	0.65	0.26	0.27	0.35	0.37
KT	0.91	0.84	0.68	0.66	0.50
PM	1.18	1.05	0.96	1.00	1.00
Co-operative					
MCSM	-4.62	-1.50	3.67	3.27	2.89
QCSM	1.57	1.28	1.04	1.13	1.13
TCSM	1.12	0.94	0.85	0.81	0.78
NTC					
ATCM	1.03	0.82	0.70	0.72	0.77
KLM	0.62	0.46	0.45	0.49	0.55
Private					
EI		0.89	0.95	0.81	0.72
KCM	1.23	1.18	0.97	1.03	1.02
TCM	1.22	1.06	0.89	0.87	0.83
AT	0.61	0.62	0.66	0.64	0.69
MS	0.64	0.52	0.46	0.49	0.64
SBT	0.70	0.55	0.58	0.50	0.51
VT	0.92	0.66	0.58	0.58	0.57
Kerala Govt.					
TSM	15.21	4.81	4.09	8.46	11.74

Source: Computed

It can be seen from Table 3.6, that the P.M(KSTC), the co-operative mills, the ATCM (NTC) ,the EI, the KCM and the TCM (Private) and the TSM(Kerala Govt.) employ heavy doses of debt of which the TSM is the most heavily indebted mill.

The shareholders' equity of the mills declined through attrition caused by operating losses. The mills , are, therefore, trading on very thin equity. The low equity base of the mills threatens the long-term solvency of the mills. In fact, there is a strong association between sickness and weak equity base. The dearth of working capital is also compelling the mills to resort to borrowings , which instead of contributing anything takes away the slice of profits. In view of the uncertainty and unpredictability of earnings, the practice of infusing debt in heavy doses is by no means desirable for the growth of the mills.

Debt to Total Assets Ratio

It equals total debt divided by total assets and shows the relationship of debt to assets. The lesser the ratio, the greater the cushion against creditor's losses in case of any adversities. On the other hand, a

high ratio provides less protection to debt holders. The debt ratios of the select mills appear in Table 3.7

Table 3.7
Debt to Total Assets Ratio of the Mills
(1988-89 to 1992-93)

Mill	Times				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	0.67	0.33	0.35	0.43	0.46
KT	0.94	0.87	0.77	0.73	0.60
PM	1.09	1.04	0.97	1.00	1.00
Co-operative					
MCSM	2.10	2.62	2.08	2.20	2.20
QCSM	1.43	1.26	1.04	1.11	1.11
TCSM	1.12	0.94	0.85	0.81	0.79
NTC					
ATCM	1.02	0.86	0.79	0.80	0.83
KLM	0.71	0.55	0.58	0.62	0.64
Private					
EI	0.72	0.95	0.96	0.87	0.81
KCM	1.10	1.09	0.98	1.02	1.01
TCM	1.14	1.04	0.92	0.92	0.91
AT	0.75	0.73	0.71	0.73	0.74
MS	0.75	0.64	0.61	0.68	0.74
SBT	0.76	0.67	0.66	0.59	0.60
VT	0.95	0.80	0.71	0.71	0.66
Kerala Govt.					
TSM	2.58	2.24	2.09	2.42	2.52

Source : Computed .

Excepting the ET (KSTC) , the mills have greater debt-to- total assets ratio, reflecting greater financial risk. It means that the cushion of protection offered to the creditors is lesser. The assets of PM (KSTC) ,

the MCSM and the QCSM (co-operative) and the TSM (Kerala Govt.) are financed wholly by debt. In the precarious situation in the textile industry, it would be difficult for the highly levered mills to borrow additional funds without going public. Any attempt to raise debt ratio further would expose the mills and creditors to greater risk. In fact, due to weak equity base, the mills have little “ reserve strength “ to weather adversities.

The forgone analysis exposes the greater reliance of the mills on debt. As the mill employs more debt , the probability that it may default at some future time also increases. At some point, the expected cost of default will be large enough to offset any other advantage due to debt. At this point other sources of financing will be preferred.³⁴ As far as a loss making mill, debt financing is not desirable. Therefore, resorting to lean on debt to cover all additional requirements would be unwise as the likelihood of the firms incurring loss increases substantially due to use of debt. Generally the more debt that is used, the greater the risk of loss.³⁵ Unprofitable companies with risky , intangible assets ought to rely primarily on equity financing ³⁶. In the context of the shaky history, cloudy prospects and uncertainty surrounding the textile industry , the

increasing pressure of debt in the capital structure of the mill is a symptom of financial distress. Therefore, in order to reduce the risk of mills, it is suggested that the mills should finance its additional requirements with equity financing. As payment of interest is contractual and is not subject to change, borrowings obligate the mills to operate profitably in order to service debt. As a surrogate for funds generated by operations, earnings are the yardsticks against which the coverage of interest and other fixed charges is measured ³⁷. Therefore, the debt capacity of the mills deserves careful examination.

Coverage Ratios

The coverage ratios help measure debt capacity. They point to the ability of the mill to service debt. Interest coverage ration and the fixed charge coverage ratio are the important coverage ratios.

Interest Coverage Ratio

This ratio equals Earnings Before Interest and Taxes (EBIT) divided by interest. It measures the ability of the firm to pay interest, a non-operating expense. It points to the extent to which the earnings can decline without any financial damage being done to the firm. Although

generalisations about what is an appropriate interest coverage ratio are difficult, one usually is concerned when the ratio gets much below 3: 1.³⁸

If a firm continues to operate on negative margin, there would be a rising interest-to-debt ratio and lowering its interest cover. Table 3.8 shows the interest coverage ratio of the mills.

Table 3.8
Interest Coverage Ratio
(1988-89 to 1992-93)

Mill	Times				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	-0.70	0.48	1.32	0.22	0.28
KT	-2.30	-3.56	4.73	3.67	4.87
PM	-7.98	2.39	3.44	0.26	1.05
Co-operative					
MCSM	-0.60	-0.28	0.02	0.20	0.59
QCSM	-0.33	2.03	2.43	0.39	0.96
TCSM	0.32	1.00	0.83	0.69	-1.60
NTC					
ATCM	0.80	0.28	3.31	1.37	0.48
KLM	0.70	4.08	3.75	0.66	0.73
Private					
EI	-5.48	-1.09	1.28	1.10	1.28
KCM	-2.56	0.70	1.08	0.38	1.11
TCM	0.70	1.85	2.43	-0.02	1.34
AT	1.23	3.09	2.60	1.56	1.25
MS	1.58	5.51	7.14	2.54	0.62
SBT	1.46	4.39	3.68	1.71	1.10
VT	-0.42	3.62	3.33	1.11	0.79
Kerala Govt.					
TSM	-1.54	0.98	0.04	-1.94	-1.26

Source : Computed

The interest coverage ratio of select mills points to their poor debt servicing. None of the mills has consistently made earnings to have an interest coverage ratio of 3: 1. It is remarkable to note that the interest coverage ratio of the ET (KSTC) is low inspite of its low D/E ratio. This situation is against the observation that relationship between coverage ratio and capital structure is perfectly negative. It is found that the years 1989-90 and 1990-91 were favourable to the textile industry during which all mills showed better results. Even though the AT (Private) is relatively more levered, its capacity to cover interest is impressive since 1990-91. It supports the view that excessive use of debt is not bad if the firm can service its debt. The position of the TSM (The Kerala Govt,) is worse as its earnings were negative. It is to be noted that with regard to interest coverage, no sectoral influences are seen.

It is felt that cash flow coverage is a more relevant measure than traditional interest coverage ratios based on EBIT . Therefor, interest coverage on cash flow basis is examined. The cash flow to interest is presented in Table 3. 9

Table 3.9
Cash Flow to Interest
(1988-89 to 1992-93)

Mill	Times				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	0.19	1.58	2.62	1.51	2.21
KT	-0.71	2.71	6.83	5.70	6.52
PM	-6.76	4.08	4.99	1.66	1.86
Co-operative					
MCSM	-0.29	-0.08	0.32	0.47	0.83
QCSM	-0.09	2.34	2.85	0.78	1.45
TCSM	0.98	1.66	1.49	1.79	2.55
NTC					
ATCM	1.44	0.96	4.15	2.14	0.86
KLM	1.36	4.77	4.52	1.41	1.22
Private					
EI	-5.11	-0.71	2.28	1.62	1.67
KCM	-2.14	1.04	1.58	1.17	1.73
TCM	0.89	2.01	2.64	0.14	1.48
AT	1.99	3.62	3.06	2.13	1.73
MS	3.51	7.22	9.05	2.76	1.35
SBT	2.42	5.55	4.72	2.72	2.04
VT	0.45	4.27	4.04	1.73	1.43
Kerala Govt.					
TSM	-1.13	1.39	0.39	-1.60	-1.05

Source : Computed .

As is evident from Table 3.9 the cash flow of the MCSM (Co-operative) and the TSM (Kerala Govt.) are not adequate enough to meet their interest obligations.

Debt Service Coverage Ratio (DSCR)

The analysis of the ability of the firm to meet its fixed obligations from its cash flow is perhaps a good way to gauge the firm's solvency as far as debt service is concerned. If a business is subject to fluctuations in after tax cash flow, lenders may be reluctant to extend credit when debt service cannot be covered several times. The DSCR is made to cover the payment of certain fixed expenses also besides the interest and debt repayments L.C.Gupta has suggested a sound formula for computing the DSCR ³⁹as :

$$\text{DSCR} = \text{EBDIT} / \text{Interest} + 0.25 \text{ Debt.}$$

EBDIT stands for Earnings Before Depreciation Interest and Taxes

The DSCR of the select mills for the period of study is exhibited in Table 3.10.

Table 3.10
Debt Service Coverage Ratio
(1988-89 to 1992-93)

Mill	Times				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	0.05	0.65	0.95	0.46	0.50
KT	-0.06	-0.40	0.88	0.81	1.21
PM	-0.36	0.26	0.57	0.24	0.38
Co-operative					
MCSM		-0.03	0.06	0.11	0.19
QCSM	-0.04	0.89	1.02	0.25	0.45
TCSM	0.22	0.41	0.42	0.37	0.17
NTC					
ATCM	0.36	0.24	0.81	0.42	0.27
KLM	0.40	1.43	0.94	0.34	0.43
Private					
EI	-1.66	-0.04	0.46	0.50	0.49
KCM	-0.43	0.14	0.30	0.24	0.45
TCM	0.28	0.69	0.72	0.04	0.34
AT	0.50	0.86	0.85	0.63	0.61
MS	0.84	1.58	1.50	0.64	0.32
SBT	0.80	1.38	1.10	0.95	0.71
VT	0.14	1.17	0.98	0.54	0.48
Kerala Govt.					
TSM	-0.23	0.26	0.08	-0.32	-0.19

Source : Computed

It is evident from Table 3.10 that none of the mills was able to honour the borrowing covenants on a continuing basis.

no significant difference in the capital structure between different ownership groups. It is also confirmed that there is no significant variation in the capital structure between years as the table value of F (5.69) is greater than the calculated value of F (0.9595726). It is worth mentioning that the high value of MSS (1211602) which is the best estimate of error variance , reveals high variations in capital structure between the mills. Therefore, the hypothesis “ The ownership pattern of textile mills has no influence on the capital structure ” is accepted.

The concept of cost of capital is a crucial variable in all financial decisions relating to fund raising and capital structure management. Therefore, the analysis of cost of capital of the mills assumes much significance.

Cost of Capital

Capital has a cost. Cost of capital is the rate of return the funds used should produce to justify their use within the firm in the light of wealth maximisation objective. It is the rate that must be earned to prevent the price of the stock from falling. The cost of capital is significant not only as an investment criterion, but also to evaluate the

financial performance of top management⁴¹ The firm's cost of capital is the standard by which the investment projects having the same business risk as the firm are evaluated.impact of financing decision on investment decision is conveyed through the use of cost of capital⁴² Thus in appraising investment decisions that affect the value of the firm , the cost of capital to the firm plays a prominent role. A basic rule often advanced is that no project should be undertaken if the expected rate of return does not exceed the estimated cost of capital.⁴³

Weighted Average Cost of Capital

It is a technique that measures required return in terms of individual components of the firm's capital structure.

Impact of Financial Leverage on Cost of Capital

The cost of capital is expected to increase as the firm becomes more risky as a result of financing operations with debt. the more debt a given company employs, other things held constant , the higher the required rate of return on equity capital⁴⁴ Bolten opines that in addition

to affecting earnings per share positively or negatively, injecting debt also affects cost of both equity and debt ⁴⁵. He also expresses the view that financial leverage is also disadvantageous to the firm if its use increases the overall cost of capital above the minimum, which can be attained. Therefore, in situations where the firm's earnings are low or negative, use of debt would lead to increase in the overall cost of capital.

Cost of Equity

The cost of equity should be the minimum yield that the firm must earn on the equity-financed portion of its investments in order not to adversely affect the share price. The cost of equity is computed as :

$$K_e = \frac{D_1}{P_0} + g$$

Where K_e = Cost of equity., D_1 = Expected dividend

P_0 = Prevailing stock price and g = Growth rate.

It should be noted that the cost of equity will be higher for the firm whose shareholders' equity is low.

Cost of Preferred Stock

The cost of preferred stock is a function of its stated dividend⁴⁶. It is equal to the return preferred stock holders receive. The cost of preferred stock is computed as:

$$K_p = \frac{D}{I_0}$$

Where K_p = cost of preferred stock., D = The stated annual dividend and
 I_0 = Proceeds from issue of preferred stock.

Cost of Debt

The cost of debt is defined as the rate of return that must be earned on debt-financed instruments in order to keep unchanged the earnings available to equity holders. As interest on debt is tax deductible, the cost of debt is adjusted to tax effect and after tax cost of debt is computed as :

$$K_d = I (1-t)$$

Where K_d = Cost of debt.

I = Rate of interest and

t = Corporate tax rate

If EBIT is negative, the tax shield will be absent and the actual cost of debt equals the interest rate.

Cost of Retained Earnings

The cost of retained earnings equals the yield that would be otherwise earned by investing the retained earnings in alternative projects. the cost of retained earnings is found as:

$$K_r = K_e (1-T) (1-B)$$

Where K_r = Cost of retained earnings.,

T = Shareholders' marginal tax rate; and

B = Percentage of brokerage cost.

Computation of Cost of Capital in Select Mills

Efforts were made to ascertain the importance assigned to the cost of capital in capital budgeting and capital structure design and the method of computation of cost of capital in select mills. It is given to understand that the mills are not concerned about cost of capital and its computation. ⁴⁷

In this study , the concept of cost of capital has been used in the sense of weighted average cost of capital. The cost of debt and the preferred stock are computed in the traditional fashion explained earlier. But a slight modification is introduced in the computation of cost of equity as the market prices of equity of the select mills are not available. B. Krishna Reddy ⁴⁸ in his study on cotton textile mills, calculated the cost of capital on the basis of book value for the reason that the market values were not available. In this context, the modification suggested by Dr. T.P. Ghosh, the Dy. Director, Board of Studies , Institute of Chartered Accountants of India is worth mentioning. He argues that the traditional method of computing cost of capital is irrelevant to the firm and, therefore, the cost of equity should be found on the basis of dividend and net worth. ⁴⁹. His formula of cost of equity is as follows:

$$K_e = \frac{\textit{Dividend}}{\textit{Net worth}} \times 100$$

In this study the cost of equity is computed on the basis of the above formula. In fact, only four private mills are paying dividend. The remaining mills are not paying any dividend and this poses a problem in the computation of cost of capital. But this problem is overcome by

applying the average cost of equity of the dividend paying mills to those mills, which do not pay dividend.⁵⁰

Table 3.12 expresses the weighted average cost of capital of the select mills during the period of study. The details of specific cost of capital are given in Appendix II

Table 3.12
Cost of Capital
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	10.88	8.73	7.48	8.36	9.76
KT	11.40	10.56	13.53	13.14	11.44
PM	11.86	11.86	17.84	18.50	18.45
Co-operative					
MCSM	22.80	15.40	14.00	14.00	14.00
QCSM	22.60	16.00	15.00	13.10	13.50
TCSM	14.00	13.41	12.31	11.83	14.17
NTC					
ATCM	11.00	9.62	7.18	7.57	13.86
KLM	12.52	9.05	9.22	11.35	12.71
Private					
EI	15.40	13.41	7.88	12.78	11.78
KCM	13.00	11.75	11.57	11.75	11.75
TCM	15.82	15.96	11.41	12.33	11.95
AT	6.55	6.82	5.75	7.40	8.51
MS	5.46	5.32	4.89	8.68	9.07
SBT	10.67	7.58	7.38	7.23	5.38
VT	10.69	9.21	8.31	11.61	9.43
Kerala Govt.					
TSM	9.50	8.00	8.90	9.00	8.20

Source : Computed

It can be seen from Table 3.12 that the average cost of capital of the select mills are 13.30%, 11.20%, 10.51%, 11.51% and 11.89% respectively during 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93. There are wide variations in the cost of capital between mills over years, the C.V being 38.79%, 30.40%, 35.97%, 29.07% and 25.65% for the corresponding period. Sector wise, the co-operative sector recorded highest cost of capital in 1988-89 and 1989-90, the respective average figures being 19.80% and 14.94%. In 1988-89, the MCSM (Co-operative) recorded the highest cost of capital with 22.80%. The QCSM (Co-operative) registered the highest cost of capital in 1989-90 with 16.00%, while the MS (Private) had the lowest cost of capital during 1988-89, 1989-90 and 1990-91 with 5.46%, 5.32% and 4.89%

respectively. In 1991-92 and 1992-93 the SBT (Private) had the lowest cost of capital with 7.23% and 5.38% respectively. Since 1990-91, the P.M. (KSTC) recorded the highest cost of capital.

As the mills are highly levered and sustaining losses or earning inadequate returns, the textile mills are subject to excessive financial risk which forces the investors to require higher rate of return for their investment in the mills. The mills differed widely between years. The private mills in general recorded lowest cost of capital due to the presence of interest tax shield. When the mills fail to make earnings, their effective tax rate will be zero and cost of debt equals their interest charges. Therefore, the cost of debt of loss making mill will be higher

than that of profitable mills whose effective tax rates are higher. Thus the cost of debt of the AT, the MS, and the SBT (Private) is relatively lower as they earn profits and have the interest tax shield. In the case of other mills, as their effective tax rate is zero, their cost of debt is higher. In this situation debt financing proves to be disastrous for them. It is attempted to identify the most influential constituent of the overall cost of capital on profitability. For this purpose, the cost of debt, cost of equity and cost of preferred stock are taken as independent variables and the ROA as dependent variable. It is found that the cost of debt is the most influential constituent of cost of capital on profitability, the coefficient of correlation being -0.39 . Therefore, the profitability is inversely related to the cost of debt. In this scenario, the indiscriminate use of debt without considering the uncertainty surrounding earnings leads the mills to financial difficulties. The higher cost of debt ends in higher overall cost of capital also. As the mills are highly levered, the cost of debt bears strong influence on the overall cost of capital. Thus greater reliance on debt has increased the likelihood of the mills' incurring losses and increasing the cost of capital. Therefore, the hypothesis " In the context of uncertainty surrounding earnings, and no or low interest tax

shield, greater dependability on debt creates adverse impact on cost of capital” is accepted.

Financing Pattern of Fixed Assets.

A firm usually finances its projects through long-term and short-term sources. In fact, there are different financing approaches, when the firm depends more on long-term sources of funds to finance its operations, it follows a conservative approach and when the firm depends more on short-term sources of funds for its financing needs, it follows an aggressive policy of financing. Even though the aggressive financing policy results in cost advantage and flexibility, it is more risky. The firm should follow an appropriate financing pattern that will assist in bringing about the desired increase shareholders’ wealth. The funds raised must be put to effective use in order for the firm to achieve its business objectives and to assure its existence and prosperity. Production would not be possible without the use of fixed assets, which are consumed in the process of production over a long period. Fixed assets are assets of a relatively permanent nature used in the operation of a business ⁵¹. Though fixed assets are permanent, they are depreciable. Fixed asset is an asset, which is expected to provide service for more

than a year, usually for several years⁵². The amount invested in fixed assets is blocked for long and therefore they are non-liquid. The investment in fixed assets involve commitment of funds for longer periods into the future and usually are difficult and costly to reverse, often they are in large increment⁵³.

Capital Budgeting Practices in Select Mills

Capital budgeting describes the firm's formal planning process for the acquisition and investment of capital and results in a capital budget that is the firm's formal plans for the expenditure of money to purchase fixed assets⁵⁴.

Efforts were made to gain knowledge of the capital budgeting practices in select mills. About 63% of the mills disclosed their capital budgeting practices. In the case of private mills only one mill follow capital budgeting. There is no capital budgeting system in the TSM (Kerala Government). Thus only the KSTC, NTC and the MS (Private) have a capital budgeting system. The KSTC and the MS follow the payback period and benefit-cost ratio methods for project evaluation. The method followed by the NTC for project appraisal is the payback

period. In the case of the KSTC, the investment decisions are taken by its Chief Executive in consultation with the Government of Kerala and those of the NTC by its Chief Executive and Government of India

The following ratios are used to study the financial pattern of fixed assets

1. Net fixed assets to shareholders' equity ; and
2. Net fixed assets to long-term funds.

Net Fixed Assets to Shareholders' Equity.

This ratio is computed by dividing net fixed assets by shareholders' equity. It measures the extent to which owners' fund has been channelled into permanent but depreciable and non-liquid assets. It also signals the volume of shareholders' funds available for investment in working capital. The yardstick for measuring this ratio is 0.65 times for industrial concerns⁵⁵. Excessive investments in fixed assets may lead to financial distress as they limit working capital, increase depreciation and high debt pressure and ultimately affects profitability adversely. The net fixed assets to shareholders' equity is presented in Table 3.13.

Table 3.13
Net Fixed Assets to Shareholder's Equity
(1988-89 To 1992-93)

Mill	Times				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	2.77	1.19	1.09	1.08	1.28
KT	3.31	2.86	1.97	1.55	1.15
PM	-4.18	11.85	16.23	-4591.00	221.99
Co-operative					
MCSM	-0.64	-0.42	-0.36	-0.37	-0.35
QCSM	-0.93	-1.40	-7.79	-1.96	-1.59
TCSM	-6.17	9.43	3.75	2.99	3.44
NTC					
ATCM	-16.71	2.55	1.15	1.29	1.58
KLM	1.35	0.65	0.63	0.81	0.75
Private					
EI	2.30	4.38	12.08	4.66	3.24
KCM	-8.14	-7.44	34.04	-26.25	-43.81
TCM	-3.15	-10.40	4.65	4.03	2.99
AT	0.75	0.88	1.30	1.19	1.57
MS	1.40	0.98	1.03	1.11	1.48
SBT	1.82	1.52	1.59	1.47	1.35
VT	6.47	1.15	1.27	1.26	1.45
Kerala Govt.					
TSM	-0.30	-0.26	-0.23	-0.16	-0.11

Source: Computed.

Table 3.13 depicts that the MCSM, QCSM (Co-operative) and the TSM (the Kerala Government) were depending wholly on debt to finance their fixed assets. In the case of the PM (KSTC) and the KCM(Private) also, excepting in 1990-91, their fixed assets are

financed with debt. As for other mills, excepting the KLM (NTC), the ratio of net fixed assets to shareholders' equity exceeded unity, pointing the fact that they were depending wholly on debt to finance their fixed assets and a part of working capital.

The ratio of net fixed assets to long-term funds also need be analysed to gain understanding of the financing pattern of fixed assets.

Net Fixed Assets to Long-term Funds

This is another measure used to study the financing pattern of fixed assets. This ratio is computed by dividing net fixed assets by long-term funds. Table 3.14 illustrates the ratio of net fixed assets to long-term funds of the mills for the period from 1988-89 to 1992-93. Ideally, the net fixed assets to long-term funds should not exceed unity.

Table 3.14
Net Fixed Assets to long-term Funds
(1988-89 to 1992-93)

Mill	Times.				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	0.95	0.88	0.79	0.70	0.80
KT	0.30	0.47	0.64	0.53	0.58
PM	0.75	0.64	0.68	0.74	0.71
Co-operative					
MCSM			0.10	0.84	0.67
QCSM	0.53	0.40	0.31	0.25	0.21
TCSM	0.77	0.53	0.56	0.58	0.76
NTC					
ATCM	0.56	0.46	0.34	0.36	0.37
KLM	0.51	0.36	0.35	0.42	0.33
Private					
EI	0.31	0.48	0.64	0.88	0.90
KCM	1.88	1.30	0.96	0.90	0.75
TCM	0.70	0.61	0.53	0.53	0.50
AT	0.29	0.34	0.44	0.43	0.49
MS	0.51	0.47	0.56	0.56	0.54
SBT	0.55	0.68	0.67	0.74	0.66
VT	0.49	0.39	0.53	0.53	0.62
Kerala Govt.					
TSM	4.19	1.00	0.70	1.18	1.19

Source: Computed.

In this respect all mills, excepting the TSM (Kerala Government) were able to keep the ratio below unity. It means that a portion of long-term funds were available for financing working capital. In respect of the TSM, that the ratio net fixed assets exceeded unity, means that the

short-term funds are financing a part of fixed assets and the whole of working capital.

Conclusion

Equity share capital, borrowings, preference shares capital and retained earnings are the sources of long-term funds of the textile mills in Kerala. Preference share capital becomes less popular with the mills because of their relatively higher explicit costs. The contribution of retained earnings is meagre as the internal generations of the mills are low. Mills are not making use of lease financing. As a result of accumulated losses, the equity base of mills has either eroded or weakened. Under these circumstances, the mills are increasingly depending on debt.

The funds flow analysis of the mills reveals that term loans are the main source of funds for the mills, which is used mainly for working capital purposes. It was found that in the case of the QCSM (Co-operative), the TCM (Private) and the TSM (Kerala Government), their assets replacements through additions were less than their assets

worn out which is by no means desirable. In fact, the mills should invest more on modernisation to become more competitive.

The design of capital structure is of crucial importance in the area of financial management. But the determinants of capital structure are a bone of contention among the theoreticians and practitioners of financial management.

The analysis of capital structure with reference to D/E ratio, debt-assets ratio and long-term debt to capitalisation exposes the greater reliance of mills on debt, which has increased their financial risk. The mills, with weak equity base, have little "reserve strength" to tide over adversities. The mills with heavy debt burden are also concerned with low interest cover and poor debt servicing capacity. As pecking order theory suggests, the less profitable textile mills choose debt over equity not because they have higher target debt ratio but because they do not have internal generations sufficient for the capital investment programme and because debt financing is first on the pecking order of external financing. This practice has resulted in high-debt equity ratio for the textile mills in Kerala.

The hypothesis "the ownership pattern of textile mills in Kerala has no influence in the capital structure" has been formulated. It was found that though there were wide variations in D/E ratio between mills and between years, there were no inter sectional differences in D/E ratio. Therefore, the hypothesis has been accepted.

The cost of capital is the rate of return the funds employed should produce to justify their use within the firm in the light of wealth maximisation objective. The cost of equity will be higher when net worth is low. In the case of the select textile mills, most of them have either negative or low net worth and therefore the cost of equity for the mills are relatively higher. The cost of debt will be low only when the mills pay higher effective tax rate. As most of the mills' effective tax rate is zero, the cost of debt equals their interest charges. Further as the mills are highly levered, the cost of debt is also relatively higher. It was also found that, among the constituents of cost of capital, the influence on profitability of cost of debt is most strong. All these lead to increase overall cost of capital for the textile mills in Kerala. Excepting three private mills, the cost of debt exceeds the ROA of the mills. Under these

circumstances, the indiscriminate use of debt creates an adverse impact on the cost of capital. Therefore, the hypothesis “in the context of uncertainty surrounding earnings and the low or no interest tax shield in the textile industry, greater dependability on debt creates adverse impact on the cost of capital” is accepted.

Only the KSTC, NTC and one private mill have proper capital budgeting system. Pay back period and benefit cost ratio are the techniques used by those mills for project appraisal.

The analysis of the fixed assets management reveals that five mills are depending wholly on debt to finance their fixed assets, while others depend partly on debt. Prudent financial management demands that fixed assets and permanent working capital should be financed by long-term funds.

After analysing the management of long-term funds, it is attempted to highlight the management of working capital in Chapter IV.

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WORKING CAPITAL MANAGEMENT

K. K. Mohamed “Financial management in textile mills in Kerala ” Thesis.
Department of Commerce and Management Studies , University of Calicut,
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CHAPTER IV

WORKING CAPITAL MANAGEMENT

WORKING CAPITAL MANAGEMENT

Financial management deals with management of long term and short-term funds. The management of long-term funds has been examined in Chapter I. The textile industry in Kerala is relying heavily on debt and the poor debt servicing capacity of the mills has exposed them to increased financial risk. Working capital management is concerned with management of short -term funds. As working capital management is an integral part of financial management, study of working capital management in the textile mills assumes much importance. This chapter, therefore, focuses on the working capital management in the mills. The overall working capital management and the management of cash, accounts receivable and inventory are highlighted in this Chapter.

Working capital management is concerned with short-term financial decisions. It is the management of current assets and current liabilities. Current assets may be defined as cash or other assets, which are expected to be converted into cash in the ordinary course of business within one year or such long period as constitutes the normal operating

cycle of a business¹. Cash, receivables, inventory, accruals, marketable securities etc are current assets. Current liabilities are those which are expected to mature within a year. Trade creditors, accounts payable, short-term borrowings and outstanding expenses constitute current liabilities.

Gross working capital (investments in current assets) and net working capital (excess of current assets over current liabilities) are different concepts of working capital. Net working capital is the portion of current assets, which are financed with long-term funds².

Working capital is classified by time as permanent and temporary.

Hypotheses

The following hypotheses have been framed and tested

H₁ : The poor management of inventory and receivables are the causal factors for the ineffective management of working capital in the textile mills in Kerala; and

H₂ : The shorter span of operating cycle need not always reflect the effectiveness in the management of working capital.

Significance of Working Capital Management

The management of working capital is a continuous activity involving control of every day ebb and flow of financial resources circulating in the enterprises in different forms. The working capital decisions have much effect on the firm's risk, return and value. The success or failure of a firm depends greatly on the way in which working capital is managed. Working capital, on the one hand, maintains proper liquidity, while on the other hand, it helps in increasing the profitability of the concern³. Inadequacy or mismanagement of working capital is one of the leading causes of business failures⁴.

Financing Working Capital

Different methods of financing working capital produce different cost patterns and affect firm's profitability differently. There are

different approaches to financing working capital. They are conservative, aggressive and hedging approaches. Conservative approach involves relatively heavy use of less risky long - term funds. In this case minimum working capital requirements and a part of the fluctuating working capital requirements are financed by long-term sources.

Financing even part of the minimum working capital with short-term finance is termed as aggressive approach. This indicates higher risk and poor liquidity.

Hedging approach is a method of financing where each asset would be offset with a financing instrument of the same maturity.

Tools of Analysis

Ratio analysis, time series analysis, 't' test, correlation and multiple regression are the tools employed to evaluate the working capital management in the select textile mills in Kerala.

Working Capital Management Practices in Select Mills

Efforts were made to understand the working capital management practices followed by the textile industry in Kerala. Even after repeated requests and persuasions, only 9 mills disclosed their practices with regard to working capital management. In general the position responsible for the overall working capital management assigns the management of components of working capital to some other positions. Table 4.1 details the positions responsible for overall management of working capital.

Table 4.1

Positions Responsible for Working Capital Management

Position	No. of Reported Mills	Percentage
Finance Manager (FM)	6	67
Managing Director (MD)	1	11
Accounts Manager (AM)	1	11
General Manager (GM) and AM	1	11
Total	9	100

Source: Disclosure during interview.

In two-third of the reported mills, the Finance Manager is responsible for working capital management. In the remaining mills, the

M.D, the Accounts Manager and the GM and Accounts Manager together look after the management of working capital.

Estimation of Working Capital Needs

All the reported mills excepting the ET (KSTC) determine their working capital requirements by making detailed estimates of various components of current assets. In the case of the ET, its working capital needs are determined by considering its operating cycle with reference to peak requirements.

Financing Working Capital

The short-term debt is related to the current assets of the mills to study the financing of their working capital. Table 4.2 exhibits the percentage of short-term debt of the mills to their current assets for the period from 1988-89 to 1992-93

Table 4.2
Short - term Debt to Current Assets.
(1988-89 to 1992-93)

	%				
Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	55.83	45.14	35.19	31.67	44.78
KT	41.32	34.85	48.94	36.88	44.57
PM	79.79	53.97	54.83	67.73	68.70
Co-operative					
MCSM	490.73	641.90	98.80	86.32	64.03
QCSM	39.85	12.68	10.63	11.97	21.87
TCSM	8.46	4.31	6.35	6.23	12.51
NTC					
ATCM	50.52	36.47	37.12	39.48	38.56
KLM	40.03	25.26	31.84	37.57	27.51
Private					
EI	205.94	67.77	55.65	80.37	82.60
KCM	374.93	155.81	96.01	84.18	52.35
TCM	80.95	35.32	48.91	58.75	64.48
AT	42.78	39.08	25.35	35.48	29.57
MS	48.55	40.52	48.70	56.69	47.54
SBT	38.38	54.27	43.13	48.91	39.04
VT	52.28	56.83	50.31	50.33	41.08
Kerala Govt.					
TSM	167.14	99.63	85.83	104.68	110.76

Source. Computed

Table 4.2 reveals that in 1988-89, the MCSM, (Co-operative) the EI, the KCM (Private) and the TSM (Kerala Government) were financing their current assets only with short-term sources. During 1989-90, 1990-91 and 1991-92 the MCSM, the KCM and the TSM were mostly

depending on short-term sources to finance their working capital with the exception of the above mills, the mills in general are adopting conservative working capital policy as they depend on long-term sources also to finance their current assets.

Causes of Excess / Deficit Working Capital

Excessive investments in inventories and receivables attribute to redundant working capital in the reported textile mills. The causes of inadequate working capital are listed in Table 4.3.

Table 4.3
Causes of Inadequate Working Capital

Causes	No. of Reported Mills	Percentage
Cash Loss	5	56
Under investment in inventories and receivables	3	33
Delayed release of funds	1	11
Total	9	100

Source : Disclosure during interview.

Table 4.3 illustrates that cash losses and under investments in inventories and receivables are the major causes of shortage of working capital in the reported textile mills in Kerala.

Effects of Inadequate Working Capital

The reported mills revealed it that higher rates of interest, higher cost of raw materials, damage to the credibility and reputation, low liquidity and low profitability are the ill effects of inadequate working capital.

Control of Working Capital

Excepting one of the reported mills, all mills review their working capital position at regular intervals. Two mills have not disclosed their review period. Four mills review their working capital position monthly while two mills have quarterly review. It was disclosed that all mills employ budgetary control and fund flow analysis for working capital control.

Analysis of Working Capital

Usually working capital is analysed with the help of ratios. Liquidity ratios are studied to measure the ability of the firm to meet its short-term obligations and the short-term financial strength. Current ratio and quick ratio are used to analyse the liquidity position of the firm. Liquidity is the ease with which assets may be converted into cash without loss ⁵.

Current Ratio (CR)

CR is the most commonly used liquidity ratio. It is computed by dividing current assets by current liabilities. If the receivables and inventory with regard to collectibility and turnover are normal, then the CR assumes importance as a specific measure of firm's ability to meet its daily financial requirements. If this ratio is too low, the firm may experience liquidity problems. Though a high CR may mean a good umbrella for creditors against the rainy day, for the management it reflects bad financial planning or presence of idle assets or overcapitalisation. A very high ratio may be the result of either excessive investment in current assets or under utilisation of short-term credit.

Table 4.4 presents the CR of select mills for the period from 1988-89 to 1992-93.

Table 4.4
Current Ratio
(1988-89 To 1992-93)

Mill	Times				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	1.79	2.22	2.84	3.16	2.23
KT	2.42	2.93	2.04	2.76	2.68
PM	1.25	1.85	1.82	1.48	1.46
Co-operative					
MCSM	0.20	0.16	1.01	1.16	1.57
QCSM	2.51	8.87	9.41	8.35	4.57
TCSM	9.19	20.14	15.75	15.98	7.99
NTC					
ATCM	1.10	2.74	2.69	2.53	2.59
KLM	2.50	3.96	3.14	2.66	3.64
Private					
EI	0.49	1.48	1.78	1.23	1.21
KCM	0.27	0.64	1.04	1.19	1.91
TCM	1.24	1.82	2.04	1.70	1.55
AT	2.34	2.56	3.94	2.82	3.38
MS	2.06	2.47	2.05	1.76	2.10
SBT	2.61	1.84	2.32	2.04	2.56
VT	1.91	1.76	1.99	1.99	2.43
Kerala Govt.					
TSM	0.60	1.00	1.17	0.96	0.90

Source. Computed

Table 4.4 reveals wide inter mill variations in CR, the range being 8.99 in 1988-89, 19.98 in 1989-90, 14.74 in 1990-91, 15.02 in 1991-92 and 7.09 in 1992-93. The TCSM and the QCSM (Co-operative) have

highest CR, their average being 13.8:1 and 6.74:1 respectively. This is due to excessive investment in current assets. The P.M(KSTC), the MCSM(Co-operative), the TSM (Kerala Govt.), the EI, the KCM and the TCM (Private) have CR less than the conventional standard of 2:1. The MCSM recorded the lowest average CR with 0.82:1 followed by the TSM with 0.92:1. The CR of 2:1 or more does not guarantee the liquidity of the firm if a greater portion of current assets comprises of sluggish inventory and doubtful receivables. This basic weakness of CR led to the emergence of the quick or acid test ratio.

Quick Ratio (QR)

This is another measure of the firm's liquidity. It equals current assets less inventory by current liabilities. This ratio is designed to show the amount of cash available for meeting immediate payments⁶. QR of 1:1 or more is considered satisfactory. Table 4.5 depicts the QR of the select mills for the period of study.

It appears from Table 4.5 that the mills differ widely with respect to QR, the range being 3.24 in 1988-89, 15.17 in 1989-90, 8.97 in 1990-

91, 8.90 in 1991-92 and 2.94 in 1992-93. The KT (KSTC), TCSM, QCSM, (Co-operative) ATCM and KLM (NTC) and the AT (Private) pass the test of conventional QR norm of 1:1. As in the case of CR, the TCSM has recorded the largest QR, its average being 7.65:1 followed by the QCSM, its average 3.56:1. The MCSM (Co-operative) and the TSM (Kerala Govt.) registered the lowest average QR of 0.26:1

Table 4.5
Quick Ratio
 (1988-89 to 1992-93)

Mill	Times				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	0.87	0.78	1.20	0.89	0.52
KT	1.20	1.55	0.95	1.12	1.18
PM	0.71	1.23	0.94	0.60	0.75
Co-operative					
MCSM	0.06	0.05	0.39	0.39	0.43
QCSM	1.18	4.76	5.39	4.47	2.01
TCSM	3.29	15.22	9.36	7.29	3.09
NTC					
ATCM	0.79	1.45	1.39	1.59	1.58
KLM	1.46	2.87	2.01	1.56	2.70
Private					
EI	0.29	0.92	0.79	0.47	0.53
KCM	0.13	0.37	0.44	0.48	0.81
TCM	0.35	0.75	0.73	0.73	0.78
AT	0.81	1.10	1.76	0.92	1.41
MS	0.67	1.09	1.04	0.67	1.25
SBT	1.00	0.66	1.35	0.65	1.19
VT	0.74	0.68	0.41	0.48	1.17
Kerala Govt.					
TSM	0.19	0.23	0.39	0.39	0.15

Source. Computed

As the QR gives no allowance for the collectibility of receivables, it is worth while to study the working capital turnover of the mills.

Working Capital Turnover

The working capital turnover ratio (WTR) equals net sales divided by net working capital. This ratio shows the efficiency with which working capital is being utilised. Usually higher sales require higher working capital. A very high working capital turnover ratio may be the result of overtrading that is increase in sales without corresponding increase in working capital. A low ratio may indicate undertrading Table 4.6. depicts the WTR in select mills.

In 1988-89, the lowest WTR was recorded by the EI (Private) followed by the TSM (Kerala Govt.) and the MCSM (Co-operative), while the TCM (Private) recorded the highest WTR followed by the PM (KSTC) and the MS (Private). During 1989-90, the KCM (Private) showed the lowest WTR followed by the TCSM (Co-operative) and the EI, whereas the highest WTR was showed by the TSM, followed by the TCM and the TCSM followed by the KLM and ATC (NTC). On the other hand WTR was highest in the MCSM, followed by the KCM and

the TS. During 1991-92 the TS recorded lowest WTR followed by the TCSM and the ET (KSTC), while the MCSM recorded the highest WTR followed by the EI and the KCM. During 1992-93 the TS showed the lowest WTR followed by the QCSM and the TCSM (Co-operative). The EI showed the highest WTR followed by the TCM and the MCSM during the same period. It is found that the high WTR is a result of low investment in current assets and the low WTR is caused by under trading.

Table 4.6
Working Capital Turnover Ratio
 (1989-90 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
Times					
KSTC					
ET	5.53	3.53	2.68	1.63	3.85
KT	3.18	2.33	3.94	3.02	3.93
PM	70.63	3.19	4.48	6.89	7.26
Co-operative					
MCSM	-1.25	*	83.05	20.66	8.35
QCSM	4.68	3.03	2.47	1.91	1.94
TCSM	1.69	1.00	1.09	1.37	2.38
NTC					
ATCM	5.76	3.57	2.31	2.64	2.87
KLM	3.43	2.34	1.65	2.34	2.60
Private					
EI	-6.50	1.25	4.50	15.41	19.24
KCM	-0.35	-2.17	29.66	12.77	5.54
TCM	22.00	11.16	6.67	7.68	8.50
AT	3.12	3.44	3.09	3.22	3.40
MS	6.56	6.78	5.56	5.06	3.88
SBT	4.22	5.18	3.64	5.37	4.03
VT	5.73	5.28	5.39	4.24	5.58
Kerala Govt.					
TSM	-5.24	666.52	12.94	-57.80	-16.13

* No operation Source. Computed

Sales and Working Capital

The nature of relationship between sales and working capital is examined by computing the co-efficient of correlation between sales and working capital as shown in Table 4.7

Table 4.7
**Co-efficient of Correlation
 Between Sales and Working Capital**

Year	Co-efficient of Correlation
1988-89	0.74
1989-90	0.57
1990-91	0.73
1991-92	0.79
1992-93	0.73

Source : Computed

The 't' test has been conducted to examine whether the correlation between sales and working capital is significant. The calculated value of 't' for 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93 are 4.12, 2.60, 4.00, 4.82 and 4.00 respectively. As the calculated values of 't' exceed the table value at 5% level of significance, the correlation between sales and working capital is significant through out the period.

The working capital trend analysis is useful to understand the working capital management policy.

Working Capital Trend

In working capital analysis, the direction of change over a period of time is of crucial importance. The analysis of working capital trend provides a base to judge whether the practice and policy of the management with regard to working capital are good enough or an improvement is to be made in managing working capital funds. Table 4.8 shows the linear least square trend values of working capital of the mills during the period under review.

Table 4.8
Working Capital Trend Values
(1988-89 to 1992-93)

Rs. Lakhs					
Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	41.84	70.41	98.98	127.55	156.12
KT	127.15	140.90	154.65	168.40	182.15
PM	53.52	60.04	66.56	73.08	79.60
Co-operative					
MCSM	-422.09	-277.34	-132.57	12.20	156.96
QCSM	176.39	229.96	283.52	337.08	390.65
TCSM	268.46	282.92	297.38	311.85	326.31
NTC					
ATCM	261.85	372.94	484.03	595.12	706.21
KLM	321.63	420.03	518.43	616.83	715.23
Private					
EI	17.56	30.85	44.13	57.42	70.70
KCM	-171.17	-87.14	-3.11	80.92	164.95
TCM	45.46	64.55	83.63	102.71	121.79
AT	276.22	314.19	352.16	390.13	428.10
MS	126.49	181.99	237.49	293.00	348.50
SBT	197.73	204.68	211.63	218.58	225.53
VT	137.12	175.53	213.94	252.35	290.76
Kerala Govt.					
TSM	-29.00	-21.71	-14.41	-7.12	-0.17

Source. Computed.

The rate of yearly increase in working capital is depicted in

Table 4.9

Table 4.9

The Rate of Increase in Working Capital

Mill	Increase
KSTC	
ET	28.57
KT	13.75
PM	6.52
Co-operative	
MCSM	144.76
QESM	53.57
TCSM	14.46
NTC	
ATCM	111.09
KLM	98.40
Private	
EI	13.28
KCM	84.03
TCM	19.08
AT	37.97
MS	55.50
SBT	6.95
VT	38.41
Kerala Govt.	
TSM	7.29

Source : Computed.

The linear least square trend lines of working capital of the select mills are graphically represented in Figures 4.1 (a), 4.1 (b), 4.1 (c), 4.1 (d) and 4.1 (e).

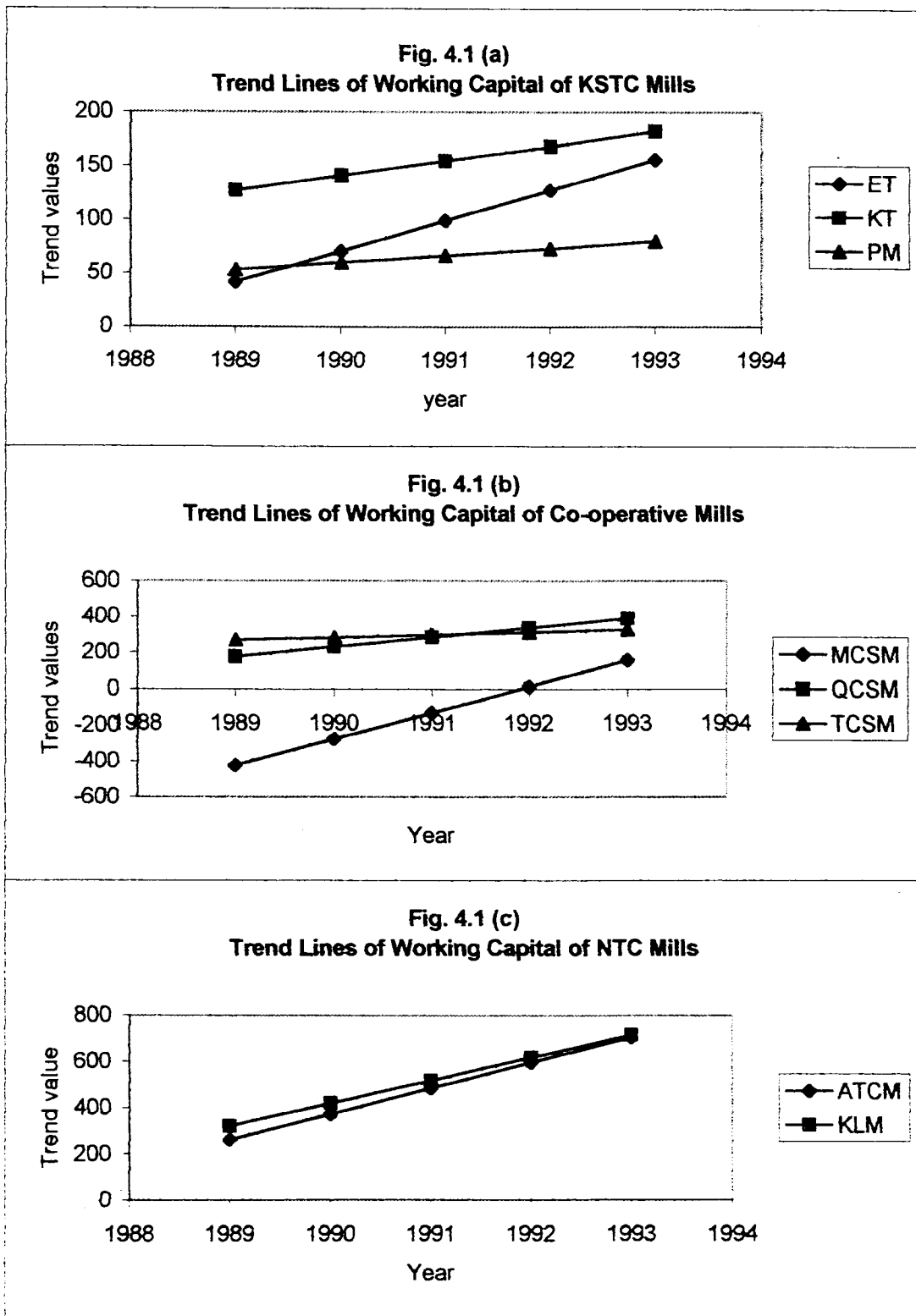


Fig. 4.1 (d)
Trend Lines of Working Capital of Private Mills

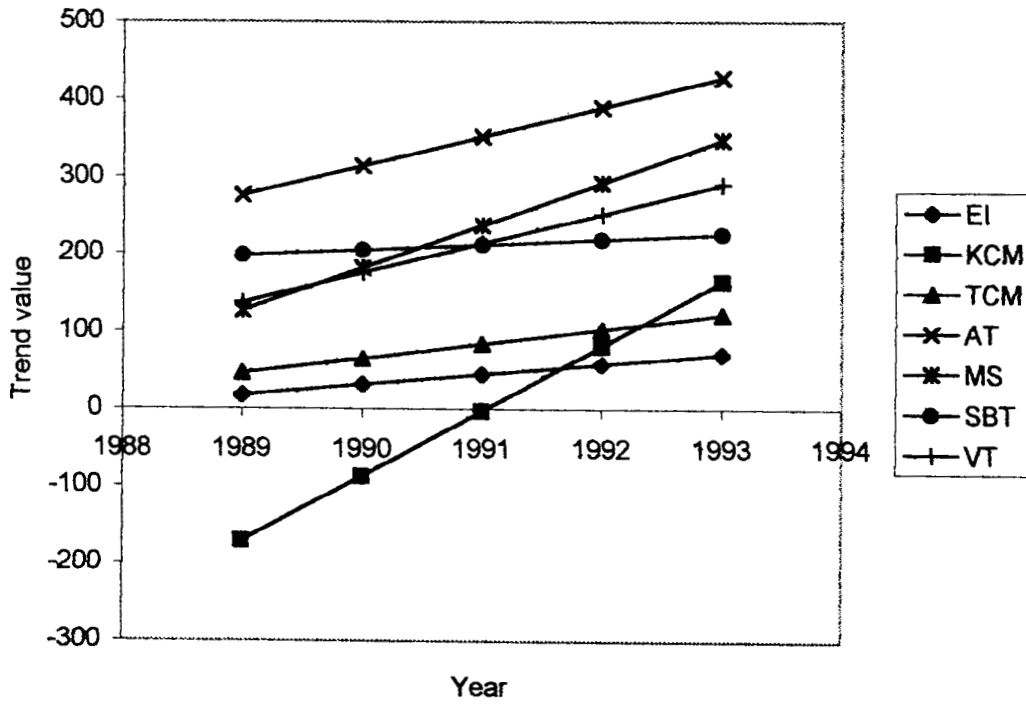
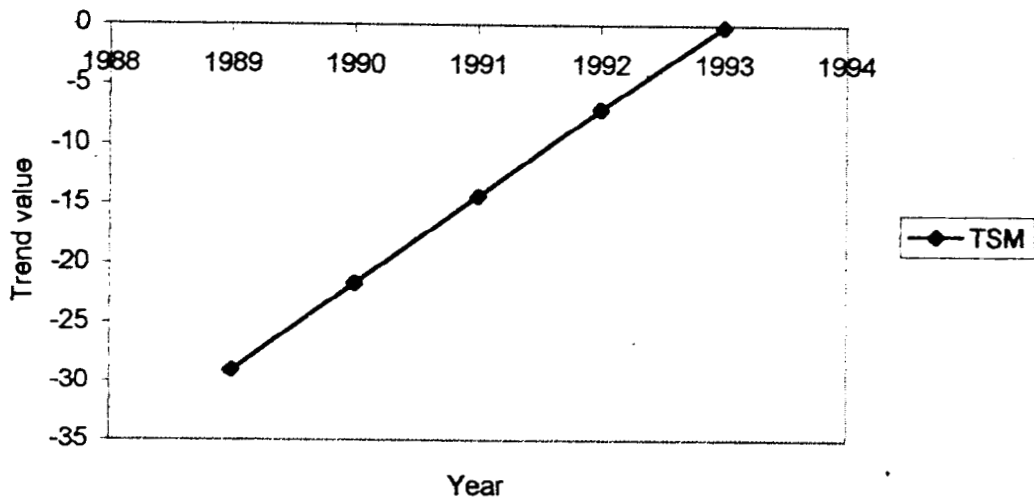


Fig. 4.1 (e)
Trend Lines of Working Capital of Kerala Govt. Mill (TSM)



Cash Management

Cash is the most significant and the least productive asset that the firm holds. It is cash, which keeps the business going. The steady and healthy circulation of cash throughout the business operation is basic of business solvency⁷. Cash is described as the oil to lubricate the ever-turning wheels of business without it the process grinds to stop⁸. A firm holds cash with motives of transaction, precaution, speculation and compensation. Increased cash holding result in forgone investment opportunities, reduction of asset turnover and return on equity, while decreased cash holdings increase the chances of liquidity problems. A business enterprise should keep its cash and near cash reserves below the requirements of one month's normal expenditure. If cash and near cash reserves happen to be more than this limit, it should be taken for granted that excessive cash is being carried by the concern⁹. In current practice, cash management encompasses management of firm's cash flows (receipts and payments), maintenance of appropriate cash balances, decisions regarding short-term borrowings from banks and other sources¹⁰. Thus effective cash management is crucial to the solvency of the firm. The emphasis of cash management is the right amount of cash at the right time, at the right place and at the right cost. Cash planning,

managing the cash flows, maintaining optimum cash balance and investing excess cash are the facets of cash management. Effective cash management strives to accelerate inflows and decelerate outflows of cash, both to the maximum possible extent.

Cash Management Practices in Select Mills

The functions of cash management are performed by different positions shown in Table 4.10.

Table 4.10
Positions Responsible for Cash Management

Positions	No. of reported mills	Percentage
Accounts Manager (AM)	5	56
Finance Manger (FM) and Cashier	1	11
Cashier	2	22
Deputy Financial Controller	1	11
Total	9	100

Source : Disclosure during interview.

It is seen from the Table 4.10 that in majority of the reported mills the AM discharges the functions of cash management.

Determination of Cash Level

The optimum cash holdings of the reported mills are determined through cash budget. When the cash holdings of the mills go below the minimum desirable level, 5 of the 9 reported mills resort to bank borrowings and the remaining mills delay their payments.

The monthly requirements of cash of the reported mills are exhibited in Table 4.11.

Table 4.11
Monthly Cash Requirement in the Mills

		Rs. Lakhs
Sl. No	Mill	Monthly Requirement
1	ET	44
2	KT	10
3	PM	55
4	TCSM	8
5	ATCM	70
6	KLM	20
7	KCM	15
8	MS	5
9	TSM	50

Source : Disclosure during the interview.

Cash Control

The reported mills prepare cash reports for purpose of review and control of cash. The periodicity of the report varies from mill to mill, which is shown in Table 4.12

Table 4.12

Periodicity of Cash Report in Textile Mills

Periodicity	No. of reported mills	Percentage
Daily	1	10
Weekly	5	50
Monthly	4	40
Total	10	100

Source: Disclosure during interview.

Fifty percent of the reported mills prepare cash report weekly and forty percent monthly and the remaining daily.

Cash Collection

The reported mills employ different methods for accelerating their cash collection. Table 4.13 depicts the methods employed by the mills for accelerating the inflows of cash.

Table 4.13

Methods Cash Collection Employed in Select Mills

Methods of Cash Collection	No. of Reported Mills	Percentage
Concentration Banking	3	33.33
Centralised Cash Collection	3	33.33
Telegraphic Transfer	2	22.22
Direct Remittance	1	11.12
Total	9	100

Source: Disclosure during interview

Effects of Cash Run -out

Loss of liquidity, loss of cash discount, higher interest burden, damage to credibility and reputation are stated to be the ill effects of cash run-out in the reported mills.

Investment of Surplus Cash

The NTC mills employ their surplus cash, if any, to lend to their associates, while others use it to discharge their short-term obligations or

plough back. The MS is the only mill to invest their surplus cash in marketable securities.

It is worthwhile to study the relationship of cash to the total current assets in select mills.

Cash to Current Assets

Though cash is the most liquid, holding excess cash adversely affects profitability. The adequacy of cash in respect of other current assets can be judged only from past experience. However, in a comfortably financed business, it will probably run not less than 5 to 10% of current assets. Since current liabilities are not expected to exceed one-half of current assets, cash percentage should not run under 10 to 20 percent of the same ¹¹.

Table 4.14 exhibits the percentage of cash to current assets.

Table 4.14
Cash to Current Assets
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	2.76	9.99	4.79	0.03	0.03
KT	0.22	18.65	6.86	2.87	3.77
PM	0.63	18.56	9.19	0.09	0.21
Co-operative					
MCSM	0.95	0.48	0.22	0.41	0.16
QCSM	2.53	1.97	1.73	5.87	2.95
TCSM	0.26	55.03	12.36	21.22	29.69
NTC					
ATCM	0.97	21.64	6.95	4.43	3.17
KLM	1.61	14.62	2.80	1.97	2.87
Private					
EI	2.09	12.58	7.61	3.05	2.63
KCM	1.01	25.86	1.40	2.15	3.02
TCM	17.84	12.25	0.79	0.88	3.88
AT	4.57	12.58	13.00	5.80	7.53
MS	1.97	3.93	2.14	1.86	3.60
SBT	4.52	7.02	4.36	0.87	4.31
VT	1.26	2.15	1.48	1.84	10.17
Kerala Govt.					
TSM	0.49	11.12	10.11	19.60	2.74

Source: Computed

The ratio of cash to current assets differed widely between mills, the range being 17.62 in 1988-89, 54.55 in 1989-90, 12.78 in 1990-91, 21.19 in 1991-92 and 29.66 in 1992-93. The relative cash position of the mills is poor, as their holdings in general are less than 10 per cent of current assets. The low cash holdings of the mills point to their poor

liquidity. In fact, it is the cash that keeps the mills going and therefore, the mills should hold necessary cash for their smooth existence.

After reviewing cash management, it is attempted to study the receivable management in select mills.

Receivable Management

Account receivable is the total of all credit extended by the firm to its customers. When goods are sold under an arrangement permitting customers to pay for them at a later date, the amount due from the customers is recorded as accounts receivable ¹². Investment in receivables is a function of sales, credit, collection policies and cash discount. The financial requirement during the interval between the date of sale and the date of receipt of payment has to be financed out of working capital funds.

The objectives of receivable management is to promote sales and profits until that point is reached where return on investment in further funding is less than the cost of funds raised to finance the additional

credit¹³. As business mortalities attributable to receivable difficulties are rising, receivable needs careful and effective management.

Economic conditions and the firm's credit policies are the chief influences on the level of a firm's accounts receivables.¹⁴ The management should implement a sound credit policy, which maximises sales and minimises bad debt losses to the extent that the firm will be led to an optimum position by making as many sales as market conditions justify, while denying credit except only when it is absolutely necessary. A firm would clearly be hurting its profit position by granting credit to any customer if bad debt possibility plus the cost of goods sold was greater than the selling price of the goods¹⁵. The collection policy should ensure that bad debt losses are kept to a minimum. The older the receivable, the greater the probability that it will never be collected.

Receivable Management Practices in Select Mills

Credit Policy

The credit policies of the mills are decided by various positions given in Table 4.15.

Table 4.15
Positions Responsible for Credit Policy

Position	No. of Reported Mills	Percentage
Chief Executive (CE)	2	25.00
Finance Manager (FM)	2	25.00
CE and Marketing Manager (MM)	1	12.50
CE and Secretary (Sec.)	1	12.50
CE, FM and Sec.	1	12.50
Committee	1	12.50
Total	8	100.00

Source : Disclosure during interview

Basis of Granting Credit

Credit is granted on the basis of sales forecast. In 43% cases past experience, in 29% cases bank checks and in 14% cases each trade reference and analysis of financial statements are relied upon by the mills for granting credit. The terms of credit vary from mill to mill. About 50% of the reported mills grant credit for seven days, 22% of the mills grant credit for a term of 2 months, 11% of the mills for 1 month and the remaining 11% for 15 days. Some mills charge a penal rate 21% p.a. for delayed payments. Reminders, phone calls, legal action etc. are made use of to collect debt.

Positions Responsible for Management of Receivables

The Accounts Manager (in 39% of the reported mills), the Chief Executive (in 25% of the reported mills), the Finance Manager (in 12% of the reported mills), the Deputy Financial Controller (in 12% of the reported mills), and the Chief Executive and the Finance Manager together (in 12% of the reported mills) are entrusted with the management of receivables in the reported mills.

Control of Receivables

Investments in receivable must be monitored continuously. The mills for the purpose of control of receivables prepare the receivable reports. The receivable report are prepared weekly by 20% of the reported mills, monthly by 60% of the reported mills and quarterly by 20% of the reported mills. Thus majority of the mills prepared monthly reports of receivable.

Some ratios relating to receivables are worked out to analyse the management of receivables.

Receivables to Current Assets

The proportion of receivables to current assets is studied to gain an understanding of the magnitude of receivables in the current asset structure. The receivables to current assets in the select mills for the period of study are shown in Table 4.16.

Table 4.16.
Receivables to Current Assets
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	16.34	12.30	14.27	5.94	7.27
KT	11.44	8.28	10.72	6.49	4.51
PM	0.20	0.42	10.98	11.48	24.97
Co-operative					
MCSM	25.75	25.55	23.76	23.17	18.83
QCSM	30.40	32.80	36.17	28.99	29.79
TCSM	12.64	6.38	19.59	21.26	2.59
NTC					
ATCM	24.30	16.98	34.39	50.26	52.30
KLM	11.20	48.47	52.83	50.66	65.93
Private					
EI	2.16	20.40	15.09	21.55	29.70
KCM	2.38	17.44	9.69	14.29	23.82
TCM	7.73	25.44	21.75	21.42	29.86
AT	19.43	16.13	19.84	17.09	15.85
MS	19.61	17.16	17.93	10.47	22.95
SBT	6.55	5.38	27.46	14.53	16.89
VT	10.19	9.49	4.50	6.39	11.46
Kerala Govt.					
TSM	5.02	1.95	3.14	1.57	1.45

Source: Computed

Table 4.16 shows that on average the TSM (Kerala Govt.) has the lowest ratio of the receivables to current assets while the NTC mills recorded the highest ratio. Among the NTC mills, the KLM has the highest ratio of receivables to current assets. In the KLM, receivable is the largest item of current assets during 1989-90 to 1992-93. In the case of the ATCM, receivable is the largest component of current assets in 1991-92 and 1992-93. In the case of other mills their relative share of receivables is comparatively low as they are not extending credit on large scale.

The receivable turnover ratio is studied to understand the effectiveness in managing the receivables.

Receivables Turnover Ratio (RTR)

The RTR equals the net sales divided by average receivables. The analysis of RTR supplements information regarding liquidity of the receivables. The turnover of receivables provides information on the reliability of receivables¹⁶. The RTR indicates the number of times the

receivable turnover in a year. The higher the turnover of the receivables, the better will be the management of receivables. The RTR of the select mills during the period under review is shown in table 4.17.

Table 4.17.
Receivable Turnover Ratio
(1988-89 to 1992-93)

Mill	Times				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	14.96	19.34	15.69	13.96	28.27
KT	16.29	19.59	19.98	24.78	43.45
PM	729.04	506.04	35.42	20.68	13.07
Co-operative					
MCSM	18.90	*	6.33	12.21	14.87
QCSM	9.27	8.27	6.94	5.81	5.69
TCSM	12.23	17.42	7.77	9.70	11.96
NTC					
ATCM	11.74	12.94	6.41	4.00	3.43
KLM	18.36	6.23	2.62	2.84	3.31
Private					
EI	319.61	3.90	15.47	16.60	13.66
KCM	40.24	13.29	11.06	18.31	14.45
TCM	54.19	29.98	16.90	14.95	13.12
AT	9.18	12.83	12.57	12.59	13.82
MS	17.22	22.29	19.02	19.97	12.47
SBT	39.65	41.76	13.00	10.58	16.82
VT	26.83	28.92	38.88	44.34	31.77
Kerala Govt.					
TSM	70.14	97.63	78.79	111.45	125.56

* No operation

Source: computed

It can be observed from table 4.17. that RTR differs widely between mills and years. During 1988-89, the PM (KSTC) registered the highest RTR followed by the EI (Private) while the AT (Private) recorded the lowest RTR during this period followed by the QCSM (Co-operative). In 1989-90 also the PM recorded the highest RTR followed by the TS(Kerala Govt.) while the EI booked the lowest RTR followed by the KLM (NTC). From 1990-91 onwards, the TSM showed the highest RTR and the KLM the lowest. The high RTR of the PM and TSM is due to their tight credit policy.

It would be of interest to examine the receivables remaining uncollected for more than six months as depicted in Table 4.18.

Table 4.18.
Receivables More Than Six Months Old
 (1988-89 to 1992-93)

Mill	Rs. Lakhs				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET					
KT	9.29	10.45	7.24	0.07	0.08
PM	0.19	0.19	0.19		
Co-operative					
MCSM					
QCSM					
TCSM					
NTC					
ATCM	2.00	2.00	1.97	1.97	1.97
KLM	0.35	0.35	0.35	0.35	0.35
Private					
EI	0.33	0.33	0.03	4.63	4.63
KCM	1.79	1.22	1.67	2.29	3.50
TCM	7.18	10.08	8.22	8.16	31.83
AT	7.58	3.81	4.05	3.72	3.53
MS	2.46	1.20	0.92	12.00	22.45
SBT	1.67	2.25	0.39	0.36	1.31
VT	22.21	3.89	11.75	8.72	12.08
Kerala Govt.					
TSM	2.78	3.11	3.08	3.08	3.08

Source: Computed

As evident from Table 4.18, the TCM, MS, VT and the EI (Private) have larger amounts of receivables lying uncollected for more than six months. The older receivables cause heavy collection expenses and increase the probability of bad debt losses. If stricter collection efforts are not taken, it would be difficult for the mills to realise those old

debts. The factoring services can be made use of to collect those old debts so that they do not become bad.

The quality of the receivables depends on their prompt collectibility. Therefore, the average collection period (ACP) of the receivables need be studied to ascertain the quality of debts.

Average Collection Period (ACP)

Average collection period for receivables provides a simple measurement of the average number of days customers take to pay¹⁷. The average collection period is a significant measure of the collection activity and the quality of accounts receivable.¹⁸ This ratio helps in understanding the effectiveness in collection of debt due, time taken in conversion of sale proceeds into cash and formulating future credit policies of the firm. The shorter the collection period, the better the quality of the receivables since short collection period means that firms customers are prompt payers¹⁹. High collection period indicates a slow collection process and low liquidity. An old account causes heavy collection expenses and increases probability of bad debt losses²⁰. Table 4.19. shows the ACP of select mills.

Table 4.19.
Average Collection Period
(1988-89 to 1992-93)

Mill	Days				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	24	19	23	26	13
KT	22	18	18	15	8
PM	0.5	1	10	17	28
Co-operative					
MCSM	19	*	57	29	24
QCSM	39	44	52	62	63
TCSM	29	21	46	37	30
NTC					
ATCM	31	28	56	90	105
KLM	20	58	137	127	109
Private					
EI	1	92	23	22	26
KCM	9	27	33	20	25
TCM	7	12	21	24	27
AT	39	28	29	29	26
MS	21	16	19	18	29
SBT	9	9	28	34	21
VT	13	12	9	8	11
Kerala Govt.					
TSM	5	4	5	3	3

* No operation

Source: Computed

Generally, the average collection period should not be more than one-third of the credit sales²¹. According to this norm, only the KCM and the MS (Private) are collecting receivables properly. The debt collection in KSTC., Co-operative and NTC mills are relatively very slacking.

Therefore, it is concluded that the management of receivables in the select mills is generally ineffective.

The working capital analysis also requires to examine the management of inventory. Therefore, it is attempted to review the inventory management in select mills.

Inventory Management

Usually in a manufacturing firm, the inventory constitutes the largest current asset. Inventory means the aggregate of the items of tangible property which (i) are held for sale in the ordinary course of business (ii) are in the process of production for sale, and (iii) are to be currently committed in the production of goods or services to be available for sale²². The Committee on Public Undertakings defined the term inventory as acquisition, storage, sale, disposal or use of materials²³. Inventory is the most difficult asset to be liquidated at the time of financial distress. It is possible for an undertaking to reduce its level of inventories to a considerable degree, example 10 to 20 per cent without any adverse effect on production and sales, by using simple inventory

planning and techniques ²⁴. The proper management and control of inventory not only solves the acute problems of liquidity but also increases annual profits and causes substantial reduction in the working capital of a firm.²⁵

The objectives of inventory management are minimisation of the possibility of disruption in the production schedule for want of raw materials, stores and spares and minimisation of investment in inventories.

Effective inventory control is exercised by introducing various measures like Just-in-Time (JIT) purchase, A.B.C. Analysis, reorder points and close watch on the movement of inventories. The slow moving inventory involves extra costs and affects the firm's ability to meet its daily commitments. Inventory carrying costs alone are estimated to be between 10 and 20% in India while interest payable on money borrowed from banks for obtaining inventories is around 18%.²⁶ The management must endeavour to dispose of slow moving and obsolete inventory even at throw away prices to ensure release of funds tied up and it must be at its guard against accumulation of such items in future.

Inventory Management Practices in Select Mills

Fixation of Minimum Level of Inventory

The minimum level of inventory is determined on the basis of consumption during lead time plus safety margin. Supply conditions, price factors, storage space, operating cycle, opportunity cost of capital, government restrictions on storage etc. are identified as the primary considerations for determining minimum level of inventory. The replenishment system (in 57% of the reported mills), and Economic ordering quantity (in 29% of the reported mills) are adopted, by the mills for ordering inventory. In the remaining 14% reported mills no such system is in vogue.

About 78% of the reported mills endeavour to maintain safety stock evenly throughout the year. About 44% of the reported mills experience shortage of raw materials and are forced to stop production for want of raw materials.

The functions of inventory management are discharged by different positions shown in Table. 4.20.

Table 4.20.

Positions Responsible for Inventory Management

Position	No. of reported mills	Percentage
Production Manager (PM)	3	34
Head Office	2	22
General Manager (GM)	2	22
Managing Director (MD) & PM	1	11
Finance Manager(FM)& Administration Manager	1	11
Total	9	100

Source : Disclosure during interview.

Inventory Control

Only 70% of the reported mills prepare inventory reports. The periodicity of the reports varies from mill to mill. Each of the 28% of the reported mills prepares monthly and quarterly inventory reports, and the remaining 14% weekly reports. In general, the mills do not employ proper inventory control system. Only 28% of the reported mills have ABC control system. In 60% of the cases inventory controls are exercised by the stores department, 20% each by the sales department and production department. The inventory to current assets is studied to expose the significance of inventory. Table 4.21. depicts the ratio of inventory to current assets in the select mills during the period under investigation.

It can be seen from Table 4.21. that with few exceptions, the inventory accounts for the largest component of current assets. Larger build up of inventory is a cause of alarm as it will affect the liquidity of the mills if it is not realised quickly.

The liquidity depends on the quality of the inventory. The inventory turnover ratio (ITR) is a measure of the liquidity of the inventory. Therefore the ITR of the select mills is analysed.

Table 4.21.
Inventory to Current Assets
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	61.73	64.57	57.95	71.68	76.51
KT	50.36	47.18	53.38	59.51	55.91
PM	43.54	33.56	48.20	59.19	48.50
Co-operative					
MCSM	69.01	70.18	61.77	66.28	72.43
QCSM	52.83	46.38	42.74	46.53	55.97
TCSM	49.91	21.21	40.55	54.36	61.40
NTC					
ATCM	60.24	47.22	48.24	36.93	39.03
KLM	41.70	27.57	35.97	41.29	25.74
Private					
EI	41.31	37.37	55.78	61.38	55.53
KCM	52.14	42.90	57.86	59.88	57.57
TCM	71.88	59.13	64.36	57.25	49.84
AT	65.16	57.16	55.26	67.43	58.39
MS	67.25	55.90	49.47	62.29	40.38
SBT	61.76	69.65	41.85	68.34	53.64
VT	61.41	61.37	79.44	76.02	51.87
Kerala Govt.					
TSM	67.87	76.82	66.53	59.10	83.52

Source: Computed

Inventory Turnover Ratio (ITR)

The ITR acts as an indicator of liquidity of the inventory. It is a method of reviewing performance and controlling inventories periodically to check the inventory turnover of each type of raw material supply and finished goods²⁷. The ITR equals cost of goods sold divided by the average inventory. The higher the turnover, the larger the amount of profit, the smaller amount of working capital tied up in inventory and the more current the stock of merchandise²⁸. A low ITR suggest poor inventory management, that is, heavy investment in inventories relative to the amount needed to service sales. But too high ITR may result in stock-outs and consequent loss of customers. Table 4.22. lists the ITR of select mills.

Table 4.22.
Inventory Turnover Ratio
 (1988-89 to 1992-93)

Mill	Times				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	3.46	2.90	2.42	1.57	2.10
KT	3.54	3.04	2.91	2.93	3.33
PM	3.27	3.53	3.57	3.51	3.69
Co-operative					
MCSM	7.58	0.17	2.11	4.09	3.98
QCSM	4.51	3.55	3.77	3.75	2.73
TCSM	2.32	3.22	2.20	2.09	2.52
NTC					
ATCM	4.23	3.98	2.98	3.59	4.16
KLM	4.14	4.61	3.23	3.40	5.14
Private					
EI	18.85	1.80	4.28	4.18	5.07
KCM	3.53	3.45	2.04	3.80	4.76
TCM	5.25	6.02	5.30	5.27	5.88
AT	2.37	3.09	3.26	5.17	3.12
MS	4.35	5.59	5.14	3.96	3.70
SBT	3.32	2.51	2.81	3.16	3.46
VT	4.21	3.53	3.09	2.72	3.63
Kerala Govt.					
TSM	84.06	3.36	2.51	4.33	2.61

Source: Computed

Table 4.22 discloses that the ITR of the mills differs widely between the years. In 1988-89, the ITR was the highest in the TSM (Kerala Govt.) followed by the EI (Private). In the remaining four years, the TCM (Private) registered the highest ITR followed by the MS (Private) in 1989-90 and 1990-91 and the AT (Private) in 1991-92 and the EI in 1992-93. In 1988-89, the TCSM (Co-operative) booked the lowest ITR followed by the AT. In 1989-90, the EI registered the lowest

ITR followed by the SBT (Private). In 1990-91, the KCM (Private) showed the lowest ITR followed by the TCSM. In 1991-92 and 1992-93 the ET (KSTC) accounted the lowest ITR followed by the TCSM. It is observed that the ITR of the mills on average is low pointing to the excessive investment in sluggish inventory. Therefore, the average inventory-holding period of the mills is to be analysed.

Average Inventory Holding Period (AIHP)

The AIHP shows the number of days for which inventory is held. It equals 360 days divided by the ITR. The Table 4.23. presents the AIHP in select mills during the period under study.

Table 4.23.
Average Inventory Holding Period
 (1988-89 to 1992-93)

Mill	Days				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	104	124	148	229	171
KT	102	118	124	123	108
PM	110	102	101	103	98
Co-operative					
MCSM	47	2118	171	88	90
QCSM	80	101	95	96	132
TCSM	155	112	164	172	143
NTC					
ATCM	85	90	121	100	87
KLM	87	78	111	106	70
Private					
EI	19	200	84	86	71
KCM	102	104	176	95	76
TCM	69	60	68	68	61
AT	152	117	110	70	115
MS	83	64	70	91	97
SBT	108	143	128	114	104
VT	86	102	117	132	99
Kerala Govt.					
TSM	4	107	143	83	138

Source: Computed

It is evident from Table 4.23. that TCSM (Co-operative) has the highest AIHP in 1988-89 followed by the PM (KSTC). During 1989-90 AIHP was the highest for the EI (Private) followed by the SBT (Private). The KCM (Private) recorded the highest AIHP in 1990-91 followed by the TCSM. During 1991-92 and 1992-93 the highest AIHP

was shown by the ET (KSTC) followed by the TCSM. In 1988-89 the lowest AIHP was recorded by the TSM (Kerala Govt.) followed by the EI. In the remaining four years, the TCSM booked the lowest AIHP followed by the MS (Private) in 1989-90 and 1990-91 and the AT (Private) in 1991-92 and the KCM in 1992-93.

It is worth noting that though presently the textile mills are barred from holding inventory for more than three months requirements, excepting the KLM (NTC), the EI, the TCM and the MS (Private), the mills are holding inventory for more than three months requirements.

Hypothesis I

The hypothesis "The poor management of inventory and receivables are the causal factors for the ineffective management of working capital is framed". For the purpose of testing the hypothesis important working capital ratios are scanned.

From the foregoing analysis, of CR and QR it is found that the mills are illiquid and, therefore, it is concluded that the management of working capital is very ineffective. The inventory management is not on

sound lines as the ITR is low. The low ITR is the result of accumulation of sluggish inventory. As regards receivable management, the debt collection of the mills is not satisfactory. Thus, inventory and receivables are not managed prudently. Hence the hypothesis “the poor management of inventory and receivables are the causal factors for the ineffective management of working capital” is accepted.

Model for Estimating Profitability on the Basis of Working Capital Ratios.

The relationship between working capital ratios and profitability ratios is established with the help of regression analysis. For the purpose of developing the model the profit before tax to total assets (PBT/TA) is taken as dependent variable (Y) and the following six working capital ratios are taken as independent variables.

$X_1 =$ Current ratio (CR)

$X_2 =$ Quick ratio (QR)

$X_3 =$ Inventory turnover ratio (ITR)

$X_4 =$ Receivable turnover ratio (RTR)

$X_5 =$ Working capital turnover ratio (WTR)

$X_6 =$ Working capital to total assets (WC/TA)

In order to identify the influence of the independent variables on profitability, a linear multiple regression model is employed. It was found that the CR and QR are highly correlated, the ratio being 0.88. As CR has got lesser influence on PBT/TA than the QR, the CR is removed from the model. It was found that the regression coefficients of RTR, ITR and WTR are small. The ANOVA tables are constructed by successively eliminating those variables. The conclusion of these analyses is that the independent variables of WC/TA and QR have got significant influence on PBT/TA and that the profitability of the mills can be predicted with the help of WC/TA and QR. The final ANOVA Table is presented in Table 4.24.

Table 4.24

ANOVA Table (PBT/TA, Using WC/TA and QR)

Source	d.f.	S.S.	M.S.S.	F	Tab. F (5%)
Regression	1	41.96281	41.96281	6.18	3.16
Mills	15	8.133743	0.5422496	1.60	1.82
Years	4	4.824708	1.206176	3.55	2.53
Error	58	19.7018	.3396862		

The regression coefficients and y-intercept are calculated using the method of least squares. From the ANOVA table years are significantly different. Hence the regression equation must be a function of years (t). Mills are not significantly different with respect PBT/TA whenever the same values for WC/TA and QR.

The model (regression equation) developed for predicting profitability is given below:

$$\text{PBT/TA (t)} = b_0(t) + b_1 \text{WC/TA} + b_2 \text{QR},$$

Where $b_0(t)$ can be estimated using numerical methods (using backward interpolation) using the following previous values $b_0(t)$ s,

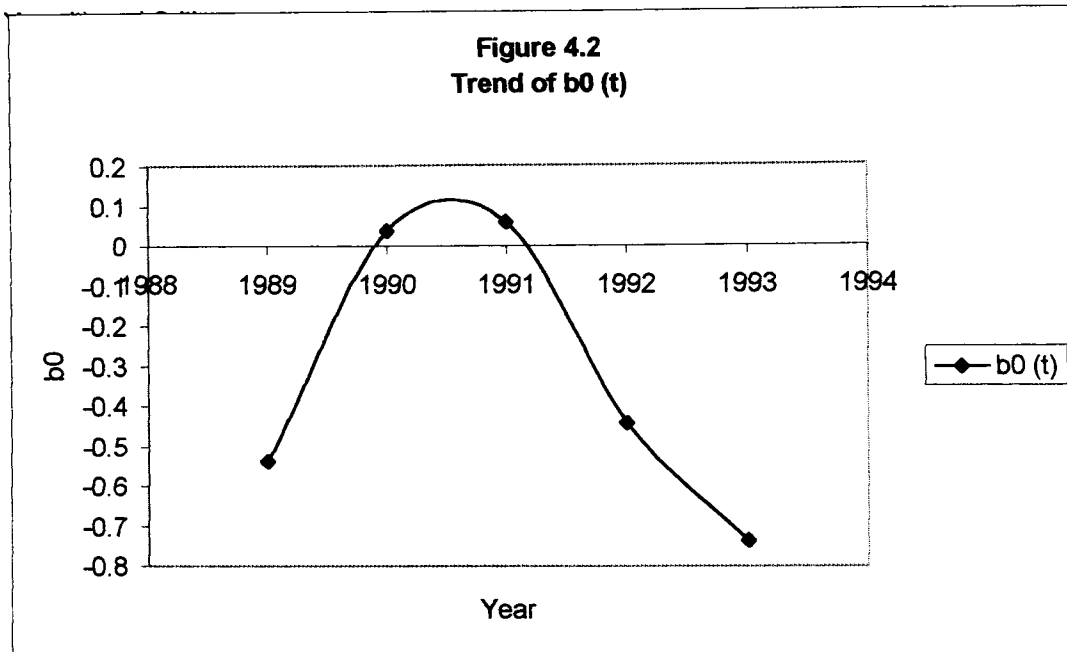
Table 4.25

Trend value of b_0

Year (t)	$b_0(t)$
1989	-0.538
1990	0.03614
1991	0.0584375
1992	-0.4425
1993	-0.73625

Source: Computed

The trend of $b_0(t)$ over 5 years is shown in Figure 4.2. The trend is curvilinear.



The values of b_1 and b_2 are estimated (using least square technique)

as

$$b_1 = -0.2648 \text{ and}$$

$$b_2 = 0.2048.$$

Using the above model, it is concluded that the profitability is influenced by the WC/TA and QR and that given WC/TA and QR, the profitability of the mills can be predicted.

Operating Cycle

The concept of OC is a more precise tool to measure the optimum working capital requirements. The continuing flows from cash to suppliers, to inventory, to accounts receivables and back into cash is what is called the operating cycle²⁹. It refers to the length of time necessary to complete the following cycle of events.

- i) Conversion of cash into raw materials,
- ii) Conversion of raw materials into work - in-progress,
- iii) Conversion of work - in - progress into finished goods,
- iv) Conversion of finished goods into receivables; and
- v) Conversion of receivables into cash.

The OC indicates how many days it takes on an average to acquire raw materials, process them into finished goods, sell them and collect cash. A firm with a very short OC can operate with a small amount of current assets and would reflect favourably on firm's liquidity. In contrast, a relatively long operating cycle might be a warning signal of excessive receivables and / or inventory and would reflect negatively on

the firm's true liquidity³⁰. The financial manager should manage the OC effectively because it represents the time interval for which the firm has to negotiate working capital from its financiers. The shorter the operating cycle, the better would be the operating management performance³¹.

The operating cycle is calculated as follows :

$$\text{GOC} = \text{RMCP} + \text{WIPCP} + \text{FGCP} + \text{RCP}$$

Where,

GOC = Gross Operating Cycle

RMCP = Raw Material Conversion Period

WIPCP = Work - In - Progress Conversion Period

FGCP = Finished Goods Conversion Period

RCP = Receivable Conversion Period.

$$\text{NOC} = \text{GOC} - \text{PDP}$$

Where,

NOC = Net Operating Cycle

PDP = Payment deferral period.

$$\text{RMCP} = \frac{\text{Average inventory of raw materials}}{\text{Material cost per day}}$$

$$\text{Material cost per day} = \frac{\text{Total Material consumption}}{\text{No. of working days in a year}}$$

$$\text{WIPCP} = \frac{\text{Average inventory of WIP}}{\text{Cost of production per day}}$$

$$\text{FGCP} = \frac{\text{Average inventory of finished goods}}{\text{Cost of goods sold per day}}$$

$$\text{RCP} = \frac{\text{Average receivables}}{\text{Cost of sales per day}}$$

$$\text{PDP} = \frac{\text{Average payables}}{\text{Credit purchase per day}}$$

$$\text{No. of OC in a year} = 12 \text{ months} \div \text{NOC}$$

$$\text{Yearly working capital requirements} = \frac{\text{Yearly operating expenses} \div}{\text{No. of OC in a year}}$$

The length of the OC can be compressed by reducing any one of its components.

The OC in days of the select mills is shown in Table 4.26.

Table 4.26.
OPERATING CYCLE
(1988-89 TO 1992-93)

Mill	Days				
	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	40.37	64.69	128.03	209.27	173.34
KT	125.53	146.69	149.02	137.57	-133.98
PM	-27.37	5.30	79.06	90.27	72.75
Co-operative					
MCSM	-27.37	*	7.03	-25.59	8.21
QCSM	62.85	92.87	90.28	164.89	165.50
TCSM	187.36	165.15	222.69	281.31	217.58
NTC					
ATCM	57.88	63.38	111.32	116.01	144.01
KLM	24.61	79.27	168.14	385.93	288.21
Private					
EI	-159.39	-95.12	67.74	43.24	17.57
KCM	-486.10	87.25	145.66	92.14	98.03
TCM	9.37	23.71	43.89	39.20	23.97
AT	79.07	70.90	81.61	98.84	91.73
MS	57.81	52.04	6.14	62.11	36.13
SBT	-79.37	-225.80	-334.17	-216.84	-181.24
VT	40.28	52.07	57.55	125.88	-34.22
Kerala Govt.					
TSM	-95.75	-22.03	43.71	7.94	-7.34

* No operation

Source: Computed

Table 4.26 reveals that the SBT (Private) has negative OC throughout the study period and the KT, PM (KSTC), the MCSM (Co-operative), the EI (Private) and the TS (Kerala Govt.) have negative OC in some years. During 1988-89, the OC of the TCSM (Co-operative) was the most lengthy with 187.36 days followed by the KT (KSTC) with 125.5 days, and the AT (Private) with 79.07 days. The shortest OC during the period was recorded by the KCM (Private) with -486.10 days followed by the EI with -159.39 days and the TSM with -95.75 days. In 1989-90 also the TCSM recorded the largest OC with 165.15 days followed by the KT with 146.69 days and QCSM (Co-operative) with 92.87 days. During this period, the SBT showed the shortest OC with -225.80 days followed by the EI with -95.12 days and the TSM with -22.03 days. In 1990-91, the TCSM recorded the largest OC with 222.69 days followed by the KLM (NTC) with 168.14 days and the KT with 149 days, while the SBT recorded the shortest OC with -334.17 days followed by the MS (Private) and the MCSM with 6.14 and 7.03 days respectively. During 1991-92, the KCM showed the largest OC with 385.93 days followed by the TCSM and the ET with 281.31 and 209.27 days respectively. The OC of the SBT was the shortest in 1991-92 with -216.84 days followed by the MCSM and the TSM with -25.59 and 7.94

days respectively. In 1992-93 the OC of the KLM was most lengthy with 288.21 days followed by the TCSM with 217.58 days and the ET (KSTC) with 173.34 days, while the SBT recorded the shortest OC with -181.24 days, the KT (KSTC) and VT (Private) with -133.98 days and -34.22 days respectively.

It would be worth while to have a comparison of the working capital needs on the basis of the OC and the actual working capital of the mills. Table 4.27 gives a comparison of the two during the period of study.

Table 4.27
Working Capital Requirements on the Basis of OC
 (1988-89 to 1992-93)

	Rs.Lakhs				
Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	17.72 (24.33)	37.38 (63.90)	99.46 (118.46)	169.22 (178.15)	203.10 (110.05)
KT	122.22 (105.74)	152.84 (183.45)	179.81 (125.05)	194.26 (185.62)	-- (173.40)
PM	-- (28.89)	3.84 (85.79)	72.57 (81.74)	109.36 (63.95)	101.70 (72.41)
Co-operative					
MCSM	-- (--)	-- (--)	5.68 (3.52)	-- (41.39)	20.99 (116.58)
QCSM	148.12 (169.14)	142.37 (235.99)	137.46 (283.58)	260.30 (347.86)	309.76 (381.02)
TCSM	113.57 (137.67)	150.04 (393.16)	210.11 (367.33)	365.44 (364.37)	335.90 (224.38)
NTC					
ATCM	192.41 (214.33)	205.71 (369.34)	364.75 (565.73)	519.91 (632.64)	723.91 (638.13)
KLM	57.69 (254.69)	195.12 (462.73)	414.02 (613.24)	1399.05 (566.89)	1403.94 (694.61)
Private					
EI	-- (--)	-- (39.65)	782.84 (103.91)	78.96 (46.56)	40.22 (46.75)
KCM	-- (--)	53.10 (--)	112.84 (10.88)	156.76 (53.74)	253.01 (182.13)
TCM	17.04 (30.99)	44.61 (69.40)	78.53 (107.59)	82.38 (98.11)	60.95 (112.04)
AT	166.67 (255.62)	193.65 (320.50)	231.89 (376.05)	329.66 (405.79)	328.93 (402.83)
MS	149.76 (146.41)	156.35 (174.57)	17.89 (214.21)	224.28 (282.12)	140.52 (370.15)
SBT	-- (209.61)	-- (170.75)	-- (261.67)	-- (172.78)	-- (243.34)
VT	82.72 (122.33)	114.94 (179.36)	31.23 (211.07)	26.76 (305.76)	-- (251.18)
Kerala Govt.					
TSM	-- (--)	-- (0.60)	45.96 (29.71)	13.53 (--)	-- (--)

-- = Negative

Figures in bracket show actual net working capital.

Source: Computed

It is evident from Table 4.27 that with the exception of the KT (KSTC) and the MS (Private) in 1988-89 and the KCM (Private) in 1989- 90, all other mills maintained more working capital than the amount justified by their OC. Thus the actual working capital maintained by the mills exceeded the ones warranted by their OC in 62.75% of the cases in 1990-91; in 56.25% of the cases in 1991-92 and in 62.50% of the cases in 1992-93.

Hypothesis II

The hypothesis “the shorter span of operating cycle need not always reflect the effectiveness in the management of working capital is framed”. In order to test the hypothesis the OC of the mills are analysed.

The analysis of the OC shows that mills, which are illiquid and face working capital problems have relatively shorter OC than mills that have better short-term liquidity. In fact, mills that have poor working capital position are manipulating to project shorter OC, which does not really reflect liquidity of the mills. The actual length of the OC is

suppressed by them by resorting to the poor financing decision of delaying payments to creditors for supplies. But such a policy is very costly to the mills as it would attract higher rates of interest, higher costs of purchases, penal actions and damage to the financial reputation of the mills. Thus the general belief that “the shorter span of OC reflects effectiveness of working capital management” is not always true. In this study it has been found that mills with relatively poor working capital have shorter OC. Therefore the hypothesis that “the shorter span of the OC does not always reflect the effectiveness in the management of working capital” is accepted.

Conclusion

The effective management of working capital is a prerequisite for the successful survival of the mills. The working capital position of the mills is analysed with reference to the CR, QR and WTR. The high CR in many mills does not reflect liquidity because of the accumulation sluggish inventory. The analysis of the QR exposes that 62.50% of the mills are illiquid. The working capital turnover ratio brings to light the inadequacy of working capital in 31.25% of the mills. All these point to

the ineffective management of working capital. In 55% of the mills, receivables are the second largest current asset. The high RTR is due to the tight credit policy of the mills. Excepting two private mills, the debt collection of the mills is not satisfactory. Inventory accounts the largest current asset. The ITR of the mills are low owing to accumulation of sluggish inventory. Therefore, the hypothesis “the poor management of inventory and receivables are the causal factors for ineffective management of working capital in textile mills in Kerala” is accepted. As the WC/TA and the QR exert greater influence on PBT/TA, a model for predicting working capital is developed. The model is given below.

$$\text{PBT/TA (t)} = b_0(t) + b_1\text{WC/TA} + b_2\text{QR}$$

Where $b_1 = -0.2648$ and

$$b_2 = 0.2048.$$

The value of $b_0(t)$ for the predicted year can be calculated using the previous values by numerical methods.

The analysis of OC reveals that in majority of the mills, their working capital is in excess of the amount warranted by their OC. This leads to low profitability. Usually, the shorter span of OC is a reflection of better liquidity and effective management of working capital. But as

against this, the analysis of the OC of the select mills leads to accept the hypothesis that “the shorter span of operating cycle need not always reflect the effectiveness in the management of working capital”.

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PROFITABILITY PROFILE

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Department of Commerce and Management Studies , University of Calicut,
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CHAPTER V

PROFITABILITY PROFILE

PROFITABILITY PROFILE

In Chapter III, we have seen that the textile mills in Kerala are employing too much debt, the cost of which is exorbitant. In fact, there is no justification for the mills to borrow heavily, if they are not able to generate adequate returns on the borrowed funds. The profitability analysis brings to light the efficiency with which the funds are employed. Therefore, the evaluation of profitability in the textile mills assumes much significance. This Chapter, therefore, profiles the profitability of the select textile mills in Kerala.

Profitability

The realisation of profit is dependent on certain degree of overall financial soundness. According to Joel Dean, a business firm is an organisation designed to make profits and profit is the measure of its success¹. The Committee on Public Undertakings (CPU) has recommended that public enterprises must prove to be viable economic units and earn a reasonable return on capital employed². The profitability is an important factor, which the public sector can ignore at

the cost of its own growth ³. Thus profit is regarded as the most fundamental identifier of a potential survivor or failure. If a firm fails to make profits, capital invested gets eroded and if this situation continues, it becomes difficult for the firm to cover its operating expenses. To the financial management, profits are the test of efficiency and measure of control, to the owners, a measure of the worth of investment, to the creditors, the margin of safety, to the employees, a source of fringe benefits, to the Government, a measure of taxable capacity and the basis of legislative action and to the country, profits are an index of economic progress, national income generated and rise in the standard of living⁴.

The word profitability may be defined as the ability of a given investment to earn a return from its use ⁵. Profitability is the rate of expressing profit as a percentage of sales or assets.

Tools of Analysis

The profitability of the select textile mills are evaluated with the help of accounting ratios and statistical techniques like measures of

central tendency and measures of dispersion. In fact, the ratio analysis provides guides in spotting trends towards better or poor performance through comparison of ratios at varying periods.

Profitability Ratios

The efficiency of the firm's activities and its ability to generate profits are appraised using profitability ratios. There are two types of profitability ratios. They are profitability in relation to sales and profitability in relation to investments. The profitability in relation to sales will give a short-term perspective of profitability while profitability in relation to investments will give a long-term perspective of profitability. These ratios together indicate a firm's operational effectiveness.

Profitability in Relations to Sales

Profitability in relation to sales is a measure superior to the profitability in relation to investment because the distorting effects of price level changes in inter firm comparison of profitability are quite

serious on book value of assets while sales values are largely free from such distortions.

The Gross Profit Margin (GPM) and Net Profit Margin (NPM) are the conventional measures used to study the profitability in relation to sales. They provide a valuable understanding of cost and profit structure of the firm and enable to identify sources of business efficiency / inefficiency. By considering both GPM and NPM, we are able to gain considerable insight into operations of the firm ⁶.

Gross Profit Margin (GPM)

The GPM equals gross profit divided by net sales. It is expressed in percentage. The GPM reflects the relationship of price, volume and cost. It shows the margin left after meeting manufacturing costs. This ratio measures efficiency of production as well as pricing. A firm should earn sufficient GPM for its continued existence. High GPM is a good sign indicating that the firm is able to produce goods at relatively lower costs and sell at favourable prices. The Low GPM may be due to

high cost of production, uneconomic sales value and inefficient utilisation of assets.

Table 5.1
Gross Profit Margin
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	12.63	29.71	30.84	20.79	15.76
KT	4.32	21.22	22.72	20.28	19.91
PM	0.46	19.50	26.91	18.22	19.41
Co-operative					
MCSM	-7.53	*	12.15	8.44	11.15
QCSM	15.36	32.40	30.30	9.96	15.58
TCSM	25.25	33.43	32.27	22.59	12.80
NTC					
ATCM	10.65	19.31	19.41	11.97	10.08
KLM	11.50	26.06	21.28	10.55	11.60
Private					
EI	-12.93	5.42	19.23	19.50	16.50
KCM	-91.63	10.80	25.41	-3.38	2.43
TCM	9.85	19.19	16.40	4.94	9.44
AT	13.31	17.06	18.79	16.21	13.64
MS	13.36	16.05	20.01	15.05	11.09
SBT	21.10	33.20	33.16	24.46	21.44
VT	5.43	23.23	19.66	15.46	10.68
Kerala Govt.					
TSM	-0.50	19.11	13.84	-2.96	0.09

* No operation

Source: Computed.

Table 5.1 depicts the GPM in the select mills for the period from 1988-89 to 1992-93. It can be seen from Table 5.1 that the GPM differs widely between the mills and between years. The GPM ranges between 25.25 and -91.63 in 1988-89, 33.43 and 5.42 in 1989-90, 33.16 and 12.15 in 1990-91, 24.46 and -2.96 in 1991-92 and 21.44 and 0.09 in 1992-93. Increasing cotton costs, unfavourable market conditions, and consequent fluctuations in prices of yarn, poor control over manufacturing costs etc. contribute to the unevenness in GPM. A comparison of the average GPM in textile mills in Kerala and that of all India textile mills would be quite revealing. Table 5.2 gives a comparative picture of the average GPM in textile industry in Kerala and India.

Table 5.2
Average GPM in Textile Mills in Kerala and India
(1988-89 to 1992-93)

Year	Textile Mills		
	Kerala*	All India**	All India***
1988-89	1.91	9.10	12.10
1989-90	21.71	9.70	13.30
1990-91	22.65	13.70	14.60
1991-92	13.68	11.10	14.60
1992-93	12.60	7.30	14.80

* Computed.

** RBI quoted in Compendium of Textile Statistics 1995,
Union Ministry of Textiles

*** Financial Performance of Companies, ICICI Portfolio 1992-93

It appears from Table 5.2 that excepting in 1988-89, the average GPM in Kerala mills was higher than the corresponding All India figures compiled by the RBI while the All India average GPM compiled by the ICICI was higher than that of Kerala mills during 1988-89, 1991-92 and 1992-93. The inventory pile up in the Kerala mills is one of the reasons for the high GPM.

Net Profit Margin (NPM)

A more specific ratio of profitability is the net profit margin ⁷. The NPM is calculated by dividing net profit by sales. The NPM is the overall measure of the firm's ability to turn each rupee of sales into net profit ⁸. Since the NPM expresses the cost effectiveness of the operation, a high NPM is a good sign. The NPM in select mills for the period of study is presented in Table 5.3.

Table 5.3
Net Profit Margin
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	-42.06	-8.12	1.99	-11.14	-4.83
KT	-6.23	8.60	9.12	6.36	7.80
PM	-17.24	2.38	6.73	-2.57	-0.59
Co-operative					
MCSM	-54.97	*	-23.17	-8.54	-4.32
QCSM	-23.41	11.40	12.50	-7.08	-1.29
TCSM	-3.14	-0.16	-3.31	-3.06	-6.79
NTC					
ATCM	-1.90	6.78	5.62	-0.55	-6.13
KLM	-2.52	13.48	8.10	-2.77	-3.44
Private					
EI	-23.46	-11.64	0.48	0.28	1.66
KCM	-167.26	-5.28	-1.31	-9.04	-8.69
TCM	-2.50	7.02	5.93	-4.74	0.59
AT	0.53	7.14	7.21	2.69	-1.31
MS	0.20	6.82	10.10	5.30	-2.06
SBT	2.56	16.14	13.91	1.80	0.19
VT	-11.63	11.61	7.25	0.34	-1.98
Kerala Govt					
TSM	-20.95	0.56	-7.93	-20.12	-22.94

* No operation.

Source: Computed.

It can be seen that there are wide variations in NPM between the mills and between the years. The NPM ranges between 2.56% and -167.26% in 1988-89, 16.14% and -11.64% in 1989-90, 13.91% and -21.17% in 1990-91, 6.36% and -20.12% in 1991-92 and 7.80% and

-22.94% in 1992-93. A comparison of the average NPM in Kerala mills with the corresponding all India figures during the period 1988-89 to 1992-93 is presented in Table 5.4

Table 5.4

Average NPM in Textile Mills in Kerala and India
(1988-89 to 1992-93)

Year	Textile Mills	
	Kerala*	All India**
1988-89	-23.37	3.00
1989-90	4.45	6.00
1990-91	3.33	11.00
1991-92	-3.30	15.60
1992-93	-3.38	N.A

NA = Not Available

* Computed.

** RBI quoted in *Compendium of Textiles 1995*,
Union Ministry of Textiles

It is evident from Table 5.4 that the average NPM in Kerala mills was less than that of the All India figure compiled by the RBI. The real NPM of Kerala mills is still worse as majority of mills is not paying taxes. The low NPM of the Kerala mills is due to the incidence of greater non-manufacturing costs. Therefore, operating ratio in the mills deserves close look.

Operating Ratio

The operating ratio equals operating expenses divided by net sales. The cost of goods sold and administrative and selling expenses constitute the operating expenses. High operating ratio means operational inefficiency while low operating ratio leaves sufficient margin to meet the firm's financial charges. Table 5.5 exhibits the operating ratio in select mills for the period from 1988-89 to 1992-93.

Table 5.5
Operating Ratios
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	117.44	93.28	88.19	100.28	99.69
KT	104.41	87.46	88.26	90.93	89.64
PM	115.34	95.42	90.25	98.99	95.71
Co-operative					
MCSM	120.90	*	99.42	98.00	94.59
QCSM	107.12	77.29	78.26	96.91	91.30
TCSM	93.78	83.02	85.02	93.53	103.81
NTC					
ATCM	96.86	88.50	90.04	96.43	98.79
KLM	96.62	81.75	87.32	97.96	97.10
Private					
EI	119.87	107.63	94.06	91.67	91.63
KCM	220.69	98.89	86.38	89.31	92.09
TCM	96.04	87.45	89.79	100.43	96.15
AT	95.17	89.32	88.02	91.86	94.19
MS	97.10	91.46	88.09	91.07	97.51
SBT	90.81	79.00	80.55	90.43	92.34
VT	105.33	83.80	89.22	93.63	96.88
Kerala Govt.					
TSM	112.27	91.73	98.50	113.02	112.68

* No operation.

Source: Computed.

It can be seen from Table 5.5 that the operating ratio differed widely between mills and years. In 1988-89, the operating ratio exceeded 100 % in the case of the MCSM, QCSM (co-operative) the EI, the KCM, the VT (Private) and the TSM (Kerala Government) In 1989-90, only the EI showed operating ratio in excess of 100 per cent. During 1992-93 the TCSM (Co-operative) and the TSM recorded operating ratio above 100 %. During the period of study only NTC mills, the AT, the MS and the SBT (Private) showed operating ratio below 100 %. The high operating ratio in Kerala mills underlines the need for strict control of operating expenses.

In the context of high operating ratios, the mills in Kerala will not be able to withstand the challenges of falling yarn prices and higher borrowing commitments. During periods of business decline a firm with high operating ratio will be in greater danger of defaulting on fixed charges than a firm with a low operating ratio⁹. Thus in the wake of the high operating ratio and excessive employment of debt, the financial crises in the textile industry in Kerala are getting worse.

NPM will be distorted by the degree of financial leverage and the tax implications. For a true comparison of the operating performance of the mills, therefore, the effects of financial leverage and tax must be eliminated. As the mills have different financing mix, the earnings before interest and taxes to sales (EBIT to S) would be a more appropriate measure of profitability. The use of EBIT to S rests on the assumption that it provides a “pure” view of operating effectiveness undistorted by financing patterns and tax calculations¹⁰. The ability to predict impending financial trouble appears to be strongest in the ratio of EBIT to sales¹¹. It is, therefore, necessary to look into the EBIT to S ratio of the mills, which is presented in Table 5.6

Table 5.6
Earnings Before Interest and Taxes To Sales
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	-17.44	6.72	11.81	-0.28	0.31
KT	-4.41	12.54	11.74	9.07	10.36
PM	-15.34	4.58	9.75	1.00	4.29
Co-operative					
MCSM	-20.90	*	0.58	2.00	5.41
QCSM	-7.12	22.71	21.74	3.09	8.70
TCSM	1.92	16.98	14.98	6.46	-4.19
NTC					
ATCM	3.14	11.50	9.96	3.57	1.21
KLM	3.38	18.25	12.68	2.04	2.90
Private					
EI	-19.87	-7.63	5.94	8.33	8.37
KCM	-120.35	5.62	13.62	0.26	0.13
TCM	3.96	12.55	10.21	-0.43	3.85
AT	4.83	10.68	11.98	8.14	5.81
MS	2.90	8.54	11.91	8.93	2.49
SBT	9.19	21.00	19.45	9.57	7.66
VT	-5.33	16.20	10.78	6.37	3.12
Kerala Govt.					
TSM	-12.27	8.27	11.50	13.02	-12.68

* No operation.

Source: Computed.

The ratio of EBIT to S varies between the mills and between the years. It ranges between 9.19 % and -120.35% in 1988-89, 22.71% and -7.63 % in 1989-90, 21.74% and 0.58% in 1990-91, 9.57% and -13.02% in 1991-92 and 10.36% and -12.68% in 1992-93. The average

EBIT to S ratio also is not consistent over the years. The average EBIT to S in percentage is -12.11% in 1988-89, 11.23% in 1989-90, 11.16% in 1990-91, 3.44% in 1991-92 and 2.98% in 1992-93.

The comparison of the average operating profit compiled by the SITRA with that of Kerala mills would be of much significance to judge the operational performance of the select mills. The SITRA average operating profits for 1990-91, 1991-92 and 1992-93 are 15.90%, 9.50% and 8.20% respectively, while the corresponding figures for the select mills are 11.60%, 3.44% and 2.98%. This also points to the poor operational efficiency of the textile mills in Kerala. Gross profit plus depreciation to sales, (GP+DEP to S) Earnings Before Interest Depreciation and Taxes to Sales (EBDIT to S) and operating cash flow to sales (OCF to S) are considered to be superior sales related profitability ratios* Therefore, the profitability of the select mills is appraised with reference to those ratios.

Gross Profit Plus Depreciation to Sales

Table 5.7 presents the ratio of GP+DEP to S of the select mills during the period under study.

Table 5.7
Gross Profit Plus Depreciation to Sales
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	34.55	46.09	43.59	34.83	25.69
KT	7.24	24.56	28.20	25.78	24.12
PM	3.72	23.22	31.60	23.25	23.37
Co-operative					
MCSM	2.94	*	19.19	11.28	13.43
QCSM	33.77	38.53	34.98	12.82	17.61
TCSM	39.39	44.81	44.35	33.11	23.59
NTC					
ATCM	13.90	22.55	23.06	15.16	12.88
KLM	15.42	29.33	24.81	14.16	14.75
Private					
EI	-11.64	6.93	24.67	23.74	19.11
KCM	-72.11	16.47	32.99	14.08	10.34
TCM	11.05	20.06	17.28	5.63	9.87
AT	16.59	18.91	20.97	19.29	17.07
MS	18.59	18.99	23.46	15.83	14.42
SBT	27.48	38.84	38.92	32.35	28.44
VT	10.91	26.22	22.14	19.16	13.95
Kerala Govt.					
TSM	3.06	22.28	17.15	0.55	2.18

* No operation.

Source: Computed.

Table 5.7 reveals that the GP+DEP to S ratio varies widely between mills and years. The average ratio for the mills is 9.68% in 1988-89, 26.52% in 1989-90, 27.96% in 1990-91, 18.81% in 1991-92

and 16.93% in 1992-93. The range of this ratio takes the values between 39.39% and -72.11% in 1988-89, 46.09% and 6.93% in 1989-90, 44.35% and 17.15% in 1990-91, 34.83% and 0.55% in 1991-92 and 28.44% and 2.18% in 1992-93. The GP+DEP to S ratio also varies between the mills and between the years.

Earnings Before Depreciation Interest and Taxes to Sales (EBDIT to S)

Table 5.8 shows the ratio of EBDIT to S. This ratio also shows the wide inter mill and inter year variations. The average EBDIT to S in percentage in 1988-89 is 8.26, 16.04 in 1989-90, 16.52 in 1990-91, 8.51 in 1991-92 and 7.31 in 1992-93, The range of this ratio during 1988-89 to 1992-93 are 116.88%, 34.92%, 22.25%. 28.07% and 25.26% respectively.

Table 5.8
Earnings Before Depreciation Interest and Taxes to Sales
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	4.48	23.09	24.56	13.76	10.24
KT	-1.49	15.88	17.22	14.58	14.57
PM	-12.08	8.30	14.43	6.03	8.24
Co-operative					
MACS	-10.43	*	7.63	4.83	7.68
QCSM	11.29	28.84	26.42	5.94	10.73
TCSM	16.06	28.36	27.06	16.98	6.60
NTC					
ATC	6.39	14.74	13.61	6.77	4.01
KLM	7.31	21.51	16.22	5.65	6.06
Private					
EI	-18.56	-6.08	11.38	12.56	10.98
KCM	-100.82	11.30	21.20	10.96	8.04
TCM	5.16	13.42	11.09	0.26	4.28
AT	8.10	12.53	14.15	11.22	9.24
MS	8.13	11.48	15.36	9.72	5.82
SBT	15.57	26.64	25.21	17.46	14.66
VT	0.16	19.19	14.04	10.07	6.39
Kerala Govt.					
TSM	-8.69	11.44	4.81	-10.61	-10.60

* No operation.

Source: Computed.

Operating Cash Flow to Sales (OCF to S)

If the purpose is to highlight the existence of large amounts of debt in the capital structure of the firm, then the best measure will be

OCF to S. It considers the weakness arising from the presence of large amounts of debt in the capital structure.

Table 5.9 presents the OCF to S in the select mills from 1988-89 to 1992-93.

Table 5.9
Operating Cash Flow to Sales
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	-20.14	-8.26	14.75	2.90	5.10
KT	-3.32	11.94	14.60	11.86	12.02
PM	-13.98	6.10	11.41	2.46	3.37
Co-operative					
MCSM	-44.49	*	-16.13	-5.71	-2.04
QCSM	-19.35	14.95	16.38	-3.06	3.56
TCSM	-5.34	11.22	8.76	7.46	4.00
NTC					
ATCM	1.34	10.02	9.26	2.65	-2.04
KLM	1.40	16.74	11.64	0.84	-0.28
Private					
EI	-22.15	-10.13	5.92	4.51	4.27
KCM	-147.74	-1.53	6.27	-1.76	-3.22
TCM	-1.29	7.89	6.81	-4.05	1.02
AT	3.80	8.99	9.39	5.77	2.12
MS	5.43	9.76	13.55	6.08	1.27
SBT	8.94	21.77	19.66	9.68	7.19
VT	-6.14	14.59	9.73	4.04	1.29
Kerala Govt.					
TSM	17.38	3.72	-4.62	-17.71	-20.86

* No operation

Source: Computed.

The average OCF to S in percentage for the mills for the years 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93 is 17.53, 7.85, 8.59, 1.62 and 1.05 respectively. The range of these ratios during the above period is respectively -156.68%, 31.90%, 35.79%, 29.57% and 32.88%.

Having studied the sales related profitability ratios, it is considered worthwhile to analyse the investment related profitability ratios of the mills.

Profitability in Relation to Investments

Profits in relation to investments are known as return on investments (ROI). It is a more effective test than profit margin ratios. A high profit margin ratio does not necessarily reflect a healthy condition unless the firm earns satisfactory return on its investments. Since investors expect satisfactory return on their investments, inadequate ROI threatens the very survival of the firms. Comparing net profits with capital investment serves a double purpose of helping to evaluate operations internally and externally ¹². ROI appeals

conceptually because it blends all major ingredients of profitability (revenue, costs and investment) into a single number ¹³.

The following are the three measures of ROI

1. Return on assets (ROA)
2. Return on Capital Employed (ROCE); and
3. Return on Equity (ROE)

The Return on Assets

A more general ratio used in the analysis of profitability is the return on assets or the ROA¹⁴. According to Myer, the ROA can be used to appraise the performance of operating management in the use of assets ¹⁵. The ROA equals net profit after taxes divided by total assets (NPAT to TA). The ROA has certain advantages for measuring efficiency. First, the investment base is relatively stable; second; creditors and stockholders have an easier time identifying profits with their investment in the business than they do with sales ¹⁶. The ROA shows the interaction of the profitability and activity ratios. It implies

that the performance of a firm can be improved either by generating more sales volume per rupee of investment or by increasing the profit margin per rupee of sales.

$$\text{ROA} = \frac{\text{Sales}}{\text{Total Assets}} \times \frac{\text{NPAT}}{\text{Sales}}$$

The ROA of the select mills appears in Table 5.10.

Table 5.10
Return On Assets
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	-10.08	-3.09	1.01	-4.78	-3.16
KT	-9.27	8.38	9.87	7.05	10.39
PM	-15.30	1.90	7.00	-2.96	-0.76
Co-operative					
MCSM	-65.22	-31.43	-13.23	-13.20	-7.48
QCSM	-39.06	19.33	19.65	-9.28	-1.63
TCSM	-5.77	-0.07	-1.54	-1.72	-3.67
NTC					
ATCM	3.20	10.05	6.16	-0.65	-7.93
KLM	-3.17	16.78	6.71	-2.80	4.77
Private					
EI	-56.18	-3.62	0.53	0.34	2.05
KCM	-24.52	-3.82	-0.49	-6.52	-8.85
TCM	-5.12	17.51	11.95	-9.26	1.23
AT	0.76	11.38	10.42	3.78	-1.83
MS	0.44	17.87	16.95	7.41	-2.58
SBT	3.63	18.50	12.70	1.83	0.19
VT	-20.42	18.98	11.65	0.45	-3.17
Kerala Govt.					
TSM	-39.18	0.92	-10.95	-42.19	-30.87

Source: Computed.

The average ROA in percentage is 17.93 in 1988-89, 6.33 in 1989-90, 5.52 in 1990-90, -4.53 in 1991-92 and -3.33 in 1992-93. The ROA ranges between 3.63 % and -65.22% in 1988-89, 19.33% and -31.43% in 1989-90, 19.65% and -13.23% in 1990-91, 7.41% and -42.19% in 1991-92 and 10.39% and -30.87% in 1992-93. Thus there are wide intra mill and inter mill variations in ROA over the years.

When financial changes are significant, it is preferable for comparative purposes to compute a net operating profit rate of return instead of a return on assets ratio¹⁷. The net operating profit rate of return is computed by dividing EBIT by total assets. This ratio eliminates the effects of financial leverage. Therefore EBIT to total assets (EBIT to TA) is presented in Table 5.11.

Table 5.11
Earnings Before Interest and Taxes to Total Assets
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	-4.18	2.56	5.97	-0.12	0.20
KT	-6.55	12.16	12.71	10.06	13.79
PM	-13.62	3.66	10.15	1.16	5.58
Co-operative					
MCSM	-24.80	-1.84	0.33	3.08	9.38
QCSM	-11.89	38.52	34.20	4.05	11.45
TCSM	0.72	7.75	6.96	3.64	-2.26
NTC					
ATCM	5.27	17.05	10.93	4.24	1.57
KLM	4.26	22.72	10.51	2.07	4.01
Private					
EI	-47.59	-2.37	6.59	10.09	10.32
KCM	-17.64	2.19	5.12	0.19	0.13
TCM	8.12	31.31	20.59	-0.84	8.01
AT	6.94	17.03	17.31	11.41	8.11
MS	6.41	22.37	19.98	12.50	3.11
SBT	13.03	24.08	17.76	9.76	8.14
VT	-9.36	26.49	17.32	8.49	5.00
Kerala Govt.					
TSM	-22.94	13.81	2.06	-27.29	-17.06

Source: Computed.

The average EBIT to TA in percentage is -7.11 in 1988-89, 14.84 in 1989-90, 12.41 in 1990-91, 3.28 in 1991-92 and 4.34 in 1992-93. The range of these ratios is higher. The ratio ranges between 13.03% and -47.59% in 1988-89, 38.52% and -2.37% in 1989-90, 34.20% and

0.33% in 1990-91, 12.50% and -27.29% in 1991-92 and 13.79% and -17.06% in 1992-93. The higher range manifests the wide variations in the ROI between the mills and between the years.

Return On Capital Employed (ROCE)

The ROCE equals profit after tax plus interest divided by capital employed. The ultimate test of any business is the rate of income earned on the capital invested¹⁸. The return on capital employed is a measure of the economic justification of a particular line of business. Wright defined capital employed either as total of shareholders' funds and borrowed funds or as the net assets of the business, the two values being the same¹⁹. The definition of Wright is not complete as he excludes bank borrowings from the term capital employed. Presently, firms depend on bank borrowings also for financing its operations. Therefore, for the purpose of our analysis, the capital employed has been defined as the sum total of shareholders' funds and all debt including bank borrowings.

The ROCE of the select mills is depicted in Table 5.12.

Table 5.12
The Return on Capital Employed
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	-4.40	2.80	6.58	-0.14	0.23
KT	-9.69	15.23	17.01	12.61	17.07
PM	-26.59	5.15	14.13	1.79	9.19
Co-operative					
MCSM	-37.08	-3.00	0.72	5.53	14.10
QCSM	-15.56	41.47	37.00	4.46	13.39
TCSM	0.75	7.91	7.16	3.74	-2.34
NTC					
ATCM	7.32	21.98	14.96	5.92	2.16
KLM	5.55	27.34	13.50	2.75	4.96
Private					
EI	-121.30	-4.32	8.39	12.69	13.28
KCM	-36.29	3.91	6.87	0.24	0.16
TCM	13.41	42.96	28.98	-1.31	14.42
AT	7.27	24.55	20.58	15.00	9.80
MS	9.36	29.65	27.97	19.01	4.39
SBT	16.30	32.42	21.77	11.82	9.62
VT	-14.09	44.70	24.80	12.46	6.25
Kerala Govt.					
TSM	-165.23	38.71	5.58	-128.88	-106.49

Source: Computed.

The average ROCE in percentage for the period 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93 was 23.14, 20.72, 16.00, -1.39 and 0.64 respectively. It can be seen from the Table 5.12 that the range of this ratio varies widely between mills and years. The range of

the ROCE for the corresponding period was 181.53%, 49.02%, 36.28%, 147.89% and 123.56% respectively

Return On Equity (ROE)

This is another measure of investment based profitability. It equals net profit divided by shareholders' equity. This ratio tells us the earning power on the shareholders' book investments and is frequently used in comparing two or more firms in an industry²⁰. In the economic sense, in any case, an enterprise can be said to have failed if it cannot earn a reasonable return on equity capital²¹. The ROE is the integration of operating profit to capital employed, net profit to operating profit and capital employed to shareholders' equity.

$$\begin{aligned} \text{ROE} &= \frac{\text{Operating Profit}}{\text{Capital Employed}} \times \frac{\text{Net Profit}}{\text{Operating Profit}} \times \frac{\text{Capital Employed}}{\text{Shareholders' Equity}} \\ &= \frac{\text{Net Profit}}{\text{Shareholders' Equity}} \end{aligned}$$

The ROE of select mills is shown in Table 5.13.

Table 5.13
Return On Equity
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	-30.91	-4.60	1.54	-8.42	-5.84
KT	-151.63	64.84	42.08	25.94	25.87
PM	-168.86	-49.62	234.15	-282.75	-394.87
Co-operative					
MCSM	-59.09	-19.40	-11.44	11.00	6.25
QCSM	-89.30	-73.55	-531.69	-81.64	15.34
TCSM	-60.59	-1.34	-10.61	-9.15	-17.05
NTC					
ATCM	-135.73	73.95	28.92	-3.27	-47.21
KLM	-11.00	37.83	15.86	-7.41	-13.44
Private					
EI	-197.76	-69.22	14.42	2.63	10.56
KCM	-247.29	-23.67	-25.28	-271.94	-656.48
TCM	-38.03	-49.65	146.67	-109.81	13.14
AT	3.00	42.10	36.52	13.92	-7.10
MS	1.79	50.08	43.76	22.92	-43.93
SBT	15.31	56.35	37.56	4.45	0.49
VT	-403.52	94.34	39.80	1.57	-9.23
Kerala Govt.					
TSM	-24.85	-0.75	-10.00	-29.81	20.34

Source: Computed.

The ROE of the mills are very bad as the average ROE is negative in all years except in 1990-91. The range of the ROE is also of the highest order. From the Table5.13, it can be seen that there are

variations in ROE between the mills and years. The average ROE for the years 1988 - 89, 1989-90, 1990-91, 1991-92 and 1992-93 is -99.90%, -14.52%, 3.27%, -17.96% and -74.19% respectively, while the range for the corresponding period respectively is 181.53%, 49.02%, 36.28%, 147.89% and 123.56%.

The investment related measures like earnings before depreciation, interest and taxes to total assets plus accumulated depreciation (EBDIT to TA+Acc. DEP) and operating cash flow to total assets plus accumulated depreciation (OCF to TA+Acc. DEP) need be examined for evaluating the ROE in select mills**. Table 5.14 depicts the EBDIT to TA+A cc. DEP in select mills for the period of study.

Table 5.14
Earnings Before Depreciation Interest and Taxes to
Total Assets Plus Accumulated Depreciation
 (1988-89 to 1992-93)

	%				
Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	0.99	7.68	10.32	4.73	5.03
KT	-1.78	13.45	15.69	13.05	15.12
PM	-9.27	5.87	12.76	5.71	8.52
Co-operative					
MCSM	-7.12	*	2.71	4.65	8.15
QCSM	10.15	23.63	19.96	3.92	7.19
TCSM	5.04	10.76	9.98	7.29	2.66
NTC					
ATCM	7.68	15.89	11.32	6.20	3.89
KLM	6.96	20.68	10.85	4.57	6.48
Private					
EI	-15.69	-1.26	10.23	12.71	11.57
KCM	-10.64	3.44	6.55	6.33	6.32
TCM	8.02	24.60	16.78	0.39	6.96
AT	7.55	13.64	14.32	11.14	9.07
MS	11.88	19.18	18.33	10.52	5.60
SBT	15.53	21.74	17.10	12.17	10.22
VT	0.16	20.05	15.04	9.97	7.42
Kerala Govt.					
TSM	-8.94	11.27	4.04	-12.77	-8.64

* No operation

Source: Computed.

The average ratio of EBDIT to TA+Acc. DEP in percentage for the years 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93 respectively is 1.28, 14.04, 12.25, 6.29 and 6.60. This ratio ranges

between 15.53% and -15.69% in 1988-89, 24.60% and -1.26% in 1989-90, 19.96% and 2.71% in 1990-91, 13.05% and -12.77% in 1991-92 and 15.12% and 8.64% in 1992-93. Though these ratios vary between years and mills, the range is relatively lower than other ROI measures.

Operating Cash Flow to Total Assets Plus Accumulated Depreciation

The ratio of OCF TO TA+Acc. DEP is presented in Table 5.15. It can be observed from the above Table that there are wide variations in this ratio between the mills over the years. The average ratio of OCF to TA+ Acc. DEP in percentage works out as -6.61, 7.27, 7.38, 0.75 and 0.82 respectively for the years 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93. The range of this ratio during the period are 39.44%, 31.17%, 21.90%, 31.94% and 29.48% respectively.

Table 5.15
Operating Cash Flow to Total Assets Plus Accumulated
Depreciation
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
%					
KSTC					
ET	-4.43	-2.75	6.20	1.00	2.51
KT	-3.96	10.13	13.30	10.62	12.47
PM	-10.72	4.31	10.09	2.33	3.48
Co-operative					
MCSM	-30.53	-13.40	-5.73	-5.50	-2.17
QCSM	-17.38	12.25	12.37	-2.02	2.38
TCSM	-1.68	4.26	3.23	3.20	1.61
NTC					
ATCM	1.61	10.80	7.71	2.43	-3.23
KLM	1.34	16.09	7.78	0.68	-0.30
Private					
EI	-18.71	-2.10	5.32	4.57	4.50
KCM	-15.59	-0.47	1.94	-1.00	-2.53
TCM	-2.01	14.47	10.30	-5.99	1.66
AT	3.54	9.79	9.49	5.73	2.08
MS	7.93	16.31	16.17	6.58	1.22
SBT	8.91	17.77	13.34	6.75	5.01
VT	-6.16	15.26	10.41	4.00	1.50
Kerala Govt.					
TSM	-17.88	3.67	-3.88	-21.32	-17.01

Source: Computed.

Operating Profit Per Spindle

The South Indian Textile Research Association (SITRA) employs the operating profit per spindle per year as a criterion for appraising the profitability of spinning mills. The operating profit per spindle equals operating profit divided by number of installed spindles. The limitation

of this measure is that the denominator does not reflect the current market price. Still, it is a widely used measure to study profitability of spinning mills. Therefore, this ratio is worked out to evaluate the efficiency achieved by the mills in utilising the spindles.

Table 5.16 gives mills' operating profit per spindle per year during the period under study. The average operating profit per spindle is Rs. -35.10 in 1988-89, Rs.315.92 in 1989-90, Rs. 349.98 in 1990-91, Rs.154.74 in 1991-92 and Rs.141.62 in 1992-93. There is wide scatter in operating profit per spindle within the mill and between the mills over the years. The operating profit per spindle ranged between Rs.13.03 and Rs.-47.59 in 1988-89, Rs.38.52 and Rs.-2.37 in 1989-90, Rs.34.20 and Rs.0.33 in 1990-91, Rs.12.50 and Rs.27.29 in 1991-92 and Rs.13.79 and Rs.-17.06 in 1992-93.

Table 5.16
Operating Profit Per Spindles
(1988-89 to 1992-93)

Rs.					
Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	-188.06	121.39	299.92	-6.49	10.58
KT	-59.57	214.62	231.22	202.89	282.24
PM	-176.16	69.62	198.46	24.60	125.56
Co-operative					
MCSM	-362.39	-25.06	6.78	68.09	210.21
QCSM	266.12	650.16	610.46	82.41	257.73
TCSM	37.17	557.58	499.92	269.33	-159.71
NTC					
ATCM	78.41	306.51	263.16	120.37	44.82
KLM	71.55	478.44	311.29	65.65	126.67
Private					
EI	-151.27	-27.35	200.56	341.72	430.64
KCM	-452.96	83.85	195.64	7.20	5.24
TCM	150.57	542.60	408.89	-18.63	204.56
AT	151.40	465.64	552.10	421.94	315.40
MS	99.46	360.00	505.45	444.52	124.41
SBT	318.42	414.66	725.24	348.43	294.23
VT	-172.82	710.88	567.82	382.18	202.45
Kerala Govt.					
TSM	-171.39	131.11	22.82	-278.37	-209.13

Source: Computed.

The SITRA worked out the average operating profit per spindle for 5 years (1990-95) at Rs.592. The figures of operating profit per spindle for the textile mill in Kerala, with few exceptions, were below the SITRA standard. The figures for the QCSM (Co-operative) in

1989-90 and 1990-91 for the SBT (Private) only in 1990-91 and for the VT (Private) only in 1989-90 were above the SITRA norm.

The operating profit per spindle for the private sector mills is higher than that of mills of other sectors even though their position is also far below the SITRA norm. The position of the TSM (Kerala Government) is worse in this regard. Its poor showing is due to low spindle utilisation and the low yarn realisation. The average capacity utilisation of spindles in Kerala during the study period is shown in Table 5.17.

Table 5.17
Capacity Utilisation of Spindles in Kerala
(1989-90 to 1992-93)

Year	Capacity Utilisation %
1988-89	45
1989-90	51
1990-91	56
1991-92	53
1992-93	54

Source: Ministry of Textiles.

It is evident from Table 5.17 that about 50 per cent of the spinning facilities of the mills in Kerala remain unutilised. In fact, the spinning mills should achieve more than 95% capacity utilisation. The

Kerala mills can considerably reduce their operating expenses by fully utilising their available capacity.

Measures to Increase Profitability

The profitability in textile mills depends to a great extent on operating expenses, financial charges, man-machine productivity and marketing techniques.

It is to be noted that the profits of the textile mills in Kerala are low and that it is due to the high operating expenses and heavy financial charges. The operating expenses can be reduced considerably by improving purchasing efficiency and man-machine productivity and by controlling operating expenses. At present the mills are over burdened with high interest charges because of over leverage. The financial charges can also be brought down by reducing the magnitude of debt financing. As regards productivity of spindles of the mills is concerned, nearly 50 per cent of the spindles remain idle. According to a SITRA study, a 5% increase in spindle utilisation will give a saving of over Rs. 90 per spindle per year for 40s average count, which is as

much as one-third of the average net profit margin. Therefore, there is greater scope to increase the profitability of the mills by improved utilisation of the idle spinning facility. The operating performance of the mills can also be improved by increasing the labour productivity from its present low levels. The mills can secure better prices for yarn by switching over to high value product mix, entering export markets and through sound marketing techniques.

Conclusion

Profitability is the overall reflection of the strengths and weaknesses of a firm. Unless a company profits from selling its goods or services, it has little reason to exist²². Keynes opines that profit is the engine that drives the business enterprise. As profitability ratios have been shown to have considerable merit in financial analysis, the profitability of the mills is studied with the help of financial ratios and statistical tools, like, average and measures of dispersion. The average of the various profitability ratios shown in Table 5.18 gives a clear picture of the profitability of the textile mills in Kerala from different angles.

Table 5.18
Average Profitability Ratios
(1988-89 to 1992-93)

Profitability ratios	1988-89	1989-90	1990-91	1991-92	1992-93
GPM(%)	1.91	21.71	22.65	13.68	12.60
NPM (%)	-23.37	4.45	3.33	-3.30	-3.38
Operating Ratio (%)	111.86	89.07	88.84	95.90	96.51
EBIT/S (%)	-12.11	11.23	11.16	3.44	2.98
GP+DEP / S (%)	9.68	26.52	27.96	18.81	16.93
OCF / S (%)	-4.34	16.04	16.52	8.51	7.31
ROA (%)	-17.83	6.22	5.52	-4.53	-2.94
EBIT /TA (%)	-7.11	14.84	12.41	3.28	4.34
ROCE (%)	-23.14	20.72	16.00	-1.39	0.64
ROE (%)	-99.90	-14.52	3.27	-1796.00	-74.19
EBDIT/TA+Acc.DE P (%)	1.28	14.04	12.25	6.29	6.60
OCF/TA+Acc. DEP(%)	-6.61	7.27	7.38	0.75	0.82
OP/Spindle (Rs)	-35.10	315.92	349.98	154.74	141.62

Source: Computed

The profitability in relation to sales reflects the relationship of prices, volume and costs. The average GPM of the mills in Kerala is above the corresponding all India figure compiled by the RBI throughout the study period excepting 1988-89. Contrastingly, the average GPM on all India basis compiled by the ICICI is higher than the same for the Kerala mills during 1988-89, 1991-92 and 1992-93. However, the average NPM for the mills in Kerala during the study period is less than the all India average NPM compiled by the RBI. The low average NPM in Kerala mills is due to high operating expenses and heavy financial charges. It is, therefore, suggested to exercise strict

control over the operating expenses and to reduce the heavy debt financing in the textile mills in Kerala. The analysis of EBIT-to-Sales, GP+DEP - to- sales, EBDIT -to-Sales and OCF- to-Sales also confirm the dismal financial performance of the textile mills in Kerala excepting the AT, the MS and the SBT. (Private)

The investment related profitability ratios like ROA, ROCE, ROE, EBDIT-to -TA+Acc. DEP and OCF-to-TA+Acc. DEP are also studied to evaluate the profitability of the select mills. The analysis of the above ratios reveals that no satisfactory returns on investments are generated by the select textile mills in Kerala. In fact, a mill can be said to have failed if it cannot earn a reasonable return on its investments. Thus the inadequate ROI of the mills threatens their very survival.

The operating profit per spindle was low in Kerala mills because of low spindle utilisation. It was also noticed that the profitability of the mills differed widely between the mills and between the years. None of the mills could maintain a steady position with respect to profitability over the years of study. The unevenness in the profitability is due to poor control over operating expenses. The inadequate

generation of profits has resulted in the erosion of equity base of the MCSM, QCSM (Co-operative) the KCM (Private) and the TSM (Kerala Government). The low internal generation and the weak equity base are forcing the mills to depend increasingly on debt financing. Too much debt in the capital structure of the mills results in low NPM of the mills. In order to improve the profitability of textile mills in Kerala, increased purchasing efficiency, strict control over operating expenses, full spindle utilisation, increased man-machine productivity, debt reduction and sound sales policy are suggested.

The low profitability of the textile mills in Kerala calls for a detailed study of the cost structure of the mills, which is attempted in the next Chapter.

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- * L.C Gupta empirically established that the EBDIT to S and OCF to S are best measures of inter firm comparison of profitability in textile industry. Whereas ICICI considers the GP+DEP to S and EBDIT to S as best profitability ratios.
- ** L.C Gupta empirically proved that among the investment related ratios EBDIT to TA+ Acc. DEP and OCF to TA+ Acc. DEP have the least classification error in the case of Indian textile industry.

COST STRUCTURE

K. K. Mohamed “Financial management in textile mills in Kerala ” Thesis.
Department of Commerce and Management Studies , University of Calicut,
1997

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CHAPTER VI

COST STRUCTURE

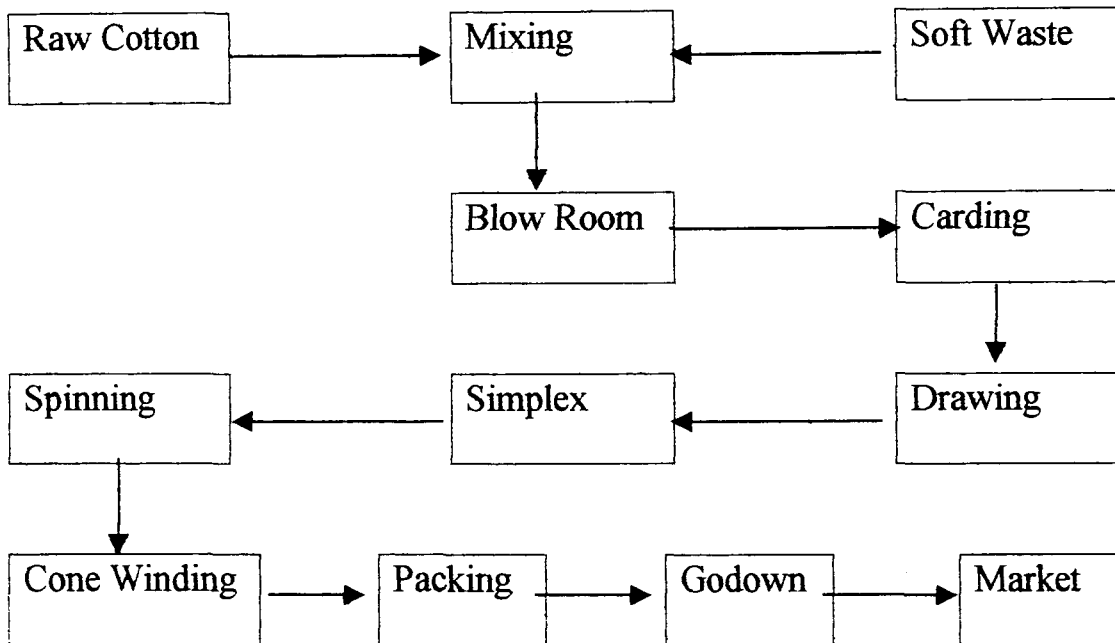
COST STRUCTURE

In the preceding chapter, it was found that the profitability of the textile mills in Kerala is very poor. In fact, the profitability in the spinning mills is influenced by costs incurred in the production, the productivity of men, machines and materials and the net value of yarn. The highly disappointing profitability in the select mills points to the necessity of analysing the cost structure of the spinning mills. This Chapter, therefore, focuses on the cost structure of the mills.

Cost Structure implies the relationship among the various components of cost. The cost structure analysis helps understand the cost competitiveness of the mills. Before examining the cost of spinning, the production process in spinning is discussed.

Production Process

In the select mills, most of the activities revolve around the spinning of yarn. Figure. 6.1 depicts the flow chart of spinning.

Figure. 6.1. Flow Chart of Spinning.

The spinning passes through different processes. Cotton is purchased from market in the form of highly compressed bales containing trashes, seeds and other impure materials. In the mixing process, the cotton bales are opened and the fibres are cleaned and loosened. In the blow room, the cotton is converted into lap form, a slightly compressed sheet of cotton rolled into cylinders. In the carding process, all impurities in cotton and short fibres are removed and the sliver, the continuous ribbon of paralleled fibre, is formed. The proportionate stretching of

carded slivers and minimisation of unevenness in the sliver is done in the drawing process. The simplex machines convert sliver into roving form, a process of imparting slight twist before spinning, which is further drafted and twisted in spinning frames to produce yarn.

Need for Cost Control

As spinning mills are operating in buyers' market, greater emphasis should be given to employing correct costing system. Cost control is the only key to profit maximisation especially in industries and business where the prices of goods and services are determined in market place¹ In most cases, the financial ailments of textile industry is the result of failure to control costs at the right time. In an atmosphere where costs of everything are increasing day by day, month by month and year after year, it is very necessary to exercise strict control over the cost of production in a textile mill². In a SITRA study, it was established that 62 per cent of the savings in a textile mill can be attributed to cost reduction. Thus in the traditionally loss making or low earning textile industry, managing for profitability means managing for costs.

Elements of Spinning Costs

Raw cotton, wages and salaries, power, stores, overheads, interest and depreciation are the elements of spinning costs, which are analysed one by one.

Raw Cotton

In spinning mills, cotton is the chief raw material accounting for more than 85% of the fibre consumption and more than 76% of the total fibre consumption in the textile sector³ Cotton accounts for about 50 to 70 per cent of the yarn costs. Cotton costs are found to differ considerably within a year to the extent of about 30%, the C.V. being on the average 7%. Besides, there is a large inter- mill variation of about 30% in raw material cost.⁴ Within the same count, the raw material is found to vary between mills + /- 20% with a C.V. of 5%⁵ In view of the very large impact which cotton cost has on profitability, just a 5% adverse change is enough to almost wipe out the average profit margin

for a mill. ⁶ Since the cotton cost and yarn selling prices are largely governed by factors which are to a great extent beyond the control of the mills, it becomes all the more important that the best quality yarn is produced with maximum realisation from cotton. In order to maintain cotton costs more or less at average levels, the mills should follow the policy of buying the required quality cotton in economic quantities at most favourable prices under best possible terms. Further, the procured cotton should be protected against losses by proper physical control.

Table 6.1 shows the raw material cost as a percentage of sales in the select mills for the period 1988 -89 to 1992-93.

Table 6.1
Raw Material Cost as a Percentage of Sales Value
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	69.50	56.04	44.82	60.86	55.08
KT	59.87	49.29	42.43	49.38	50.79
PM	65.89	48.93	42.12	49.87	49.83
Co-operative					
MCSM	64.52	*	74.81	63.23	60.79
QCSM	63.05	52.15	5.27	67.64	67.91
TCSM	60.62	50.77	53.26	59.03	58.80
NTC					
ATCM	56.86	52.90	51.71	63.61	66.48
KLM	55.57	48.42	47.48	63.87	62.79
Private					
EI	47.63	65.11	51.96	61.27	56.53
KCM	35.88	58.45	55.48	63.85	56.89
TCM	65.64	56.35	64.396	74.05	65.97
AT	61.59	46.31	45.14	57.67	54.08
MS	57.60	55.51	50.42	66.05	63.99
SBT	46.85	44.11	40.43	49.02	53.24
VT	62.48	56.03	53.24	64.93	58.65
Kerala Govt.					
TSM	64.42	54.68	56.17	67.86	81.19

*No operation

Source: Computed

Table 6. 1 reveals that the average raw material costs expressed as a percentage of sales value for the period 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93 are respectively 58.62, 53.00, 51.54, 61.7 and 60.19. During 1988-89, the raw material costs of KSTC, co-operative

and Kerala Govt. mills were greater than the overall average cost of raw material, whereas, the NTC and private mills excepting the TCM and the AT recorded lesser costs than the overall average cost. In 1989-90, the raw material costs of the Kerala Govt and private mills were higher than the overall average raw material cost. In 1990-91, the MCSM (Co-operative), the TCM (Private) and the TSM (Kerala Govt.) posted higher than the average costs. During 1991-92, all mills excepting those under the fold of KSTC incurred higher than the average cost of raw material. The raw material costs for the co-operative, NTC, and the TSM mills were greater than the average for the period 1992-93. On the whole, the average raw material cost as a percentage of sales value for the select mills exceed the SITRA norm of 50%. The inter play of a number of factors like paying higher costs for the same quality of cotton, same price for low grade cotton, inferior yarn quality, lack of quality control for the outgoing yarn and poor reputation of these mills explain the higher raw material cost by low profit mills⁷. The range in the raw material costs as a percentage of sales value for the mills under different sectors for the period 1988-89 to 1992-93 is shown in Table 6.2.

Table 6.2
Range of Raw Material Cost as a Percentage of Sales Value
(1988-89 to 1992-93)

Sector	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC	9.63	7.11	2.70	11.48	5.25
Co-operative	3.90	1.38	24.54	8.61	9.11
NTC	1.29	4.48	4.23	5.26	3.69
Private	29.76	21.00	24.53	25.30	12.78

Source: Computed.

It is evident from Table 6.2 that there are inter and intra sectoral variations in raw material costs. The private sector mills recorded greater variations throughout the period of study. Therefore, there is a strong case for the effective control of raw material cost

The trend ratios of the raw material cost as a percentage to sales value would highlight the directional change in the raw material cost during the period of study. Table 6.3 shows the trend ratios of raw material costs relative to sales value.

Table 6.3
Trend Ratio of Raw Material Cost
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	100	135.13	151.82	188.81	249.51
KT	100	104.91	104.00	137.42	172.15
PM	100	99.41	114.56	163.42	194.87
Co-operative					
MCSM	100	*	78.03	192.87	211.12
QCSM	100	74.61	70.53	90.20	100.55
TCSM	100	141.94	151.29	209.46	222.72
NTC					
ATCM	100	99.40	96.29	151.32	173.35
KLM	100	108.10	99.24	188.45	233.76
Private					
EI	100	64.33	483.70	875.12	1012.02
KCM	100	645.84	891.78	2183.46	2858.05
TCM	100	97.53	104.12	124.62	140.36
AT	100	103.94	106.86	153.51	150.86
MS	100	118.64	108.47	170.48	165.95
SBT	100	94.26	92.90	109.94	126.02
VT	100	121.33	138.45	192.25	187.84
Kerala Govt.					
TSM	100	96.26	95.22	162.38	148.77

* No Operation

Source: Computed

Table 6.3 depicts the upward direction of raw material costs, though in varying degrees, which is due to increase in sales and cotton costs. The cotton costs of public sector mills are higher because they are constrained to buy whatever cotton supplied at exorbitant prices by their

suppliers to whom they are heavily indebted. Due to financial constraints, these mills are also not able to take advantage of the low cotton prices prevailing in the market. In order to keep cotton prices within reasonable level, it is suggested that the mills should make cotton purchases at regular intervals irrespective of short-term price fluctuations.

Wages and Salaries

The ever increasing portion of sales rupees which is paid out for salaries and wages and for fringe benefits points out the importance of effective control over labour and labour related costs. It is the largest component of conversion cost and the second largest element of spinning cost. It accounts for about 14% of the sales revenue of cotton yarn. But, there are wide inter mill variations in the incidence of labour cost, the variation being 6 per cent to 25 per cent of sales revenue.⁸ A major cause of the inter-mill variation in labour cost is due to differences in labour productivity and wage rates. As far as labour productivity is concerned, there is a wide gap between Indian mills and those in developed

countries--- our labour productivity is only 1/4 to 1/6 of that of developed countries.⁹ It should be ensured that labour productivity should be maintained at maximum possible levels. The improvement in labour productivity should be sought through co-operation of labour unions, but at the same time the fruits of increased labour productivity be shared with work force. The SITRA norms of labour requirement for 1000 spindles for reeled and cone yarn are given in Table 6.4

Table 6.4
Workers Per 1000 Spindles (Per Shift)

Count	Reeled Yarn			Cone Yarn
	SHPR	DHPR	DHCR	
16s	11.5	10.2	10.0	8.7
20s	10.3	8.9	8.9	7.1
26s	8.8	7.8	7.7	6.0
30s	8.4	7.3	7.2	5.4
40s	7.9	6.6	6.4	4.5
60s	6.3	5.2	5.0	3.3
80s	5.3	4.3	4.2	2.7
100s	4.6	3.8	3.6	2.3

SHPR = Single Hank Plain Reeling

DHPR = Double Hank Plain Reeling

DHCR = Double Hank Cross Reeling

Source: SITRA, Coimbatore, 1982

The SITRA has also laid down that the number of staff and non-productive operators required will be 40 each for a 30000 spindle mill

working 3 shifts a day, spinning 40s count and employing 500 workers. Employment of larger complement of labour would shoot up the wage cost. The high labour costs have compelled Europe and Japan to close down their textile mills. Therefore, it should be seen that no excess labour is employed. In reality, there exists substantial scope for reducing labour strength in textile mills of Kerala by adopting right principles of work organisation and workload without overburdening the labour. According to Indra Doraiswamy, mills with wage cost of 18% and above invariably could not make profits even during normal trading conditions or at best earned only very nominal profits¹⁰. The labour costs as percentage of sales value is shown in Table 6.5

Table 6.5
Labour Cost As A Percentage of Sales
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	9.32	9.10	12.49	16.33	13.93
KT	24.56	21.71	23.01	21.25	19.36
PM	28.07	24.24	21.73	19.38	18.35
Co-operative					
MCSM	27.90	*	30.08	18.30	17.71
QCSM	8.95	11.07	14.12	17.17	16.69
TCSM	7.63	9.69	12.51	13.40	13.96
NTC					
ATCM	17.46	19.50	22.33	16.96	16.75
KLM	15.76	14.43	20.43	15.87	12.98
Private					
EI	30.46	33.10	15.43	11.29	11.85
KCM	95.05	21.96	22.01	12.77	4.72
TCM	13.88	12.09	14.01	14.31	12.98
AT	14.26	11.65	12.98	11.90	12.43
MS	12.40	14.91	12.43	12.09	14.55
SBT	9.16	9.06	10.87	11.38	13.48
VT	13.47	17.25	13.49	12.80	12.59
Kerala Govt.					
TSM	27.46	25.22	30.47	22.77	31.08

*No Operation

Source: Computed

It can be seen from Table 6.5, which the average labour cost as a percentage of sales value works out at 22.24, 17, 18.02, 15.50 and 15.21 during 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93 respectively. The combined mean labour cost of the select mills is 16.59%, which is

above the SITRA norm of 12.00% for the average spinning, mill. The high labour cost is a contributing factor for the losses or the low profits of the select mills. The C.V of average labour costs as a percentage of sales value for the period 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93 are respectively 94.06%, 41.88%, 35.29% 23.23% and 35.70%. The range of labour cost in mills under different sectors for the period of study is shown in Table 6.6.

Table 6.6
Range of Labour Cost as a Percentage of Sales
 (1988-89 to 1992-93)

Sector	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC	18.75	15.14	10.52	4.92	5.43
Co-operative	20.27	1.38	17.57	4.90	3.75
NTC	1.70	5.07	4.90	1.09	3.77
Private	85.89	24.04	11.14	3.02	9.83

Source: Computed

As can be understood from the Table 6.6, the range of labour cost is the lowest in the N.T.C mills followed by the co-operative mills, while it is the highest in the private mills.

The trend ratio of labour cost in the select mills is worked out to gain a clear picture of the labour cost behaviour over the period of study.

Table 6.7 presents the trend ratio of labour cost as a percentage of sales value.

Table 6.7
Trend Ratio of Labour Cost
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	100	163.51	315.30	377.69	470.36
KT	100	112.68	137.49	144.16	160.00
PM	100	115.60	138.79	149.12	168.46
Co-operative					
MCSM	100	1.53	72.56	129.08	142.21
QCSM	100	11.52	139.60	161.29	174.05
TCSM	100	215.28	282.36	377.79	420.07
NTC					
ATCM	100	119.34	135.39	131.36	142.23
KLM	100	113.55	150.57	153.11	170.33
Private					
EI	100	51.14	224.62	252.10	331.71
KCM	100	91.61	133.58	164.82	182.15
TCM	100	98.96	106.19	113.87	130.60
AT	100	112.88	132.66	136.80	149.72
MS	100	148.07	124.28	144.98	175.29
SBT	100	98.96	127.73	130.54	163.22
VT	100	173.32	162.79	175.83	187.17
Kerala Govt.					
TSM	100	104.14	121.17	127.82	133.58

Source: Computed

Table 6.7 establishes that the labour costs generally take an increasing trend during the period of study. The linkage of the dearness allowance of

workers to the cost of consumer price index and the low labour productivity result in continuing rise in wage costs in textile mills in Kerala.

Power Costs

Energy cost is one of the major components of conversion cost in a spinning mill and ranks next only to wages. The SITRA norm of power cost for the average spinning mills is 10.50% of the sales value¹¹. The power cost as a percentage of sales value is given in Table 6.8

Table 6.8
Power Cost as a Percentage of Sales Value
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	7.92	2.64	2.16	6.43	8.18
KT	8.31	8.42	4.98	5.29	6.50
PM	6.40	5.29	4.90	5.07	8.29
Co-operative					
MCSM	6.77	*	5.65	5.17	6.81
QCSM	7.25	4.13	3.16	5.56	6.47
TCSM	3.09	2.57	3.14	5.00	6.76
NTC					
ATCM	7.43	5.51	5.08	4.72	6.02
KLM	7.87	6.60	5.95	6.01	6.15
Private					
EI	4.41	7.63	5.12	4.02	5.00
KCM	5.51	4.48	4.69	4.28	2.30
TCM	4.72	4.22	3.73	3.28	4.30
AT	5.72	4.07	3.66	4.23	5.12
MS	3.64	3.10	4.90	4.76	5.53
SBT	6.51	6.14	4.90	4.65	5.96
VT	4.77	3.81	3.54	4.08	5.40
Kerala Govt.					
TSM	7.39	5.72	5.84	4.70	7.02

* No Operation

Source: Computed

The average power costs as a percentage of sales value for the period 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93 are respectively 6.11, 4.96, 4.46, 4.83 and 5.99, the combined mean being 5.28%. Table 5.8 demonstrates the inter mill variations in energy costs; the C.V being 26.35%, 35.08%, 24.60%, 16.36% and 24.21% for 1988-89, 1989-90, 1990 -91, 1991- 92 and 1992-93 respectively. The combined mean power cost for the select mills is less than the SITRA norm of 10.50%. This is partly due to the low power tariff in Kerala when compared to the other southern states and partly due to the low capacity utilisation of the mills. We have seen in Chapter IV, that nearly 50%, of the production facility of the spinning mills is lying idle. The spinning mills in Kerala face power cut of nearly 35 percent and experience frequent unscheduled power interruptions resulting in production loss and damage to highly sophisticated machinery. Most often, the undeclared power cuts and low quality power not only throw the production schedule of the mills out of gear but also badly affect the yarn quality. Thus the power shortage has hampered the working of spinning mills in Kerala.

The range of power cost as a percentage of sales revenue of the mills under the different sectors is presented in Table 6.9

Table 6.9
Range of Power Cost as a Percentage of Sales Value
(1988-89 To 1992-93)

Sector	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC	1.91	5.78	2.82	1.36	1.79
Co-operative	4.16	1.56	2.51	0.56	0.34
NTC	0.44	1.09	0.87	1.29	0.13
Private	2.87	4.53	1.58	0.74	3.66

Source: Computed

As shown in Table 5.9, in 1988-89 there was the highest variation in energy cost in co-operative mills followed by private mills. During 1989-90, 1990-91 and 1991-92 the KSTC mills recorded the highest variation followed by the private mills, co-operative mills and NTC mills respectively. In 1992-93, the private mills marked the highest range in power costs followed by KSTC mills. Thus on the whole there are wide scatter in energy cost between mills and between years and the variations are larger in the KSTC mills.

The trend ratio of power cost as a percentage of sales value is illustrated in Table 6.10

Table 6.10
Trend Ratio of the Power Cost
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	100	55.91	64.17	175.14	325.23
KT	100	129.12	88.00	106.02	158.78
PM	100	110.56	137.18	171.00	333.74
Co-operative					
MCSM	100	*	83.63	164.87	195.11
QCSM	100	51.42	38.54	64.51	83.27
TCSM	100	140.95	174.93	348.61	502.65
NTC					
ATCM	100	79.34	72.46	85.93	120.19
KLM	100	103.97	87.77	116.10	161.55
Private					
EI	100	81.51	515.27	620.65	966.67
KCM	100	322.73	491.56	953.25	1543.51
TCM	100	101.77	83.23	76.85	127.31
AT	100	98.33	93.28	121.34	154.00
MS	100	104.92	166.81	194.57	226.93
SBT	100	94.44	80.96	75.09	101.49
VT	100	107.86	120.39	158.28	226.41
Kerala Govt.					
TSM	100	87.78	86.13	98.08	112.06

* No operation

Source: Computed

The trend ratio of power cost reveals that the energy cost in the select mills takes an increasing trend. But contrary to this general trend, the QCSM (Co-operative) registered a declining trend in the power cost

and the power costs of the SBT (Private) and the TSM (Kerala Govt.) in 1989-90, 1990-91 and 1991-92, were less than that of 1988-89. In order to reduce the power costs it is suggested that the mills should give due importance to Energy Conservation Programme (ECP) and energy audits.

Cost of Stores

The stores and spares items consist of packing materials, spindle oils, grease and lubricants, lobbins, skewers, aprons, spindle tapes and travellers, rings card clothing, combing needles, rollar cots in ring frames and ring spinning etc. According to SITRA, stores expenses are on the average about 3.5% of sales revenue, of which half is for packing materials. The cost of stores as a percentage of sales value for the select mills for the period of study is presented in Table 6.11.

Table 6.11
Cost of Stores as a Percentage of Sales
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	2.61	1.98	2.67	2.18	2.11
KT	1.57	1.71	3.65	2.92	2.63
PM	1.49	1.25	2.64	1.57	4.09
Co-operative					
MCSM	2.31	*	2.87	1.93	2.01
QCSM	1.50	1.68	1.65	1.73	1.72
TCSM	2.34	3.10	3.46	3.60	3.76
NTC					
ATCM	2.55	3.39	3.72	4.21	2.95
KLM	3.13	3.18	4.47	4.01	3.05
Private					
EI	1.35	9.55	5.01	3.52	3.71
KCM	0.89	2.11	2.29	2.62	2.30
TCM	1.92	1.96	2.01	2.20	1.99
AT	6.24	7.79	5.14	4.55	3.51
MS	2.48	3.69	3.63	3.23	2.80
SBT	2.45	4.79	4.24	3.56	4.25
VT	3.36	6.44	5.90	5.78	4.61
Kerala Govt.					
TSM	0.38	0.57	0.79	0.40	0.50

* No operation

Source: Computed

The combined mean of cost of stores of the select mills during the period of study is 3.12% of the sales revenue which is below the SITRA norm. But there is high degree of variation in the cost of stores between the mills, the C.V being 57.64%, 72.39%, 40.38%, 44.38% and 38.49%

during 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93 respectively.

The range in the cost of stores as a percentage of sales value for the mills under different sectors is depicted in Table 6.12

Table 6.12
Range of Cost of Stores as a Percentage of Sales Value
(1988-89 to 1992-93)

Sector	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC	1.12	0.73	1.01	1.35	1.98
Co-operative	0.84	1.42	1.81	1.87	2.04
NTC	0.58	0.21	0.75	0.20	0.10
Private	4.89	7.59	3.89	3.58	2.62

Source: Computed

It is found that throughout the period of study, the variations in cost of stores were the highest in the private sector.

The trend ratio of cost of stores as a percentage of sales value is exhibited in Table 6.13.

Table 6.13
Trend Ratio of Cost of Stores
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	100	127.07	241.31	180.63	254.99
KT	100	138.37	340.45	309.45	338.37
PM	100	112.50	317.43	226.97	707.89
Co-operative					
MCSM	100	*	83.63	164.87	195.11
QCSM	100	101.26	97.64	96.88	107.08
TCSM	100	224.40	253.94	330.64	368.44
NTC					
ATCM	100	142.15	154.51	223.70	171.86
KLM	100	125.95	165.72	194.52	201.32
Private					
EI	100	333.80	1650.00	1776.76	2352.11
KCM	100	934.00	1478.00	3602.00	4638.00
TCM	100	116.30	110.48	126.75	144.76
AT	100	172.66	120.16	119.68	96.64
MS	100	182.99	180.94	193.29	168.24
SBT	100	195.98	186.63	152.91	192.69
VT	100	259.13	284.85	318.08	274.28
Kerala Govt.					
TSM	100	169.92	227.82	163.91	155.64

* No operation

Source: Computed

The trend ratios show that, with few exceptions, the cost of stores relative to sales registered an uptrend. Prudent inventory control measures are, therefore, suggested to maintain the cost of stores at reasonable level.

Overheads

Overheads include the expenditure incurred towards general administration, selling and distribution, insurance, travelling expenses, telephone, advertisement, rates and taxes, time office and welfare expense, printing and stationery etc. The overhead costs relative to sales value for the select mills are presented in Table 6.14.

Table 6.14
Overheads as a Percentage of Sales Value
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	11.63	11.89	9.43	10.78	7.33
KT	9.33	7.25	7.32	6.48	7.27
PM	14.36	13.16	14.15	16.88	11.96
Co-operative					
MCSM	3.52	*	6.86	6.22	6.81
QCSM	4.91	5.44	4.95	5.19	8.75
TCSM	5.15	5.32	5.62	6.26	6.68
NTC					
ATCM	5.16	5.34	6.13	5.59	6.38
KLM	4.52	5.55	6.67	6.02	5.97
Private					
EI	5.74	20.12	14.72	10.69	10.34
KCM	10.05	17.19	14.69	10.78	9.60
TCM	6.23	8.33	10.05	8.72	6.39
AT	9.84	11.99	16.73	14.97	10.17
MS	9.29	13.25	13.47	9.42	7.99
SBT	13.19	13.06	15.91	15.55	13.67
VT	6.23	6.16	11.31	6.70	5.22
Kerala Govt.					
TSM	9.67	8.95	10.87	8.64	11.94

* No operation

Source: Computed

The combined mean overhead relative to sales value of select mills is 9.29%, which exceeds the SITRA norm of 5.50%. It is found that administration and selling and distribution overheads account for a major share of the overheads. There are wide variations in the overhead burden between the mills, the C.V being 40.99%, 45.49%, 37.88%, 40.28% and 16.73% respectively in 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93. In this context, the range in the overhead of select mills is given in Table 6.15.

Table 6.15
Range in Overheads as a Percentage of Sales Value

Sector	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC	5.03	5.91	6.83	10.40	4.69
Co-operative	1.63	0.12	1.91	1.07	2.07
NTC	0.64	0.21	0.54	0.43	0.41
Private	7.45	13.96	6.68	8.85	8.45

Source: Computed

It can be seen that the range in the private sector mills and the KSTC mills is higher than the co-operative and NTC mills. During 1988-89, 1989-90 and 1992-93 variations were the largest in private mills followed by that of the KSTC mills. In 1990-91 and 1991-92, the KSTC

mills showed the highest variations in overheads followed by the private mills.

The trend ratio of the overheads as a percentage of sales revenue is given in Table 6.16.

Table 6.16
Trend Ratios of Overhead
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	100	102.24	81.08	92.69	63.03
KT	100	77.71	78.46	69.45	77.92
PM	100	91.64	98.54	117.55	83.29
Co-operative					
MCSM	100	*	194.89	176.70	193.47
QCSM	100	110.79	100.81	105.70	178.21
TCSM	100	103.30	109.13	121.55	129.71
NTC					
ATCM	100	103.49	118.80	108.33	123.64
KLM	100	122.79	147.57	133.19	132.08
Private					
EI	100	350.52	256.45	186.24	180.14
KCM	100	171.04	146.17	107.26	95.52
TCM	100	133.71	161.32	139.97	102.57
AT	100	151.96	212.04	189.73	128.90
MS	100	142.63	144.99	101.40	86.01
SBT	100	99.01	120.62	117.89	103.64
VT	100	98.88	181.54	107.57	83.79
Kerala Govt.					
TSM	100	92.55	112.41	89.35	123.47

* No operation

Source: Computed

As shown in Table 6.16, with few exceptions, the overheads registered an increasing trend. The mills with heavy overhead cost relative to sales are those, which post low sales revenue because of poor machine productivity. In fact, in order to effect economy in costs, the overheads, being fixed in nature, should be spread over more units of production. Therefore, in order to reduce the overhead burden, it is suggested to pay greater attention to improve the productivity of the mills.

Interest

Interest is a non-operating cost. The SITRA norm for interest as a percentage of sales revenue is 4%. The interest expense of the select mills as a percentage of sales value is depicted in Table 6.17

Table 6.17
Interest as a Percentage of Sales Value
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	24.61	14.83	9.82	10.86	5.14
KT	1.83	3.93	2.62	2.71	2.56
PM	1.90	2.20	3.02	3.57	4.87
Co-operative					
MCSM	34.06	*	23.75	10.54	9.73
QCSM	16.28	11.31	9.25	10.17	9.99
TCSM	21.40	17.14	18.30	9.52	2.60
NTC					
ATCM	5.05	4.72	4.34	4.11	7.34
KLM	5.91	4.77	4.58	4.81	6.34
Private					
EI	3.58	4.03	5.46	8.05	6.71
KCM	46.92	10.90	14.93	9.30	8.82
TCM	6.45	5.53	4.28	4.31	3.26
AT	4.30	3.54	4.77	5.45	7.12
MS	2.70	1.72	1.81	3.64	4.55
SBT	6.63	4.86	5.54	7.78	7.48
VT	6.30	4.59	3.53	6.03	5.10
Kerala Govt.					
TSM	8.69	7.72	9.43	7.10	10.26

* No operation

Source: Computed

The combined mean interest, as a percentage of sales value of the select mills is 8.02, which is more than twice the SITRA norm. The high incidence of interest, a non-operating cost, is a major problem faced by the mills. There are very high variations in interest charges between

these mills, the C.V. being 106.75% in 1988-89, 68.33% in 1989-90, 79.46% in 1990-91, 41.04% in 1991-92 and 39.56% in 1992-93. The range in interest as a percentage of sales value in different sectors is given in Table 6.18

Table 6.18
Range of interest as a percentage of sales value

Sector	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC	22.78	12.63	7.20	8.15	2.58
Co-operative	17.78	5.83	14.50	1.02	7.39
NTC	0.86	0.05	0.24	0.70	1.00
Private	44.22	9.18	13.12	5.66	5.56

Source: Computed

It can be noticed that the range in interest charge as a percentage of sales value is negligible in NTC mills. In 1988-89, the private mills recorded the highest range followed by the KSTC. During 1989-90 and 1991-92 the range was the highest in KSTC mills followed by the private mills. But in 1990-91 and 1992-93 the co-operative mills registered the highest range followed by the private mills.

The trend ratio of interest as a percentage of sales value is exhibited in Table 6.19

Table 6.19
Trend Ratio of Interest
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTE					
ET	100	101.00	93.90	95.14	65.77
KT	100	274.27	210.42	247.39	284.20
PM	100	155.30	285.53	406.46	662.53
Co-operative					
MCSM	100	68.36	46.93	60.90	63.98
QCSM	100	62.65	50.22	52.50	57.25
TCSM	100	135.78	147.26	95.68	27.90
NTC					
ATCM	100	99.89	91.12	110.21	215.58
KLM	100	100.17	90.12	123.76	222.05
Private					
EI	100	52.91	675.93	1528.57	1596.56
KCM	100	92.07	183.61	243.25	338.99
TCM	100	97.34	69.82	73.82	70.48
AT	100	113.96	161.74	207.80	284.67
MS	100	78.18	82.83	200.08	251.35
SBT	100	73.48	89.97	123.21	125.00
VT	100	98.62	90.94	177.10	161.98
Kerala Govt.					
TSM	100	100.75	118.50	126.05	139.42

Source: Computed

The trend ratios reveal that interest charges of the KT and PM (KSTC), NTC mills and private mills excepting the TCM and the TSM (Kerala Govt) registered an uptrend, with the largest magnitude of increase in the EI (Private). It is worth noting that the QCSM and the TCSM (Co-operative) and the TCM (Private) could maintain their

interest obligations below that of 1988-89. We have already seen in Chapter III that the textile mills in Kerala over are leveraged and that the mills have to pay heavy interest charges. In fact, debt financing would not be acceptable in the select mills as in majority of cases their returns are less than the interest charges. Further, in the textile industry the recession and boom alternate each other, sometimes interspersed by normal periods, and occur roughly once every 6 years and last each time for about 2 years. Apart from the intensity, it is the prolonged nature of recession that makes it particularly more difficult for low profit mills to hold on to their operations¹². In this precarious state of the industry, the over leverage and the consequent interest burden have increased the likelihood of these mills incurring losses.

Depreciation

The process by which productive assets are allocated to operation is called depreciation. The concept of conservatism requires that a permanent impairment of value and /or loss of utility of fixed assets be reflected in the account by a write-down. This is needed not only to

reflect a loss of value and utility but also in order to relieve future periods of changes which the usefulness and productivity of the assets can no longer support and justify¹³. The cost of plant and equipment is an outlay of capital, which must be recovered through revenues generated by operations before net income can be recognised. Depreciation is provided to recover the original cost of the asset from the operations by means of amortisation. From the managerial point of view, depreciation denotes the measure of contribution of the fixed assets to circulating or working capital, because provision for depreciation represents that portion of revenue which is not available for dividend distribution. Sound business practice requires to provide sufficient depreciation to maintain capital in tact. Inadequate provision of depreciation has been identified as a cause of sickness in the textile industry. The SITRA standard of depreciation as a percentage of sales value for an average spinning mill is 3.5%. Table 6.20 shows the depreciation as a percentage of sales value of the mills for the period 1988-89 to 1992-93

Table 6.20
Depreciation as a Percentage of Sales Value
 (1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	21.92	16.38	12.75	14.04	9.93
KT	2.92	3.34	5.49	5.50	4.21
PM	3.26	3.72	4.68	5.03	3.95
Co-operative					
MCSM	10.47	*	7.04	2.83	2.27
QCSM	18.42	6.13	4.68	2.86	2.03
TCSM	14.14	11.38	12.08	10.52	10.78
NTC					
ATCM	3.25	3.24	3.65	3.20	2.80
KLM	3.93	3.27	3.54	3.61	3.16
Private					
EI	1.31	1.55	5.44	4.24	2.61
KCM	19.52	5.68	7.58	7.30	5.47
TCM	1.20	0.87	0.88	0.69	0.43
AT	3.27	1.85	2.18	3.08	3.44
MS	5.23	2.94	3.45	0.78	3.33
SBT	6.38	5.64	5.76	7.88	7.00
VT	5.49	2.99	2.48	3.70	3.27
Kerala Govt.					
TSM	3.58	3.17	3.32	2.41	2.08

* No operation

Source: Computed

The combined mean of depreciation relative to sales value during the period of study works out at 5.39% which is above the SITRA norm.

There are very high variations in depreciation between the mills over the period of study, the CV being 88.92%, 84.82%, 61.58%, 73.20% and

67.87% respectively for 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93. The range of depreciation in different sectors is shown in Table 6.21

Table 6.21
Range of Depreciation as a Percentage of Sales Value

Sector	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC	19.0	16.04	8.07	9.01	5.98
Co-operative	7.95	5.25	7.40	7.66	8.75
NTC	0.68	0.03	0.11	0.41	0.36
Private	18.21	4.81	6.70	6.52	6.53

Source: Computed

Table 6.21 shows that except in 1992-93, the range of depreciation as a percentage of sales value was the highest in the KSTC mills. In 1988-89 the range of depreciation has been found the highest in the KSTC followed by the co-operative, and the private sectors. In three years following 1988-89, the range was the highest in the KSTC followed by the co-operative sector. In 1992-93, the range is the highest in the co-operative sector followed by the private sector.

The trend ratio of depreciation as a percentage of sales value is shown in Table 6.22

Table 6.22
Trend Ratio of Depreciation
(1988-89 to 1992-93)

Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	100	125.22	136.98	138.10	142.16
KT	100.	145.82	276.02	314.39	293.16
PM	100	152.07	257.36	332.73	312.16
Co-operative					
MCSM	100	4.42	45.26	53.22	48.60
QCSM	100	30.04	22.47	13.03	10.29
TCSM	100	136.42	147.13	160.05	175.14
NTC					
ATCM	100	106.55	118.80	133.20	127.67
KLM	100	103.21	104.72	139.80	166.65
Private					
EI	100	55.80	1843.48	2202.17	1701.45
KCM	100	115.29	223.99	672.16	729.95
TCM	100	82.34	76.86	63.34	49.57
AT	100	78.23	96.93	154.08	180.34
MS	100	69.24	81.78	22.22	95.12
SBT	100	88.55	97.25	129.94	121.81
VT	100	73.62	73.34	124.74	119.28
Kerala Govt.					
TSM	100	100.40	101.19	103.73	68.73

Source: Computed

The trend ratios of depreciation reveal the low level of depreciation in the MCSM, QCSM, (Co-operative) the TCM, the MS (Private) and the TSM (Kerala Govt.) which is to noted with concern. The investment in machinery by these mills is not at all satisfactory, as their investment

is less than the SITRA norm. The low depreciation is a manifestation of the low investments in the modernisation of mills. In fact, the depreciation charges of the high profit mills are higher. As a broad guideline, it may be taken that the annual investment on modernisation should be about 3 to 4% of the sales revenue¹⁴.

So far the spinning costs in select mills are reviewed. It would be relevant to present the cost sheet of select mills in 1989-90 along with SITRA norms to get a comparative picture at a glance. The period 1989-90 is chosen as it is considered to be a good year for the whole textile industry¹⁵. The cost sheet for 1989-90 is presented in the format prescribed by the SITRA. Table 6.23 illustrates the spinning costs in select mills vis-a-vis the SITRA figures for an average spinning mill.

Table 6.23
Spinning Cost as a Percentage of Sales Value in 1989-90 for the Select Mills Vis-a-vis the SITRA Norm

Mill	Raw Material	Salaries & Wages	Stores	Power	Over-head	Interest	Depreciation	Total
KSTC								
ET	56.04	9.10	2.64	1.98	11.89	14.83	16.38	112.86
KT	49.29	21.71	8.42	1.71	7.25	3.93	3.34	95.65
PM	48.93	24.24	5.29	1.25	13.16	2.20	3.72	98.79
Co-op.								
MCSM	*							
QCSM	52.15	11.07	4.13	1.68	5.44	11.31	6.13	91.91
TCSM	50.77	9.69	2.57	3.10	5.32	17.14	11.38	99.97
NTC								
ATCM	52.90	19.50	5.51	3.39	5.34	4.72	3.24	94.60
KLM	48.42	14.43	6.60	3.18	5.55	4.77	3.27	86.22
Private								
EI	65.11	33.10	7.63	9.55	20.12	4.03	1.55	141.09
KCM	58.45	21.96	4.48	2.11	17.19	10.90	5.68	120.77
TCM	56.35	12.09	4.22	1.96	8.33	5.53	0.87	89.35
AT	46.31	11.65	4.07	7.79	11.99	3.54	1.85	87.20
MS	55.51	14.91	3.10	3.69	13.25	1.72	2.94	95.12
SBT	44.11	9.06	6.14	4.79	13.06	4.86	5.64	87.66
VT	56.03	17.25	3.81	6.44	6.16	4.59	2.99	97.27
Kerala Govt								
TSM	54.68	25.22	5.72	0.57	8.95	7.72	3.17	106.03
SITRA	57.00	15.00	3.00	8.50	5.50	4.00	3.00	96.00

* No operation

Source: Computed

It is evident from Table 6.23 that the cost effectiveness of the select spinning mills is disappointing as 50 per cent of the select mills' cost exceed their sales value even in a year of prosperity for the textile

industry. The mills would be incurring losses as long as their costs exceed the sales value.

Impact of Cost Components on Profit

It is attempted to identify the most influential component of cost on profit. The relationship of the cost components with profit is studied using ANCOVA model taking the following variables

Raw material (X_1)

Wages and salaries (X_2)

Stores (X_3)

Power and fuel (X_4)

Manufacturing overhead (X_5)

Administration and selling and distribution overhead (X_6)

Interest (X_7)

Depreciation (X_8); and

EBT (Y)

The ANOVA tables are constructed by successively eliminating the variables except interest (X_7). It was found that only interest has got influence over EBT. The final ANOVA table is presented in Table 6.24.

Table 6.24.
ANOVA Table (EBT) using ANCOVA Model with one variable

Source	df	SS	MSS	F	Table 5%	
Regression	1	18948.951172	18948.951172	15.33	4.00	Significant
Mills (R)	14	87403.77	6243.126	5.05	1.75	Significant
Years(T)	4	118634.8	29658.71	23.99	2.53	Significant
Error	55	68001.78	1236.396			

It has been found that the influence of interest on EBT is highly significant and that EBT is not much influenced by the contributory effect of two or more cost components. The interest exerts such an influence on EBT that it can be predicted in terms of the given interest. Therefore, using regression analysis the model for predicting EBT using interest is as follows:

$$\text{EBT (t)} = \text{Average EBT} - 0.9971 (\text{Interest (t)} - \text{Average Interest})$$

Break-Even Analysis

Break-even analysis is a useful tool both in planning control. It is used to evaluate the operational efficiency of the mills. It, otherwise known as cost-volume-profit analysis, is a general term for a number of techniques and procedures designed to assist planning and decision making by classifying the effect of changes in volume of business profitability¹⁵. Cost-volume-profit analysis a valuable tools for measuring the efficiency of current operations¹⁶. A firm should always strive to operate beyond the break-even point (BEP), the point at which the total revenue equals total costs. When the firm is operating below the BEP, it sustains losses. Therefore, the BEP assumes importance in the cost analysis of the manufacturing firms. If you wish to calculate break-even for multiple products (and this is by far the most common situation) you express the sales revenue¹⁷. For calculating the BEP, the costs are divided into fixed and variable.

Fixed Cost in Spinning

Salaries and wages, administration overhead, depreciation and interest on term loans are treated as fixed costs of spinning.

Variable Costs in Spinning

Raw cotton, stores, packing materials, power and fuel, interest on working capital and selling and distribution expenses fall under variable costs of spinning.

The break-even sales are calculated as follows.

$$\text{BEP in Sales} = \frac{\text{Fixed Cost}}{\text{Contribution}} \times \text{Sales}$$

Table 6.24 depicts the break-even sales and actual sales in the select mills for the period of study. It is evident from Table 6.24 that the MCSM, the TCSM, (co-operative) the KCM and the TCM (Private) and the TSM (Kerala Government) operated below the BEP throughout the period of study. The ET, the PM (KSTC), the QCSM (co-operative) and the VT (Private) operated below the break-even level in all years of study excepting in 1990-91. The KT (KSTC), the KLM (NTC), the EI, the AT, the MS and the SBT (Private) operated above BEP sales in three years of the study period.

Table 6.25
Actual Sales & Break-Even Sales In Select Mills
 (1988-89 to 1992-93)

Rs. Lakhs					
Mill	1988-89	1989-90	1990-91	1991-92	1992-93
KSTC					
ET	134.60 (547.95)	225.56 (390.78)	316.90 (278.19)	290.24 (385.25)	423.77 (446.62)
KT	335.97 (426.17)	428.14 (562.36)	493.02 (381.46)	559.75 (468.93)	681.80 (524.43)
PM	204.13 (396.61)	273.26 (366.79)	365.85 (313.48)	440.77 (455.80)	525.99 (546.79)
Co-op					
MCSM	434.39 (1408.40)	*	292.32 (1612.27)	854.93 (1123.04)	973.23 (1193.59)
QCSM	792.31 (1455.46)	714.66 (901.62)	700.82 (505.12)	666.12 (969.40)	739.61 (1108.89)
TCSM	232.51 (341.34)	394.00 (511.17)	400.37 (492.76)	500.12 (631.12)	533.87 (605.54)
NTC					
ATCM	1253.61 (1104.69)	1320.25 (1982.97)	1308.48 (977.64)	1671.35 (1844.80)	183.97 (2732.31)
KLM	873.60 (775.11)	1083.59 (1260.21)	1014.65 (833.57)	1328.25 (1893.18)	1870.28 (1666.68)
Private					
EI	105.47 (92.99)	49.64 (1950.40)	467.65 (1248.45)	717.53 (798.27)	899.40 (808.36)
KCM	55.93 (167.93)	221.75 (516.45)	322.66 (512.56)	686.35 (1225.47)	1008.27 (1124.88)
TCM	681.71 (682.86)	774.44 (1449.10)	717.19 (715.13)	753.04 (1271.13)	952.06 (1011.55)
AT	796.81 (973.78)	1101.34 (1318.95)	1161.78 (971.20)	13.06.29 (1259.62)	1368.89 (1007.14)
MS	960.89 (764.20)	1182.92 (1699.69)	1190.65 (1030.14)	14.28.47 (1426.87)	1435.26 (1592.73)
SBT	883.88 (684.06)	884.91 (967.16)	951.65 (689.42)	928.67 (924.60)	980.25 (1138.42)
VT	700.55 (767.68)	947.79 (2090.87)	1138.15 (912.48)	1295.92 (1565.93)	1401.90 (1540.23)
Kerala Govt					
TSM	352.09 (1540.71)	399.31 (643.96)	384.50 (709.97)	542.76 (900.95)	415.61 (9511.86)

Figures in bracket show the break- even sales

* No operation

Source: Computed

It is, therefore, confirmed that the KSTC, Co-operative and Kerala Government mills are operating below the BEP and that the operational performance of the private sector mills is relatively better as they work above the break-even level. The low profitability of many of the mills is attributed to their below break-even level operation. Therefore, it is suggested that greater focus should be given to increase the level of operation of mills beyond BEP.

Conclusion

A clear understanding of the costs and their behaviour is essential for the effective financial management of a firm. As spinning mills are not price makers, managing for profitability means managing for spinning costs. The foregoing cost analyses reveal that with few exceptions, the spinning costs of the select textile mills in Kerala exceed their yarn price. Cotton is the largest component of spinning cost. In fact, cotton prices are subject to violent fluctuations. Even a slight change in cotton price is bound to make profit position of the mills

topsy-turvy. In order to withstand the adverse effects of violent fluctuations in cotton prices, it is suggested that the mills should procure cotton at competitive prices at regular intervals. Wages and salaries constitute the second largest component of spinning cost. There are wide variations in labour cost, which is attributable to differences in labour productivity. Therefore, efforts should be made to improve the labour productivity. The overheads of the mills are also very high due to the low capacity utilisation of the mills. In order to reduce the overhead expenses, it is suggested to achieve full capacity utilisation and to improve the productivity of men, machines and materials. It has been confirmed that the interest is the most crucial variable influencing the profitability of the mills and EBT can be predicted if interest is known. The model developed to predict EBT using interest is shown below.

$$EBT(t) = \text{Average EBT} - 0.9971 (\text{Interest}(t) - \text{Average interest})$$

The heavy interest burden of the mills is due to over leverage. In view of the large impact which interest has on profitability, it is suggested to reduce the debt considerably. In no case debt should be

allowed to exceed 50% of the total capitalisation. The select mills are working below BEP. It is, therefore, suggested that the mills should strive to raise the production performance at least beyond their BEP. In order to improve the productivity in terms of labour and machinery, it is also suggested that the mills should give utmost priority to modernisation of the mills on a continuing basis.

The findings and suggestions of this study are presented in Chapter VII.

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FINDINGS AND SUGGESTIONS

K. K. Mohamed “Financial management in textile mills in Kerala ” Thesis.
Department of Commerce and Management Studies , University of Calicut,
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CHAPTER VII

FINDINGS AND SUGGESTIONS

FINDINGS AND SUGGESTIONS

In the foregoing Chapters, the textile industry is reviewed, the financial management practices are discussed and the effectiveness of various facets of financial management is evaluated. This Chapter attempts to draw the threads together in the form findings and suggestions.

The textile industry occupies a place of unique importance in the economy of the country by virtue of its significant share in the industrial production, large work force employed, substantial contribution to the exchequer, catering the clothing needs of the vast population and enormous foreign exchange earnings. Inadequate finance, heavy indebtedness, high cost of borrowing, high fiscal levies, poor profitability, sickness etc are some of the burning problems of Indian textile industry. Still, this industry has great potential for growth in the context of the closure of textile mills in Europe, U.S., and East Asian Countries, the changed world trade scenario and its comparative

advantages. Kerala has been predominantly service-based economy. Even though this small State is India's most advanced society in terms of education, literacy and health, Kerala is confronted with the economic problems like mounting unemployment, poverty and industrial backwardness. Kerala has a hoary past in the textile manufacturing. In view of the crucial role played by the industry in the economy of Kerala, the textile industry is considered to be very ideal for the alleviation of her mounting economic problems. Hence, the successful working of the industry is of utmost importance for the economic well being of the State. Of the several problems faced by the industry, finance is considered to be very grave. It is against this background, that an attempt is made to study the financial management in textile mills in Kerala.

Capital Structure

Capital Structure refers to long-term sources of funds. The designing of capital structure is of crucial importance with long-term financial implications. Even though several determinants of capital

structure are put forth, there is no unanimity among the theoreticians and practitioners as to the determinants of capital structure . The sources of long-term funds, flow of funds, mix of funds, cost of capital, capital budgeting and the financing pattern of fixed assets are discussed in this Chapter

Sources of Long- term Funds

The primary objective of financial planning is to secure and employ funds. Firms finance their projects through different sources. The textile mills in Kerala source their long-term funds mainly from debt and equity . The role of preferred stock as a source of long-term funds is very insignificant. The aversion of the textile mills to the preferred stock is due to its high explicit cost on account of the inadmissibility of preference dividend for tax purpose. Debentures and lease financing are not yet popular with the textile mills in Kerala.

Sources and Uses of Funds.

Management decisions cause funds movements. The analysis of sources and uses of funds in the mills are helpful to understand their activities. The working capital and repayment of debt are the major uses of funds which are financed primarily by borrowings. It is noted with concern that the additions to fixed assets in the QCSM (co-operative) the TCM (Private) and the TSM (Kerala Govt.) are lesser than their assets worn out. This means that those mills are not deploying funds for modernisation of their obsolete spinning facilities.

Analysis of Capital Structure

Capital Structure is permanent financing of the firm. It consists basically of equity and debt. The capital structure of the textile mills in Kerala is analysed with the help of structural and coverage ratios.

The structural ratios express the extent to which debt financing has been used. Debt involves commitment to pay fixed charges in the form

of interest and principal payments which can not be postponed without adverse repercussions. The debt - equity , debt - capitalisation and debt - assets are studied to measure the degree of debt financing.

Debt to Equity

The D / E ratios of the textile mills in Kerala are very high. In fact, the debt should be very low as the textile mills in Kerala produce wide swings in operating income. The PM (KSTC) the MCSM and the QCSM (co-operative) and the TSM (Kerala Govt.) depend wholly on debt financing as their entire equity have been wiped out.

Debt to Capitalisation

The debt to capitalisation also reveals that majority of the mills employ high proportion of debt in their capitalisation.

Debt to Total Assets

The high ratio of debt to total assets in the mills substantiate their greater financial risk.

The analysis of the structural ratios exposes the over leveraged capitalisation of the mills. In fact the shareholders' equity of the mills declined through attrition caused by operating losses. As the Pecking order theory suggests, the mills resort to borrowings when their internal generations are negative or low. Such borrowings instead of contributing any thing takes away the slice of profits. Thus, the mills are getting into trouble by borrowing too much money.

In the context of the shaky history, clouded prospects and uncertainty surrounding the textile industry over leverage can be deadly.

Debt Capacity

The debt capacity of the mills is measured with the help of coverage ratios. None of the mills has consistently passed the test of the interest

coverage ratio norm of 3:1, suggested by James C. Vanhorne. Thus the interest coverage ratio of the mills points to the poor debt servicing of the mills.

The debt service coverage ratios (DSCR) disclose that none of the mills is able to honour its borrowing commitments on a continuing basis. According to A. David Silver, if a company's ability to service debt ratio is less than 1.0, the company is not only over leveraged, but it is on the edge of the diving board overhanging an unfilled swimming pool.

The capital structure of different ownership groups is studied in order to verify the hypothesis that "ownership pattern of textile mills has no influence on the capital structure". The hypothesis has been tested using the ANOVA. It is established that at 5% confidence level, there is no significant variation in the capital structure between different ownership groups. There exists no significant variation in the capital structure between years also. But variations do exist in capital structure

between the mills. Therefore, the hypothesis "ownership pattern of textile mills has no influence on the capital structure" has been accepted.

Cost of Capital

The concept of cost of capital is a crucial variable in all long-term financial decisions such as capital structure management, dividend decisions, and the decisions relating to fund raising. Cost of capital is the rate of return the funds employed should produce to justify their use. The term cost of capital has been used in the composite sense of weighted average cost of capital which is a technique that measures required return in terms of individual component of the firm's capital structure.

The average cost of capital for the select mills during 1988-89, 1989-90, 1990-91, 1991-92 and 1992-93 are 13.30%, 11.20%, 11.51%, 10.51% and 11.89% respectively, the C.V being 38.79%, 30.40%, 35.97%, 29.07% and 25.65% for the corresponding period. Thus the mills differ widely over the years in respect of their cost of capital.

Of the components of cost of capital of the sample mills, cost of debt is the most dominant. The tax deductibility of interest charges effectively reduces the cost of debt to a net amount after prevailing tax rate is applied. In the absence of tax deductibility, cost of debt is the same as the rate of interest. Sector wise, the co-operative mills record the highest cost of debt throughout the period of study. Unit wise, the cost of debt of the AT, the MS, the SBT and the VT(Private) is relatively lower as they have interest tax shield. In the case of other mills, their cost of debt is higher due to the absence of interest tax shield. With few exceptions, ROA of the mills is less than their cost of capital and therefore debt financing in the mills is very risky for the mills. The high risk exposure of textile mills forces the investors to demand higher rate of return on their investments which in turn results in increased cost of capital. Therefore, the hypothesis "in the context of uncertainty surrounding earnings and low or no interest tax shield, greater dependability on debt creates adverse impact on cost of capital" is accepted.

Capital Budgeting

Only 63% of the sample mills disclosed their capital budgeting practices, and of these the KSTC, NTC and the MS (Private) have the capital budgeting system. The KSTC and the MS employ both the pay back period and the benefit cost ratio methods for their project appraisal, while the NTC mills follow the pay back period method only.

Financing Pattern of Fixed Assets

The mills should follow an appropriate financing pattern that will assist in bringing about the desired increase in shareholders' wealth. The investments in fixed assets involves commitment of funds for longer periods into the future and usually are difficult and costly to reverse. The financing pattern of fixed assets is examined with the help of net fixed assets to shareholders' equity and net fixed assets to long-term funds.

Net Fixed Assets to Shareholders' Equity

Excepting the KLM (NTC), all mills are depending partially on debt to finance their fixed assets. The PM(KSTC), the MCSM, QCSM (Co-operative), the KCM (Private) and the TSM (Kerala Govt.) finance their fixed assets with debt only.

Net Fixed Assets to Long-term Funds.

Excepting the TSM, all mills are able to keep the ratio of net fixed assets to long-term funds below unity. In the case of TSM, it follows an aggressive assets financing policy as it depends on short-term funds to finance a part of its fixed assets and the whole working capital.

As working capital accounts for the major uses of funds, evaluation of the effectiveness of the management of working capital assumes much significance.

Working Capital Management

Working capital management is an important facet of financial management. The effective management of working capital would make substantial contribution to the financial success.

Working Capital Management Practices in the Select Mills.

In the majority of the reported mills, the Finance Manager undertakes the functions of the working capital management. The quantum of working capital requirements is determined by making detailed estimates of the components of current assets and by considering the operating cycle with reference to peak requirements. The reported mills review their working capital position at monthly or quarterly intervals. The budgetary control and funds flow analysis are employed for the control of working capital

Cash losses and under investment in inventories and receivables are the causes of inadequate working capital, while redundant working capital is the result of excessive investments in receivables and inventories.

High interest rates, high cost of raw materials, damage to credibility, low liquidity and low profitability are the ill effects of inadequate working capital in the mills.

Majority of the sample mills are following conservative policy of financing working capital.

Liquidity Position of the Select Mills.

Liquidity is the ability of the firm to meet short-term obligations. It reflects the short-term financial strength of the mills. In fact, a mill can run without profitability but it cannot run without liquidity. Thus liquidity is the prerequisite for the survival of the mills. The liquidity position of the mills is studied with the help of current and quick ratios.

The mills differ widely in respect of current ratio. The current ratio is below the traditional norm of 2:1 in 37.50% of the sample mills. The TCSM (co-operative) registered the highest average current ratio of 13:1 while another co-operative mill, the MCSM showed the lowest average current ratio of 0.82:1. The high current ratio in the mills is due to the accumulation of sluggish receivables and inventories. The quick ratio, a more refined conventional measure of liquidity, also varies widely between the mills. With respect to the QR, only 37.50% of the mills pass the test of the conventional norm of 1:1. This is because of heavy inventory build up. This leads to conclude that the majority of the mills are illiquid.

Working Capital Turnover.

The degree of efficiency in the use of short-term funds for generating sales is examined with the help of working capital turnover ratio. It is evident that in 31.25% of the mills, the working capital turnover ratios are high owing to the inadequacy of working capital. In

the case of the TCSM (co-operative), it is not able to generate sufficient sales commensurate with its excessive working capital.

Cash Management

It is the cash which keeps a business going. The steady and healthy circulation of cash throughout the entire business operation is basic of business solvency. In 45% of the mills, the cash management functions are performed by the Accounts Manager. The cash level is determined by preparing cash budget. When the cash level goes below the required minimum, 56% of the mills resort to borrowings and 44% of the mills resort to delaying payments. Cash reports are prepared weekly in 50% of the cases, monthly in 40% of the cases and daily in 10% of the cases, for purpose of review and control of cash. In 33.33% of the reported mills each, the concentration banking, centralised cash collection, in 22% of the reported mills, the telegraphic transfer and in the remaining 11.11% of the reported mills, direct remittance are employed for cash collection. The cash holdings of the mills are not satisfactory as their cash to current assets are less than 10%. Loss of

liquidity, loss of cash discount, high interest charges, damage to reputation and creditworthiness are the ill effects of cash run-out. The surplus cash, if any, is used to discharge short-term obligations and to lend to associates. Only one mill invests surplus cash in marketable securities.

Receivable Management

Receivables are investments in uncollected credit sales. The basic objective of receivable management is to maximise the value of the firm by achieving trade-off between liquidity and profitability. The receivables management functions are discharged by the Accounts Manager in 39% of the sample mills and by the Managing Director in 25% of the sample mills. In 25% of the sample mills, the credit policy is taken by the Chief Executive and the Finance Manager. Credit is granted on the basis of sales forecast. The terms of credit vary from mill to mill. It is one week in 55% of the reported mills, two weeks in 11% of the reported mills, one month in another 11% of the reported mills and two months in 23% of the reported mills. The receivable reports are

prepared weekly by 20%, of the mills, monthly by 60% of the mills and quarterly by 20% of the mills. In the majority of sample mills, receivables are the second largest component of current assets.

In the NTC mills, receivables are the largest component of current assets.

Receivable Turnover Ratio

The receivable turnover ratio indicates the number of times the receivables turnover each year. The mills differ widely with respect to the RTR. Because of the tight credit policy, the RTR has been high. But the debt collection of the mills is not satisfactory as they, barring the co-operative sector, have receivables more than 6 months old . Only two private mills are collecting their receivables promptly. Therefore, it is concluded that the management of receivables is not effective.

Inventory Management

Inventory accounts the largest component of current assets in select mills. Inventory management tests the skill of financial managers

on several fronts including raw material purchasing , processing and holding finished goods for sale. The objective of inventory management is to minimise total inventory costs. Effective management of inventory enables the mills to solve acute liquidity problems, maximise profitability and facilitate smooth production and sales operations. In 34% of the mills, the inventory management functions are discharged by the Production Manager, in 22% of the mills each by the Chief Executive and the General Manager. The maximum level of inventory is determined on the basis of consumption during lead time plus safety margin. The replenishment system is followed by 57% of the mills for ordering goods and EOQ system of ordering goods is followed by 29% of the mills. The remaining mills do not follow any particular system. The safety stock is maintained evenly in 78% of the mills. About 44% of the mills experience shortage of inventory leading to stoppage of production. Inventory reports are prepared by 70% of the mills. The period of such reports varies from mill to mill. In 14% cases, it is weekly, in 28% cases it is monthly and in another 28% cases it is quarterly. As ABC control system is not employed in 72% of the

reported mills, it is concluded that the textile mills lack proper inventory control system.

Inventory Turnover

It is found that 75% of the sample mills are holding inventory for periods exceeding three months requirements, ignoring the Government direction not to stock inventory for more than three months needs. The mills' inventory turnover, an indicator of liquidity, are low because of heavy build up of sluggish inventory. It has been revealed that excessive inventory is being carried by the mills. The liquidity risk increases directly with inventory build up. Besides their purchase price, the mills stand to lose from cost of storing. The build up of heavy inventory affects the mills ability to meet their daily commitments. Thus, the inventory management in the mills is not also satisfactory.

The foregoing analysis establishes that the management of working capital is ineffective mainly due to the poor management of receivables and inventory. Therefore, the hypothesis "the poor

management of inventory and receivables are the causal factors for the ineffective management of working capital” is accepted.

A linear multiple regression model is developed to estimate the profitability using working capital ratios. The regression analysis establishes that working capital to total assets (WC/TA) and quick ratio (QR) have got such significant influence on PBT/TA so that profitability can be estimated given the WC/TA and QR. The model developed for predicting the profitability in textile mills in Kerala is given below.

$$\text{PBT / TA (t)} = b_0 (t) + b_1 \text{ WC / TA} + b_2 \text{ QR.}$$

Where b_0 is a constant the value of which can be estimated using numerical method

$$b_1 = -0.2648 ; \text{ and}$$

$$b_2 = 0.2048$$

Operating Cycle

The concept operating cycle (OC) is a more precise tool for the financial management to measure the optimum working capital requirements. OC is the length of time from the commitment of cash for purchases until the collection of receivables resulting from sale of goods and services. The OC should be managed effectively because it represents the time interval for which working capital has to be arranged. Usually, shorter span of OC has been characterised as better working capital management and liquidity.

The analysis of the OC reveals that the actual working capital of majority of the mills is in excess of the amount warranted by their OC. Still, such mills are illiquid as larger portion of working capital consists of sluggish inventory and receivables. Such pile up of illiquid current assets causes liquidity problems for the mills.

In fact, the textile mills with poor liquidity are manipulating shorter OC by adopting poor financing decisions of delaying payments to

creditors for supplies. This leads to accept the hypothesis “the shorter span of the OC need not always reflect the effectiveness in the management of working capital”.

The working capital management analysis confirms the illiquidity and the poor or negative profitability. Therefore, there is a strong need to improve liquidity of the mills.

Profitability Profile

Chapter IV that brings to light that the textile mills in Kerala face liquidity problems. This compels them to resort to borrowing. Chapter III exposes the over leveraged capitalisation of the mills. But the borrowings obligate the mills to earn sufficiently high returns for debt servicing and meeting operating expenses. Profitability is an over all reflection of the strengths and weakness of the firm. As profitability ratios are useful to assess the operational effectiveness of the mills, they are analysed with the help of statistical tools.

Excepting in 1988-89, the average GPM of the select mills was above than the corresponding RBI figures. Contrastingly, the average GPM of select mills is less than that of the ICICI figures during 1988-89, 1991-92 and 1992-93. Whereas, the average NPM of the select mills was less than the corresponding RBI figures throughout the period of study. The low NPM of the select mills is due to their high operating expenses and heavy financial charges.

There are large inter mill and inter year variations in profitability. None of the mills could maintain stability in earnings. The unevenness in the profitability is due to their poor control over operating expenses.

The analysis of EBIT to S, GP+DEP to S, EBDIT to S, OCF to S, operating profit per spindle, ROA, ROE, EBDIT to TA+Acc. DEP and OCF to TA+Acc. DEP confirm the poor profitability of the mills with the exception of the AT, the M.S and the SBT (Private) whose cost of debt is relatively low because of their interest tax shield. The poor profitability is thus threatening the very survival of the mills.

In fact, a mill can be said to have failed if it cannot earn reasonable return on its investments. The inadequate generation of profits has resulted in the complete erosion of equity base of the MCSM, the QCSM (Co-operative), the KCM (private) and the TSM (Kerala Govt.). As the pecking order theory suggests, the low internal generations in select textile mills compels them to greater borrowings. But in the context of the wide volatility of the operating income and the high cost of borrowings, heavy debt financing becomes a double-edged sword for the textile industry in Kerala. The profitability analysis shows that the profitability of the select textile mills has been low and in many cases negative. Therefore, there is the need for the mills to earn sufficiently high yields to cover the operating expenses and pay out.

Cost Structure

As spinning mills are not price makers, managing for profitability means managing for spinning costs. The elements of spinning costs are analysed one by one.

Cotton Cost.

The cotton cost is influenced by the quality, market conditions and purchasing efficiency. The cotton cost is the largest component of spinning cost as Cotton accounts for more than 85% of the fibre consumption in spinning mills. A slight change in the price of cotton is bound to make financial and profit position of spinning mills topsy-turvy. The combined mean of cotton cost, as a percentage of sales value for select mills during the period of study is 57.06%. In 1988-89, the KSTC mills recorded the highest raw material cost, while it was the lowest in the private mills. During 1988-89 raw material cost was the highest for private mills and the lowest for NTC mills. In 1990-91, raw material cost of the co-operative mills was the highest, while it was the lowest in the NTC mills. During 1991-92 and 1992-93, the NTC mills registered the highest raw material costs and that of the KSTC mills the lowest. In general, raw material costs of all the mills registered an uptrend. The mills also recorded wide scatter in raw material costs relative to sales value, while the inter mill variations were the highest in private mills throughout the period of study.

Labour Cost

As wages and salaries are the largest element of conversion cost, they are the key determinants of profitability in spinning mills. Therefore, labour productivity should be maintained at the maximum possible levels. The wages and salaries showed an increasing trend consequent to the linkage of dearness allowance with the consumer price index. The average labour cost as percentage of sales value was 22.24, in 1988-89, 17.00 in 1989-90, 18.02 in 1990-91, 15.05 in 1991-92 and 15.21 in 1992-93, which was above the SITRA standard of 12.00% for the average spinning mills. On an average KSTC mills recorded the highest labour cost relative to sales value during 1989-90, 1991-92 and 1992-93. In 1988-89, the private mills incurred the highest wage cost and in 1990-91, the NTC mills registered the highest wage cost. The lowest wage costs as a percentage of sales value were incurred by the private mills during 1990-91, 1991-92 and 1992-93 and that of the co-operative mills in 1988-89 and 1989-90. In fact, there are wide inter mill variations in wages and salaries. This is attributed to difference in

productivity and wage rates and larger labour complements. The increasing labour cost has affected the profitability of the mills.

Power Cost

The average power cost relative to sales value for the select mills was 6.11% in 1988-89, 4.96% in 1989-90, 4.46% in 1990-91, 4.83% in 1991-92 and 5.99% in 1992-93. The SITRA standard for power cost for the average mills is 10.50% of the sales value. The power cost is relatively lower in Kerala because of lower power tariff. However, the power shortage, low quality of power etc., has hampered smooth working of the spinning mills in Kerala. Sector-wise, the NTC mills recorded the highest power cost relative to sales value in 1988-89, 1989-90 and 1990-91 and the KSTC mills in 1991-92 and 1992-93. The lowest power cost was recorded by private sector mills during 1988-89, 1990-92 and 1992-93 and the co-operative mills in 1989-90 and 1990-91. The power cost differed widely between mills and between years. The energy costs of the mills also took an upward trend.

Cost of Stores

According to SITRA norms, while the stores expenses are on the average about 3.50% of sales revenue, half of them is for packing materials. Excepting in 1989-90, the overall average stores cost as a percentage of sales value for the select mills was less than the SITRA norm of 3.50%. Among the different sectors, the cost of stores was the highest in the NTC mills during 1988-89 and 1990-91. The lowest cost of stores was recorded by the KSTC in 1988-89, 1989-90 and 1991-92 and by the co-operative mills in 1990-91 and 1992-93. The private mills recorded the highest variations in the cost of stores. It is observed that the cost of stores showed an increasing trend.

Overheads

The overheads for the select mills were well above the SITRA norm throughout the period of study. The private mills recorded the highest overhead costs as a percentage of sales value, while the NTC mills posted the lowest overhead costs in relation to sales value in 1988-

89, 1991-92 and 1992-93. The co-operative mills marked greater variations in overhead costs. The higher overhead cost relative to sales value is because of low productivity and low sales revenue.

Interest

The interest expense of the select mills takes an increasing trend. Excepting the KT and the PM (KSTC) and the MS (Private), all the mills recorded very high interest charges throughout the study period. On an average, the interest charges relative to sales value of the mills were more than twice the SITRA norm. Throughout the period of study interest relative to sales value was the highest in the co-operative mills and the lowest in NTC mills. There was wide scatter in the interest cost in relation to sale between mills and between years. The high interest burden of the mills is due to the over leverage and high cost of borrowings. It has been proved that the interest is the most significant variable that determines the profitability of the mills. The model developed for estimating EBT using interest is given below.

$$\text{EBT (t)} = \text{Average EBT} - 0.9971 (\text{Interest (t)} - \text{Average Interest})$$

Depreciation

The depreciation relative to sale value for the select mills was higher than the SITRA standard through out the period of study. The depreciation relative to sales value differed widely between years and mills. The level of depreciation has been low in the MCSM, QCSM (co-operative) the TCM and MS (private) and the TSM (Kerala Govt.). This points to the low investments made by these mills in modernisation. It is distressing to note that the asset replacements of the QCSM, the TCM and the TSM are less than their assets worn out. In fact, the annual investment on modernisation should be about 3 to 4% of the sales revenue.

Thus the cost of spinning is very high in the textile mills in Kerala leaving nothing or very little towards profits. The yarn costs in textile mills in Kerala exceed the SITRA norm. As the yarn prices have no positive correlation with the yarn costs, the textile mills in Kerala are

suffering heavy losses or earning very nominal profits. It has been found that among the cost components, the influence of interest is very strong on profitability. The larger variations in spinning costs between the mills and the years demand the need for greater focus on cost control.

The break-even analysis reveals that the KSTC, co-operative and the Kerala Government mills are operating below the break-even point (BEP). The operating performance of the private mills is relatively better as they are working above the BEP. Thus owing to the continued uneconomic working, the financial flexibility of the industry has been shattered.

Suggestions

The findings of the study lead to the following suggestions to the Government and to the industry.

Suggestions to the Government

Considering the key role of the textile industry in the Indian economy, the Government should formulate suitable policies for the sustained and balanced growth and development of the industry. In the light of this study, the following suggestions are given to the Government, which if implemented earnestly would certainly help improve the performance of the textile industry.

1. The incidence of heavy fiscal levies shoots up the prices of cloth and consequently the off-take of cloth is very poor. In fact, being a mass consumption item, the duty incidence on textiles should be minimal. Therefore, in order to widen the demand for textiles, it is suggested that the Government should scale down the excise and indirect levies on textiles.
2. The winds of liberalisation have swept almost every sector of the economy and consequently the textile industry is exposed to global

competition. The industry will be able to meet the challenges of international competition only if it can sell quality goods conforming to ISO standards at competitive prices which will be possible only through modernisation of production facility and technology upgradation. To increase the competitiveness of the textile industry, the Government should provide sufficient financial assistance on soft terms to the industry to enable it to clear the large modernisation backlog and upgrade technology rapidly.

3. As a direct corollary to the recommendations of Tandon and Chore Committees and the operation of Credit Authorisation Scheme, the financial institutions reduce their lending to the industry. subsequently there is severe credit crunch and the plight of the industry is getting aggravated. Therefore, the Government should ensure that the genuine credit requirements of the industry are adequately met.
 4. The capital cost in India is one of the highest on account of the high interest rates. The profitability of the industry has been eroding
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because of the very high interest rate structure. Even mills with commendable track record for several years are facing a critical situation. To improve the competitiveness of the industry, it is suggested that the Government should ensure it a level play ground by reducing the interest rates to those on par with the countries of international competitors.

Suggestions to the Industry

The healthy growth of the industry largely depends on profitability. Effective financial management of the firm is identified as one of the critical success factors that contribute to profitability. Therefore, the industry should focus its attention for the proper management of finance. The following suggestions are made to the industry to make the financial management more effective.

1. The over leveraged capitalisation and poor debt servicing expose the textile mills in Kerala to increased financial risk. The mills with inadequate equity base have little reserve strength to weather

adversities and are, therefore, sick prone as there is strong association between weak equity base and sickness. As textile mills are subject to greater risk, they ought to rely more on equity financing. In this precarious situation, it is suggested to the industry to make efforts to correct the lop sided and unbalanced financial structure by converting debt into equity along with fresh issue of equity so that the equity base can be strengthened and relieve the mills' heavy interest and repayment of debt burdens. The necessary financial engineering to this effect can be done by negotiating with the lenders. As for the KSTC, co-operative, NTC. and Kerala Government mills, this is rather easy as the Govt. is the major lender to those mills. In view of the key role of the textile industry in the economy, it deserves a liberal treatment with regard to debt servicing. Further, in order to save the industry, lenders should do maximum by reducing the interest rates and by extending the prescribed time schedule for the repayment of debt. Through this sort of capital restructuring, the over leverage in the capitalisation and the consequent high cost of capital can be reduced considerably.

2. The effective working capital management is the primary means of achieving the firm's goal of adequate liquidity. There is an urgent need for improving liquidity. In order to make the management of working capital more effective, the following suggestions are made.
 - a. The mills should take sincere efforts for the prompt collection of debts. As regards debt remaining uncollected for more than 6 months, it is better for the mill to make use of the factoring service for realisation of such debts.
 - b. Regarding heavy inventory build up, it is suggested to dispose of unnecessary, slow moving and obsolete stores, spares, loose tools etc. even at throwaway prices to ensure release of funds so blocked and the management must be at its guard against accumulation of such items in future too. The mills should strive to keep inventory at lowest levels consistent with providing the material necessary to meet production schedule. It is also suggested to replace the prevailing purchasing practices by the JIT purchasing. The main

advantages of the JIT purchasing are savings in large space, inventory reduction, lead time reduction, cost savings, productivity improvements, more competitiveness, large reduction in stock and working capital. Effective control of inventory should be introduced in the form of inventory flow forecasting, meshing raw materials, work-in-progress and finished goods, speedy and efficient handling of inventory, strategic placement of inventory and prompt inventory reports. The ABC analysis must also be introduced. All these will not only solve the acute problems of liquidity, but also increase the annual profits and causes substantial reduction in working capital.

3. It has been found that the profitability in textile mills in Kerala has not been satisfactory. The profitability of the mills can be increased by enhancing the operating efficiency of the mills. The efficient purchasing, increased man-spindle utilisation and productivity and strict control over operating expenses would help increase the operating efficiency and the profitability of the mills. The textile mills are resorting to greater borrowings due to low / no

internal generations, But these borrowings, instead of contributing any thing, has taken away the slice of profit. Therefore, high degree of leverage is not beneficial for the industry. In order to improve profitability of the industry, the industry should considerably reduced the dependence on borrowings. In this scenario, the following suggestions are made.

- a. The low or negative operating profits of the mills and the large inter mill variations in costs underline the need for correct costing methods and strict control over costs. The mills have to reduce costs wherever it could if it is to remain competitive. It is suggested to the industry to focus on the following areas to make the industry cost effective.
- b. As cotton is a major item in the cost structure of spinning, efforts should be made to procure cotton at competitive prices. In order to contain the wide fluctuations in cotton prices, it is suggested that the mills should switch over to JIT purchases.
- c. Wages and salaries are largest element of yarn conversion cost. They take an increasing trend as DA is linked to consume price index. It is suggested to increase operating efficiency in terms of

labour and to effect rationalisation of labour in a big way for the profitable operation of the mills.

- d. As energy costs are taking an upward trend, the mills should attach greater importance to energy audit and energy conservation programme (ECP).
- e. The cost of stores also goes on rising. It is, therefore, suggested to exercise prudent inventory control techniques to keep the stores cost at a reasonable level.
- f. The overhead burden can be reduced considerably by improving spindle productivity and thereby spreading overhead costs on more units of output.
- g. The interest cost is more than twice the SITRA norm. It has been established that interest exerts strongest influence on the profitability in textile mills in Kerala. In fact, the plight of the mills is getting aggravated due to high interest costs. The cost of capital of the mills is very high on account of high interest rates and the absence of interest tax shield. In view of larger impact which interest has on profitability, the mills should reduce the debt financing considerably.

- h. Actually one half of the production facility of the mills remains under utilised. In fact, the standard capacity utilisation in spinning mills is more than 95%. In this dismal scenario, the industry should strive to achieve at least the standard spinning capacity utilisation.
- i. The weaker mills with relatively old machinery and high cost structure will not be able to cover the variable costs and therefore attention should be focussed on the modernisation of the plant and machinery. Actually, modernisation should be a continuous process. In order to evenly space the burden of modernisation, the production processes should be reviewed every year and modernisation undertaken wherever necessary.

It is rightly hoped that the above findings and suggestions would go a long way in making the financial management of the textile industry in Kerala more effective .

APPENDICES

APPENDIX I
QUESTIONNAIRE

A General

1.01 Name & address of the mill :

1.02 Date of incorporation :

1.03 Date of commencement of business :

1.04 Date of commercial production :

1.05 Type of ownership :

Please tick

Private Public NTC Co-operative KSTC Govt. of Kerala Joint Venture

1.06 Please supply the list of directors along with their qualifications and functional areas.

1.07 Who are the policy makers ?

Board of Directors Govt. of India Govt. of Kerala Any other, please specify

1.08 Nature of operation

Spinning Composite

1.09 Type of technology

Conventional Modern Most modern

1.10 No. of shifts worked

One Two Three

1.11 Source of power supply

K.S.E.B Generator KSEB & Generator

1.12 Please furnish the production particulars from 1988-89 to 1992-93

Production particulars	1988-89	1989-90	1990-91	1991-92	1992-93
Production capacity with average count in 1000 Kg					
Actual production with average count in 1000 Kg					
Value of production in Rs in Lakhs					

1.13 Please provide details of your spinning capacity from 1988-89 to 1992-93

Spinning capacity	1988-89	1989-90	1990-91	1991-92	1992-93
Licensed					
Installed					
Utilised					

1.14 Kindly provide detail of employment as on 31.03.1993

Nature of employment	No. employed
Permanent	
Temporary	
Badali	
Trainee	
Casual	
Others	
Office	
Total	

1.15 What is present size of work force :Nos .Please furnish details of the number of excess / shortage of workers, if any.Nos

1.16 Is there any labour absenteeism ? Yes / No
If yes, please give details

1.17 Please furnish the amount spent for labour welfare facilities from 1988-89 to 1992-93

Year	Amount in Rs.
1988-89	
1989-90	
1990-91	
1991-92	
1992-93	

1.18 Please furnish the details of man days lost on various grounds from 1988-89 to 1992-93

Year	Lab Strike	Lay off	Power failure	Others
1988-89				
1989-90				
1990-91				
1991-92				
1992-93				
Total				

1.19 Which are your markets ?

Kerala
 Outside Kerala
 Outside the country

1.20 Who are your major customers ?

Handloom
 Powerloom
 Mills

1.21 Are you able to execute customers' orders on time ? Yes / No
If not, please specify reasons.

1.22 Please furnish details of marketing support form Govt., if any

1.23 Nature of your market

Buyers' market
 Sellers' market

1.24 Do you experience any problem of marketing ? Yes / No
If yes, please explain

1.25 What is your break-even production in terms of units and value

1.26 The present overall position of the mill

Sick
 Incipient sick
 Sound

1.27 What according to you is the most important problem of the mill ?

Financial
 Technical
 Marketing
 Managerial

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1.28 What are the remedial measures according to you to solve the above problems ?
Please explain

B Long-term Financial Management

2.01 Do you have any capital budgeting system ? Yes / No

If yes, please specify the methods employed for project appraisal

Pay back period
 ARR
 IRR
 NPV
 BC ratio
 Any other, please specify

2.02 Who takes the investment decision ?

2.03 Kindly detail the long-term sources of funds from 1988-89 to 1992-93

1988-89	Authorised Rs in Lakhs	Issued Rs in Lakhs	Subscribed Rs. in Lakhs	Paid up Rs. in Lakhs
Equity				
.....% Preferred stock				
.....% Debenture				
.....% Loan				
Leasing				
Any other, please specify				
Total				

1989-90	Authorised Rs in Lakhs	Issued Rs in Lakhs	Subscribed Rs. in Lakhs	Paid up Rs. in Lakhs
Equity				
.....% Preferred stock				
.....% Debenture				
.....% Loan				
Leasing				
Any other, please specify				
Total				

1990-91	Authorised Rs in Lakhs	Issued Rs in Lakhs	Subscribed Rs. in Lakhs	Paid up Rs. in Lakhs
Equity				
.....% Preferred stock				
.....% Debenture				
.....% Loan				
Leasing				
Any other, please specify				
Total				

1991-92	Authorised Rs in Lakhs	Issued Rs in Lakhs	Subscribed Rs. in Lakhs	Paid up Rs. in Lakhs
Equity				
.....% Preferred stock				
.....% Debenture				
.....% Loan				
Leasing				
Any other, please specify				
Total				

1992-93	Authorised Rs in Lakhs	Issued Rs in Lakhs	Subscribed Rs. in Lakhs	Paid up Rs. in Lakhs
Equity				
..... % Preferred stock				
.....% Debenture				
.....% Loan				
Leasing				
Any other, please specify				
Total				

2.04 Pattern of share holding

closely held

widely held

2.05 Kindly furnish the details of term loans from 1988-89 to 1992-93

Year	Amount Rs in lakhs	Period	Purpose	Security offered	Rate of interest	Terms of repayment
1988-89						
1989-90						
1990-91						
1991-92						
1992-93						

2.06 Do you receive any financial assistance from Govt. ? Yes / No
If yes, please give details.

2.07 Would you attach any importance to cost of capital ?

Yes

No

Don't know

If yes, please supply the following information

Cost of capital	YEAR				
	1988-89	1989-90	1990-91	1991-92	1992-93
Debt					
Equity					
Preferred stock					

2.08 Please furnish the investments in fixed assets during 1988-89 to 1992-93

YEAR	Amount Rs. in Lakhs
1988-89	
1989-90	
1990-91	
1991-92	
1992-93	

2.09 Do you have any programme for expansion / modernisation ? Yes / No
If yes, please give details

2.10 Are you paying dividend ? Yes / No

If yes, what are your practices of paying dividend ?

Cash dividend

Bonus share

Stock split

If you are paying cash dividend, please specify the rate of dividend for the period 1988-89 to 1992-93.

Year	Rate
1988-89	
1989-90	
1990-91	
1991-92	
1992-93	

2.11 What are your difficulties in the area of finance? Please explain

2.12 What are your suggestions to tackle the above difficulties ? Please explain

Please Supply a copy each of your Annual Reports for five years from 1988-89 to 1992-93

C. Working Capital Management

General

3.01 Who looks after the management of working capital ?

3.02 How do you determine the amount of working capital ? Please explain

3.03 How do you determine the amount of each current asset ? Please explain

3.04 How do you control working capital ?

3.05 Do you review working capital regularly ? Yes / No

If yes, how often do you review?

Daily

Weekly

Fortnightly

Monthly

Half yearly

Yearly

3.06 What technique do you employ to review working capital positions ?

3.07 What are the causes of working capital deficiency ?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cash shortage	Under investment in marketable securities	Shortage of inventory	Others, Please specify

3.08 What is the effect of working capital deficiency ?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low liquidity	High cost of debt	No / low return	damage to reputation	Any other, please specify

3.09 What are the causes of excess working capital ?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sluggish inventory	Uncollectible receivables	Idle cash	Over investment in marketable securities	Others, please specify

3.10 What are the sources of working capital and the percentage of each source

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Equity	Long-term debt	Retained earnings	Short-term debt	Others
.....%%% -%	Please specify%

Cash Management

3.11 Who manages the cash?

3.12 What is the estimated monthly requirement of cash?

3.13 Do you receive any advance from customers? Yes/No
If yes, please give details

3.14 How do you determine the optimum level of cash? Please explain

3.15 Do you prepare cash report ? Yes / No

If yes, what is the period of report ?

Daily

Weekly

Fortnightly

Monthly

Half yearly

Yearly

3.16 What are the costs of cash run out?

damage to
reputation

high cost
of debt

loss of cash
discount

others, please
specify

3.17 How do you tackle cash run-out ?

loans

sell investments

delay payments

others, please specify

3.18 How do you manage excess cash?

invest in
marketable securities

discharge short-
term obligations

lend to
associates

purchase
inventories

others, please
specify

3.19 What methods are employed to collect cash ?

centralised
cash collection

lock box
system

concentration
banking

zip code

fax
transfer

others,
please
specify

Investment Management

3.20 Who manages the investments ?

3.21 When do you make investments ? Please explain

When returns are
attractive

When there is
surplus cash

Others, please specify

3.22 How do you determine the optimum level of investments?

3.23 What are the securities selected for investment?

Govt. securities

Equity shares of
private companies

Debentures of
private companies

Others,
please specify

Receivables Management

3.24 Who manages receivables?

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3.25 On what basis do you determine the level of receivable ?

sales forecast Past experience Trade off between cost of carrying receivables and profits from sales others, please specify

3.26 Do you prepare receivable report ? Yes / No

If yes, what is the period of such report

weekly monthly quarterly any other, please specify

3.27 What is your credit policy? Please specify the following :

Period of credit :

Cash discount allowed :

3.28 What is the basis of granting credit ?

Analysis of financial statements Bank checks past experience Trade reference any other

3.29 What is your collection policy?

Strict Lenient Flexible

3.30 What steps do you take for debt collection ?

Reminders through letter Contact over telephone atstage Legal action at stage Compromise atstage

3.31 Who determines the credit policy?

3.32 Who determines the collection policy ?

Inventory Management

3.33 Who manages the inventory ?

3.34 Please name the important raw materials, stores, spares etc., and their source

3.35 Do you have any problem of raw material shortage ? Yes / No

If yes how does it affect production? Please explain

3.36 What is your daily requirement of raw materials in terms of quantity and value ?

3.37 What is the percentage of brokerage paid on purchase of raw materials ?

3.38 What is the basis of determining the minimum level of inventory ?

Consumption during load period Consumption during lead period + safety margin price change Any other, please specify

3.39 How do you determine the maximum level of inventory ?

Opportunity cost of funds employed Availability of storage space Carrying cost Supply conditions Price changes Any other please specify

3.40 What is the basis of determining safety stock?

Variation in lead time period Variation in consumption rate any other, pl. specify

3.41 Is safety stock even throughout the year? Yes / No

3.42 What is the review period of minimum and maximum level of inventory?

3.43 Do you prepare inventory report ? Yes / No

If yes, what is the period of report?

Daily Weekly Fortnightly Monthly Half yearly Yearly

3.44 What system of ordering do you follow ?

EOQ Replenishment system Single order and scheduled part delivery system Any other please specify

3.45 Do you have any A.B.C analysis of inventories ? Yes / No

If yes,

a. Who looks after the 'A' item ?

b. What is the period of stock report of 'A' item to the top management ?

c. Who looks after the 'B' and 'C' items ?

3.46 Do you maintain any optimum level of inventory ? Yes / NO
If yes, please give details

3.47 Who performs the functions of inventory control ?
 Stores Dept. Purchase Dept. Prod. Dept. Any other, please specify

3.48 Which are the slow moving items of inventory ? Please specify

3.49 Any other additional information, opinion and comments do you want to give ?

APPEDIX II
Cost of capital
(1988-89 to 1992-93)

%

Mill	1988-89				1989-90				1990-91				1991-92				1992-93			
	Kd	Ke	Kp	Ko	Ke	Kp	Ke	Ko	Kd	Ke	Kp	Ko	Kd	Ke	Kp	Ko	Kd	Ke	Kp	Ko
KSTC																				
ET	8.56	2.32		10.88	6.10	2.63		8.73	5.53	1.95		7.48	6.58	1.78		8.36	7.12	2.64		9.76
KT	10.76	0.64		11.40	9.98	0.58		10.56	12.69	0.84		13.53	12.20	0.94		13.14	9.31	2.13		11.44
PM	11.86			11.86	11.86			11.86	17.73	0.11		17.84	18.50			18.50	18.44	0.01		18.45
Co-operative.																				
MCSM	22.80			22.80	15.40			15.40	14.00			14.00	14.00			14.00	14.00			14.00
QCSM	22.60			22.60	16.00			16.00	15.00			15.00	13.10			13.10	13.50			13.50
TCSM	14.00			14.00	13.21	.020		13.41	11.91	.040		12.31	11.30	0.53		11.83	13.22	0.95		14.17
NTC																				
ATCM	11.00			11.00	9.00	0.62		9.62	6.40	0.78		7.18	6.81	0.76		7.57	12.88	0.98		13.86
KLM	9.99	2.53		12.52	7.13	1.92		9.05	7.76	1.46		9.22	9.96	1.39		11.35	10.83	1.88		12.71
Private																				
EI	9.63	2.54	3.23	15.40	12.67	0.10	0.64	13.41	7.63	0.08	0.17	7.88	12.25	0.41	0.12	12.78	10.65	1.03	0.10	11.78
KCM	13.00			13.00	11.75			11.75	11.51	0.06		11.57	11.75			11.75	11.75			11.75
TCM	15.57		0.25	15.82	15.71		0.25	15.96	10.94	0.23	0.24	11.41	11.51	0.19	0.68	12.33	10.87	0.45	0.63	11.95
AT	3.95	2.60		6.55	5.29	1.53		6.82	4.65	1.10		5.75	5.72	1.68		7.40	5.57	2.94		8.51
MS	4.02	1.29	0.15	5.46	4.00	1.32		5.32	3.92	0.97		4.89	7.74	0.94		8.68	7.86	1.21		9.07
SBT	8.58	2.09		10.67	5.21	2.37		7.58	5.59	1.79		7.38	5.63	1.60		7.23	3.83	1.55		5.38
VT	15.34	0.47	0.88	16.69	8.16	0.99	0.06	9.21	7.77	0.54		8.31	11.14	0.47		11.61	8.97	0.46		9.43
Kerala Govt.																				
TSM	9.5			9.5	8.00			8.00	8.90			8.90	9.00			9.00	8.20			8.20

Kd = Cost of debt
Ke = Cost of equity
Kp = Cost of preferred stock
Ko = Overall cost of capital
Source: Computed

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