WORKING CAPITAL MANAGEMENT AND PROFITABILITY

(A study on select textile units in India)

Thesis submitted to Pondicherry University in partial fulfillment of the requirements for the award of the degree of

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IN

COMMERCE

By

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CERTIFICATE

This is to certify that the dissertation entitled, **"WORKING CAPITAL MANAGEMENT AND PROFITABILITY" (A study on select textile units in India)** Submitted for the award of the Degree of **Doctor of Philosophy** in Commerce by **Chinta Venkateswara Rao** is the bonofide research work carried out by him independently under my guidance and supervision. I also certify that this has not been previously submitted for the award of any degree or diploma or associateship to any other university or institution.

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DECLARATION

I**,** hereby declare that the thesis entitled, **"WORKING CAPITAL MANAGEMENT AND PROFITABILITY" (A study on select textile units in India),** submitted to the Pondicherry University in partial fulfillment of the requirements for the award of the degree of **DOCTOR OF PHILOSOPHY IN COMMERCE** is my original work and it has not been previously submitted either in part or whole to this or any other University for the award of any Degree/ Diploma.

Place : Puducherry
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ABBREVIATIONS

01.	MNC	:	Multinational Companies
02.	WC	:	Working Capital
03.	CAs	:	Current Assets
04.	WCM		Working Capital Management
05.	CCC	:	Cash Conversion Cycle
06.	CR	:	Current Ratio
07.	QR	:	Quick Raio
08.	CPR	:	Cash Position Ratio
09.	CATTR	:	Current Asset to Total Asset Ratio
10.	ITR	:	Inventory Turnover Ratio
11.	DTR	:	Debtors Turnover Ratio
12.	WCME	:	Working Capital Management Efficiency Measure
13.	NTC	:	Net Trade Cycle
14.	CLs	:	Current Liabilities
15.	IFFCO	:	Indian Farmers Fertilizer Cooperative Limited
16.	NFL	:	National Fertilizer Limited
17.	CMIE	:	Center for Monitoring Indian Economy
18.	CAGR	:	Compounded Annulaized Growth Rate
19.	PI	:	Performance Index
20.	UI	:	Utilization Index
21.	EI	:	Efficiency Index
22.	ARDYS	:	Accounts Receivable Days
23.	APDYS	:	Accounts Payable Days.
24.	INDYS	:	Inventory Days
25.	BSE	:	Bombay Stock Exchange
26.	PAT	:	Profit After Tax
27.	SHE	:	Shareholder’s Equity
28.	NTC	:	National Textile Corporation
29.	BSA	:	Balance Sheet Approach
30.	OCA	:	Operating Cycle Approach

31.	GWC	:	Gross Working Capital
32.	NWC	:	Net Working Capital
33.	ICP	:	Inventory Conversion Period
34.	RMCP	:	Raw Material Conversion Period
35.	WIPCP	:	Work-in-Progress Conversion Period
36.	FGCP	:	Finished good conversion Period
37.	DCP	:	Debtors conversion period
38.	GOC	:	Gross Operating Cycle
39.	NOC	:	Net Operating Cycle
40.	IBA	:	Indian Banks Association
41.	MPBF	:	Maximum Permissible Bank Finance
42.	LCS	:	Line of Credit System
43	DBF	:	Desirable Bank Finance
44	WCR	:	Working Capital Requirement
45.	WCC	:	Working Capital Cycle
46.	ZLWC	:	Zero level Working Cycle.
47.	P&L A/c	:	Profit & Loss Account
48.	NP	:	Net Profit
49.	EBIT	:	Earnings Before Interest & taxes
50.	TVFS	:	Technology Upgradation Fund Scheme
51.	IDBI	:	Industrial Development Bank of India
52.	TRF	:	Textile Reconstruction Fund
53.	QR	:	Quick Ratio
54.	QAS	:	Quick Assets
55.	QLs	:	Quick Liabilities
56.	B/R	:	Bills Receivable
57.	A/Rs	:	Accounts Receivable
58.	RTR	:	Receivable Turnover Ratio
59	ACR	:	Average Credit Period Ratio
60.	RM	:	Raw Material
61.	FG	:	Finished Goods
62.	EOQ	:	Economic Order Quantity

63.	WIP	:	Work-in-Progress
64.	GPM	:	Gross Profit Margin
65.	OPM	:	Operating Profit Margin
66.	ROA	:	Return on Assets
67.	LNSALES	:	Logarithm Scales
68.	GEAR	:	Gearing Ratio
69.	CATURN	:	Current Asset to Turnover Ratio

CHAPTER – I

INTRODUCTION

CHAPTER I

INTRODUCTION

The present study focuses on the relationship between efficient Working Capital Management and profitability in select Cotton Textile units in India. In any business, procurement of funds and their utilization become an important function of financial managers. It has become more relevant subsequent to liberalization measures and subsequent competitions posed by the Multi National Companies (MNCs). As there is no scientific model for working capital management (WCM), the responsibility of fund management is of great importance to the success of any business. The present study attempts to analyze the Working Capital Management as a contributing factor for profitability in select Textile Firms.

I.1 Working Capital: A Basic Component of operations:

Working Capital (WC), is regarded as the lifeblood of a business. It plays a pivotal role in keeping the wheels of a business enterprise running. However, the management of Working Capital is a delicate area in the field of Financial Management as it involves frequent decision-making. (**Joginder Singh Dulta 2000**). Every organization, whether profit oriented or not, irrespective of its size and nature of business need requisite amount of Working Capital. The efficient management of Working Capital is crucial as it decides their survival, liquidity, solvency and profitability of the concerned business organization **(Mukhopadyay 2004).**

The production of goods and realization of cash from sales are not instant. There is a time interval in the procurement of raw materials, and production and sales, and realization of cash. This time interval is referred as 'Operating Cycle. The size of working capital varies based on the length of operating cycle of the firm. That is higher the size of the concern, greater will be the requirement of Working Capital **(Sharma 1988).** The change in the level of current assets depends on the current sales and future expected sales. This calls for a continuous decision to adjust the size of Current Assets. The changing levels of Current Assets may also require the periodic review of the working capital financing pattern **(Moorthy 2000).** The sourcing options are often insufficient for the procurement of needed Working Capital. It is also not always possible for the owners, promoters or the entrepreneurs to mobilize finance from their personal resources. A portion of working capital requirements, therefore, have to be financed through borrowings, keeping in view the short, medium or long-term requirements**. (Philip, Mc Casher 2000).**

I.2 Management of Working Capital – Issues involved

Management issues relating to working capital are many. While some focus on the optimum levels of inventory, others focus on the management of accounts receivables in an optimum way, which leads to profit maximization **(Basley, Scott & Meyer, R.L. 2006)** Deloof identified that the Working Capital has significant impact on profitability of a firm **(Deloof, M 2003).** Efficient management of Working Cappital includes management of various components in such a way that an adequate amount of Working Capital is maintained for smooth running of the business for achieving liquidity and profitability **(Santanu Kr.Ghose & Santi Gopal Maji 2004).** Declining interest rates have brought good liquidity in Indian industry. However, many companies, irrespective of their size, age or product range have been experiencing difficulties in meeting their short term maturing liabilities. The firms' liquidity and profitability are the two important and vital aspects of corporate business life **(Barida, S.C. 2004**). Less liquidity in the firms may lead to fall in business and consequently incur losses. Therefore, liquidity management has become a basic and broad aspect of judging performance of a corporate entity **(Barida, S.C. 2004).**

I.3 Liquidity-The primary objectives of Working Capital Management

The objective of Working Capital Management is to maintain the optimum balance of each of the components of working capital. Liquidity relies on the effective management of receivables, inventories and payables. Firms are able to reduce financing cost and/or increase the availability of funds for expansion by minimizing the amount of funds tied up in Current Assets. Much managerial effort is required to maintain optimum levels of Current Assets and Current Liabilities. This optimum level is achieved by balancing between the risk and efficiency **(George Filback 2002).**

I.4 Efficient Working Capital Management

Efficient Working Capital Management is an integral component of the overall corporate strategy to create shareholder's value. Working Capital is the resultant need of time lag between the expenditure for the purchase of raw material and collections from the sale of the finished product. The continuing flow of cash starting from suppliers of inventory to accounts receivables and back into cash is referred to as the Cash Conversion Cycle. The way in which Working Capital is managed can have a significant impact on both the liquidity as well as the profitability of the firm **(Hyum – Ham Shim and Lue Soemen 1998).** Focusing entirely on liquidity increase will tend to reduce the chances of profitability of the firm **(Hyum – Ham Shim and Lue Soemen 1998).**

Efficient management of Working Capital refers to the management of various components of Working Capital in such a way that an adequate amount of Working Capital is maintained for the smooth running of a firm and for the fulfillment of twin objectives of liquidity and profitability. While inadequate amount of Working Capital impairs the firm's liquidity, holding of excess Working Capital results in the reduction of the profitability. Inefficient management of Working Capital is one of the important factors causing industrial sickness **(Santanu Kr.Ghose & Santi Gopal Maji 2004)..**

Modern financial management aims at reducing the levels of Current Assets without ignoring the risk of stock outs. Efficient management of Working Capital is an important indicator of sound health of an organization that requires reduction of unnecessary blocking of capital in order to bring down the cost of financing **(Santanu Kr.Ghose & Santi Gopal Maji 2004).** There are several techniques to estimate the requirements of Current Assets, these include Percentage Approach, Operating Cycle Approach, Projected Balance Sheet Approach, Regression Analysis Approach, etc. The most important aspect of determining adequate Current Assets should help in uninterrupted flow of funds of production. **(Nanda Kishore 2007).**

I.5 Gross and Net Working Capital

Two distinct views regarding the measurement of Working Capital are the gross and the net concepts of Working Capital . The gross concept refers to total Current Assets while the net concept refers to the difference between the Current Assets and the Current Liabilities **(Subhash Chander 2005).** Working Capital Management is Management of working capital is important for small firms as they hold little investment in fixed assets. Fixed assets are drawn by renting or leasing Plant and Machinery. But there is no way to avoid investment in Current Assets such as Current Assets, accounts receivables and inventories **(Subahs Chander 2005).** Many research studies have indicated that small scale units suffer with inadequacy of Working Capital and inefficient management. Few studies also report that the incidence of sickness amongst small-scale units is due to inadequate Working Capital **(Subash Chander 2005).**

1.6 Focus of Research Studies of Working Capital

Studies on Working Capital Management Focused on different components of Working Capital. Few researchers have focused on estimating the impact of optimum inventories, while others focused on better accounts receivable management and their impact on profitability. The way the Working Capital is managed has significant impact on profitability of firm **(Iaonnis Lazaridis, and Dimitrios Tryfonidis 2006).** A certain level of Working Capital requirement was found to maximize returns of firms **(Iaonnis Lazaridis, and Dimitrios Tryfonidis (2006).** Small firms found focusing on management of inventories less profitable firms found focusing on credit management routines. The studies further suggest that high growth firms follow more liberal credit policy towards their customers, instead of tie up capital in the form of inventories. Meanwhile accounts payable will increase due to better relations of suppliers with financial institutions, which pass on this advantage of financial cost to their clients **(Iaonnis Lazaridis, and Dimitrios Tryfonidis 2006)**

I.7 Measures of Working capital (WC)

Liquidity enables a firm to make a rapid shift in its operational decisions. In order to measure the liquidity position of a firm certain measures have been computed by Barida. **(Barida S.C 2004)**

I.7. A. Current Ratio (CR)

Current Ratio (CR) is an important measure of firm's ability to pay its current obligations out of its short-term resources. Higher is the Current Ratio greater will be the amount available per rupee of current obligations and accordingly, greater is the feeling of safety and security. The rule of thumb (2:1) is based on the logic that in the worse situation, even in the possibility of fifty per cent shrinkage of Current Assets, the firm will be in a position to pay off its current obligations. However, this cannot be treated as a general rule applicable to all types of businesses. Each firm should develop its own standard of Current Ratio from past experience. **(Barida S.C 2004)**

I.7. B. Quick Ratio (QR)

Quick Ratio (QR) is yet another widely used parameter of judging the repaying ability of a firm in the near future. It is a refinement over Current Ratio as it considers the quality of Current Assets. This removes slow moving assets like the stock from the list of current assets. Thus, it assesses the liquidity position of the company more effectively and its rule of thumb is 1:1**. (Barida S.C 2004)**

I.7. C. Cash Position Ratio (CPR)

Cash position ratio (CPR) (known as super quick ratio) is still a more rigorous measure to test the liquidity position of a firm. Absolute liquid assets (Cash in hand, Cash at bank and marketable securities) are compared with the Current Liabilities for computation of this ratio. A high Cash Position Ratio is good from the creditors' point of view, although it indicates poor investment policy**. (Barida S.C 2004)**

I.7. D. Current Assets to Total Assets Ratio (CATTR)

Current Assets to Total Assets Ratio indicates the extent of total firms' investment made in Working Capital purposes. **(Barida S.C 2004)**

I.7. E. Inventory Turn Over Ratio (ITR)

Inventory Turn Over Ratio focuses on the inventory control adopted by firm and shows the relationship between the cost of goods sold during a particular and the average investment made in inventories. The higher the Inventory Turn Over Ratio the greater would be the efficiency of the management and vice versa. **(Barida S.C 2004)**

I.7. F. Debtors Turn Over Ratio (DTR)

Debtors Turn Over Ratio throws light on the type of credit and collection policy pursued by a firm. It is an important tool for analyzing the efficiency of liquidity management. The liquidity position of a company or firm depends on the quality of debtors to a large extent. It measures the rapidity or slowness of their collectibility. Higher Debtors Turn Over Ratio implies the prompt payments made by debtors and vice versa. According to the study conducted by the Centre for Monitoring Indian Economy (CMIE), the average Debtors Turn Over Ratio of 11 times is considered to be satisfactory in Indian manufacturing company. **(Barida S.C 2004)**

I.7. G. Cash Conversion Cycle (CCC)

The relationship between the Cash Conversion Cycle and the corporate profitability is negative.(**Hyum – Ham Shim and Lue Soemen 1998)**

I.8. Earlier studies on Working Capital Management

Working Capital Management **(**WCM) is very sensitive area in the field of Financial Management. It involves the quantification of various components of Working Capital and combination of Current Assets (CAs) and the financing of these assets. Current Assets include all those assets that can be convertible into cash within a short period of time, ordinarily within a year and such temporary investment may be readily converted into cash if need arises. The Working Capital Management of a firm partly affects its profitability.

The ultimate objective of any firm is to maximize profits. But, preserving liquidity of the firm is also important to achieve this objective. It is a fact that increasing profits at the cost of liquidity can bring serious problems to the firm. Therefore, there must be a trade-off between these two objectives. One objective should not be at the cost of the other because, both have their own importance. If a firm does not care for the profits, it cannot survive for a long period. On the other hand, if it does not care about the liquidity it may face the problem of insolvency or bankruptcy. **(Abdul Raheman and Mohammed Nasr, 2007).** These are aspects of inquiry by many studies.

The first literature work in Working Capital Management was pioneered by John Bauer (1916). He examined the Pattern of Operating Revenue for an year and found that the average time taken by consumers for paying for service was two months. The operating revenue for this period was $200,000 and the expenses incurred were $120,000. This contributed to the necessity of Working Capital. If the company is a new one with its actual fixed capital and volume of business, it would practically have to provide this amount in its initial investment. Thus, the company actually has to tieup this sum in the business, which intern earn a return on the amount **(John Bauer, 1916).**

William (1939) opined that the Working Capital is an element to be considered in fixing the rate-base. It normally includes materials, other supplies and Cash for which the book amount may be accepted. The amount of Cash working capital should be based on an actual analysis of the company's operations. It should be included as a principal item in a company's actual investment on operating expenses for the interval between payment and reimbursement. Working Capital (including both materials and supplies, and cash for merchandising) has to be allowed in merchandising activities of the business. In the analysis the taxes should either be weighed in to the computation of the delay in payment of operating expenses, or may be considered separately as an offset against necessary bank balances.

Colin Park (1951) indicated that Current Assets are those assets which are in the process of the operating cycle of an enterprise together with those assets that are available and intended with the management of the firm. Current Liabilities should be interpreted as natural consequence or incident of the cycle upon existing current assets and their liquidation will be provided by natural and progressive conversion of current assets. The researcher also attempted to match historical cost to related revenues. The residual net enterprise assets will include original proprietary investment and the assets increment due to profitable operations less dividend payments to investors.

John Segan (1955) states that the Working Capital ratios are useful tools in appraising the financial strength and immediate solvency of a company. From operational point of view, however, the manager is primarily concerned with the current Cash flows and those flows expected in the near future. He concludes that a satisfactory Working Capital ratio is required to meet an immediate due payments.

Chadda (1964) studied the inventory management practices of Indian companies and found that the management of individual components of inventory vary and remain scattered. The study recommended for the use of tools like Operation Research in ensuring the efficient management of Working Capital .

Philip (1966) analysed the working capital and stated that the renovation of the balance sheet needs consideration and all the resources and equities required to be given proper identification. Also he stated that the present classification of balance sheet items, especially Working Capital items, may lead to different implications. The statement covering past operations is useful in making financial decisions related to Working Capital. However, adding projected funds statement to historical funds statement might provide even better data for making financial decisions.

Van Horne (1969) has emphasized on the fact that the lower the level of liquid assets, the greater will be the risk of not being able to meet current obligations. He defined risk as the probability of technical insolvency and found that this occurs whenever a firm is unable to meet its cash obligations.

Merville (1973) examined the Optimum Working Capital Policies by dividing the Working Capital into permanent and temporary components. The Permanent components are associated with trends in basic demand and found them increasing due to credit policies. Temporary components are included periodically and stochastically. This distinction allows for mere explicit consideration of different sources of financing. Permanent components can be financed, by continuing long term or intermediate term funds. Finally, the management can relate the complex set of credit and inventory policies in carrying out its short term planning function.

Ramkumar Mishra (1975) studied the Problems of working capital with special reference to the public undertakings in India and identified inventory, receivables, Cash and working capital finance as the four major areas of Working Capital drawing the attention of Fund Manager.

Agarwal (1977) conformed that a majority of companies failed to plan their Working Capital requirements properly. As a result, they often experienced either excessive or shortage of Working Capital.

Vijaya (1977) made "a comparative study of Working Capital Management in Co-operative and Private Sectors Companies in the Sugar Industry of Tamil Nadu" and found that the Current Assets registered higher growth compared to the sales. The correlation analysis revealed that there was negative correlation between return on investment and Working Capital. His study further revealed that the Working Capital Management in private sector was found to be better than that of the public sector.

Vijayasarathi and Rao (1978) studied the "Working Capital Investment in Financing in Public Enterprises" and found that the management of Working Capital played a key role in the success of business.

James Gentry, et. al (1979) studied the managerial aspects of management of Working Capital process and stated that the literature on Working Capital is rather limited and that the process of managing short-term resources is not understood well by academicians. The study interpreted objectives of Working Capital and indicated the need to improve financial planning models to include explicitly short-term objectives. They examined the predictability of cash inflows and outflows and evaluated the potential factors affecting predictability. They also examined management perception of long-term objectives in order to provide a proper perspective to short term financial planning.

Iyer (1979) analysed the "Working Capital Management in Textile Industry" and concluded that the primary aspect in Working Capital Management is to recognize the importance of Working Capital as part of the total capital. The second aspect is to recognize the factors which influence Working Capital and their volume and to look at the remedial action on the basis of the ratio of Working Capital to the total capital.

Banerjee (1979) established the relationship between liquid ratio, debtors' turnover ratio, creditors' turnover ratio and the movement of overdraft. The study found that when the liquid ratio was below the norm, the debtors' turnover ratio and the creditors' turnover ratios were high while the movement of overdraft showed declining trend. The study indicated how turnover ratios would affect the financial performance of a given company and concluded that the management of working capital was not satisfactory.

Gangadhar (1981) examined the statistical trends in Working Capital position among medium, large and small public and private limited companies in the Indian corporate sector during 1961-77. The application of second parabola revealed the Current Assets formed relatively higher proportion of total net assets in private limited company than in public limited companies. This study also revealed that in case of medium and large public limited companies there appeared to be a lead – lag relationship between gross fixed and current assets over the study period. [65]

Lal (1981) explored the Inventory models and the problems of price fluctuation in Modi Steels Ltd., as a case study with an objective of analyzing inventory management and found that the company is not taking into account the price variables in inventory management. He also developed a model by including the price variables. The study strongly recommended policies, which would take care of both internal and external factors in to account, for efficient management of Working Capital.

Swamy (1982) studied various aspects of Working Capital and materials management in select enterprises from 1977-78 to 1981-82. The study revealed that inventory represented more than 61 per cent of the total Current Assets of the concern.

Ghosh (1983) addressed the existing practices of Working Capital in Crane manufacture in India. The study indicates that the management of individual components of Working Capital is erratic. The collection mechanism followed by the sample company seems unplanned and the company took more time than allowed in collecting the cash from the customers. The payment to the suppliers was equally delayed keeping highest portions pending for more than allowed period.

Akkihal (1984) studied Working Capital Management in Small Scale Industrial Units in Hubli – Dharwad Corporation Area". This study indicates that the management of Working Capital in 94 small-scale industries in Hubli – Dharwad Municipal Corporation (HDMC) in the state of Karnataka, was found to be highly unplanned. The study concentrated on the ratios like current ratio, inventory turnover ratio, fixed assets turnover ratio, earning power and gross profit margin. This study revealed that the improper management of Working Capital had adverse effect on the performance of the industries.

Rajeswara Rao (1985) examined the Working Capital policies adopted by the select Public Sector units and assessed the degree of effective management of Working Capital funds. This study revealed that no company has clearly defined Working Capital polices and hence majority of them could not achieve efficiency in Management of Working Capital.

Khandelwal (1985) investigated the Working Capital Management process and practices among the selected small-scale units in Jodhpur industrial estate during 1975 –1980. The analysis showed that the sample firms held more investment in inventories than required and that the management of receivables was found not in order. It was found that bills receivables constituted more than 50 per cent of Current Assets.

Panda (1986) examined the management of Working Capital funds in Small Scale Industries in the State of Orissa and observed the issues like optimum investment of funds in Current Assets. Relationship between growth in sales and Working Capital needs and the role of banks in meeting Working Capital requirements is explored. This study also reveled that Working Capital was neglected by majority of sample units, which lead to the increased losses.

Ravi K Jain (1988) examined the Working Capital Management practices in State Enterprises in the State of Rajasthan. The study found that the companies had faced both over investment and under investment in Working Capital. The study recommended the release of excess fund in Working Capital and invest the same in short-term or long-term assets.

Sinha, Sinha and Singh (1988) have examined the issues relating to management of Working Capital in Fertilizer Corporation of India in the State of Gujarat. The study showed that a huge portion of funds was tied up in Working Capital especially in inventory and receivables. The study revealed that the sample companies failed to mange Working Capital efficiently and hence the funds were locked up.

Sharma (1988) examined Working Capital Management in Private Sector Units and explored whether the causes responsible for low profitability, low capacity utilization and making losses in textile mills are relating to mismanagement of Working Capital in textile mills of Rajasthan.

Mall Singh (1989) evaluated the management of Working Capital in Public Sector Corporations. The gross Working Capital investment in Current Assets and its components have been analyzed to examine the behaviour of each component. Further, they also have studied it in relation to sales in order to measure the degree to which Working Capital has been utilized effectively. Finally, the pattern of financing gross Working Capital has been traced.

Oppedahl and Richard (1990), in their study "Working Capital Management" found that capital budgeting projects consume much of the time of a firm's management group, thereby not having time to take quality Working Capital decisions. More emphasis has been laid on two most important components of Working Capital called Accounts Receivables and marketable securities. This study also revealed that the managers have to be very cautious in accounts receivables and marketable securities decisions.

Shri Sisir Kumar and Bhattacharya (1991) stated that depreciation provision enjoys the tax benefit and becomes a cheap source of financing Working Capital. They found that the fund generated by way of depreciation is considerably cheaper in response to funds contributed by retention of profits. They also stated that financing of Current Assets by Current Liabilities is economical but it widens the incidence of risk of technical insolvency.

Rao and Rao (1991) evaluated the efficiency of Working Capital Management using conventional techniques and probed into the capacity of the various techniques in evaluating Working Capital efficiency of business enterprises belonging to manufacturing sector in the state of Karnataka. The study reveled that the investment in Working Capital was considerably high when compared to the total investment. The Tandon Committee (1974) norms compliant companies were found yielding better results among the surveyed companies. However, the study also revealed that Working Capital planning and control was found to be in disorder and ineffective.

Suk, Seung and Rowland (1992) examined the Working Capital Practice of Japanese Firms in US. The survey on 94 Japanese companies in US, revealed that the Japanese companies differ in Working Capital Management practices from US companies in terms of lower levels of inventories and higher levels of Accounts Receivables. This study also revealed that more than 70 per cent of the time, Japanese firms use outside financing as a major source of short-term financing.

Jain (1993) studied seven paper companies in India to analyze the basic components of Working Capital. The study shows that the current ratio in public sector undertakings during the study period was found to be highly erratic while the same in private sector undertakings registered continuous decrease. As far as the inventory was concerned the study reveled that it was highly unplanned in public sector undertaking units when compared to private sector units.

Siddarth and Das (1994) attempted to ascertain efficiency or, otherwise in use of Working Capital in select Pharmaceutical companies in India. This study revealed that the overall Working Capital turnover ratio was 9.03 times. The overall analysis of the study indicated that the selected companies are very well in terms of utilization of Working Capital.

Hyun Han Shin and Lue Seonen (1994) stated that Working Capital Management is only a part of business process but for many firms it is a very important component of financial management. The net trade cycle (NTC) offers an easy and useful way to check the efficiency of managing Working Capital of the firms. A strong negative association exists between the firms' NTC and their profitability. Individual firm's stock returns are also found to be significantly negatively correlated with the length of the firm's net trading cycle. Considering the negative relationship between debt and market value, the true benefit from the NTC comes from reduction in assets rather than increase in payables.

Geoffrey Mills (1996), studied "Impact of Inflation on Capital Budgeting and Working Capital" and stated that the cost of capital will increase at the same rate as the rate of inflation on an ex-ante basis, and multiplicative relationship on net Working Capital as a proportion of the overall financing required. The higher the net Working Capital the greater is the impact of inflation on capital spending. It was also observed that the corporate financial behaviour is influenced by inflation. Inflation will cause the firm to reduce its capital budget, reduce net Working Capital and alter the debt/asset ratio.

Shankar (1996) developed a new concept of Working Capital known as zero Working Capital , which means the current ratio of one and quick ratio of below one. As per the observations made by the study, zero Working Capital would ensure a smooth and uninterrupted Working Capital cycle and it would pressurize the Finance Manager to improve the quality of Current Assets at all times to keep them cent per cent realizable.

Inderasena and Someswar (1996) in their case analysis in Hindustan cables Ltd. for the period from 1989-94 examined the trends in current ratio, quick ratio, Working Capital turnover ratio, inventory turnover ratio, debtors turnover ratio, current assets turnover ratio and average collection period.

Vijayakumar and Venkatachalam (1996) executed a case Study of Tamil Nadu Sugar Corporation on Working Capital Management and indicated a moderate trend in the financial position and the utilization of Working Capital . They suggested that attempts should also be made to use funds more effectively to keep an optimum level of Working Capital since holding more Current Assets causes reduction in profitability. Hence, efforts should be made to ensure a positive trend in the estimation and maintenance of the Working Capital.

Smith and Beaumont (1997) measured the association between Working Capital and Return on Investment using the traditional and alternative methods of Working Capital measures. The study captured some empirical association between traditional and alternative Working Capital measures of liquidity and Return on Investemnt. By employing χ^2 test and regression analysis the study found that the traditional Working Capital leverage measure of Current Liabilities divided by gross funds flow displayed the greatest association with Return on Investment. The study also indicated that a decrease in the total Return on Investment divided by gross funds flow lead to an improvement in Return on Investment and vice versa.

Sur (1997) made a case study on Working Capital Management in Colgate Palmolive (India) Ltd. and attempted to assess the efficiency of Working Capital Management in terms of Working Capital ratio, acid test ratio, ratio of Current Assets to total assets, ratio of Current Assets to sales, ratio of inventory to sales, ratio of debtors to sales and composition of Working Capital. The study revealed that Working Capital Management was inefficient during the study period. He recommended to pay special attention to the management of inventories that constitutes to occupy the highest portion of current assets.

Rao (1997) analysed the Small Paper Mills in Andhra Pradesh and found that the six sample companies over-traded with insufficient Working Capital and the system of cash forecasting and planning and control seems to be random. The sample units were forced to under-stock raw material for want of adequate Working Capital . It was also found that though liberal credit policy of the sample companies boosted up the sales, the companies failed to ensure effective collection mechanism. The current ratio and liquid ratio of sample units are found to be very low, indicating liquidity crunch.

Khan (1998) found that Escorts Ltd. did not use real professional assistance and expertise, which in turn impaired the overall performance of the company. The financial decisions taken were found to be of short-term perspective ignoring the effect in the long run. The cash planning was found to be very ineffective and hence the company found very difficult to procure the cash from operations even though there was enough cash generated from the operations. It was also found that the company depended on ordinary share capital, preference share capital and debentures as the long term sources of Working Capital . The management of inventory in the company was found to be very effective and hence no stock was found to be lying ideal.

Mercer (1998) stated that reducing Working Capital would provide huge opportunities to generate cash and improve return on capital. Mercer's field experience in reducing Working Capital has generated hundreds and millions of dollars in cash flow and saved millions of dollars in capital expenditures and reduced costs. Mercer has achieved these results in the chemicals, upstream oil and gas, downstream oil and gas, energy utilities, fiberglass, and other process industries located in North America, Europe, Asia, and Latin America. He also found that some companies manage late payment quite vigorously. Sales and marketing managers are understandably highly interested in an issue that directly has an impact on the customer relationship. He also stated that professional sales force-armed with accurate information and trained in communications are so powerful and productive in improving receivables payments. [101]

Sharma and Chary (1999) appraised working capital management in VST Industries Ltd. and showed that Working Capital Management in the firm was inefficient. A disproportionate investment in Current Assets in relation to sales resulted in declining Working Capital turnover ratio. It was found that the company did not follow any consistent policy with respect to investment and financing of Working Capital . Though there existed many opportunities to make use of trading on equity and hedging for an appropriate management of Working Capital , the company never used for the same. The study also revealed that the company failed to manage inventory efficiently, which in turn has resulted in lower profitability.

Sivaram (1999) examined the Working Capital Management in Indian Paper Industry laying emphasis on individual Current Assets like cash, receivables and inventories. The study found that the Working Capital formed 47.2 per cent of the total net assets during 1984-1993. The rate of return on Current Assets was insignificant in all selected mills indicating the inefficient management of Working Capital . The study also attempted to assess the perceptions of Chief Executives on management of Working Capital . Most of the executives (50 per cent) also favoured budgetary method as the tool to plan Working Capital . They also felt that the funds meant for Working Capital should not be diverted to any other applications. The study also observed that collection of receivables and inadequate Working Capital were serious problems in running the business.

Chundawat and Bhanawat (2000) analyzed the Working Capital Management practices in IDBI assisted Tube and Tyre companies for the period 1994- 1998 by using some relevant ratios and concluded that these companies were more effective than the industry as a whole.

Harinath (2000) attempted to examine the Working Capital structure in 30 small-scale units of Cuddapah District, Andhra Pradesh. The study indicated that 50 per cent of the sample units did not have very close watch on Working Capital and one third of sample units controlled Working Capital through proper production and sales budgets. Excess investment was found in debtors, and it was due to ineffective collection mechanism. In sample units the cash Working Capital was excess of the average balance sheet Working Capital, and a result it led to insufficient Working Capital finance. However, the overall profitability of all sample units was found to be satisfactory during the study period.

Prasad (2001) studied Working Capital Management in the Paper Industry consisting of 21 paper mills from large, medium, and small scale for a period of 10 years and reported that the Chief Executives properly recognized the role of efficient use of working capital , its liquidity and profitability. However, in practice they could not achieve it fully. The study also revealed that 50 per cent of the executives followed budgetary method in planning Working Capital.

Saravanan (2001) examined working capital management in ten Non Banking Financial Companies using working ratios to evaluate the effectiveness of Working Capital Management. He concluded that the sample companies had given more importance to the liquidity aspect in comparison to the profitability.

Shanmugam and Poornima (2001) appraised the implications of Working Capital in selected 28 medium and large scale spinning mills in Coimbatore industrial area in Tamil Nadu. The study revealed that effective Working Capital Management is still crucial in the success of an organization. The study also revealed that most of the units (10 mills) depended on production plans in Working Capital planning, leaving all norms aside. The budgetary control was found to be the widely applied criterion for Working Capital control.

Thomas Krueger (2002) analysed Working Capital Management results across industries and pointed out that the firms are able to reduce financing costs and/or increase the funds available for expansion by minimizing the amount of funds tied up in Current Assets. The study provided insights in to the performance of sample firms across key components of Working Capital Management. In addition, the study also found that these measures for Working Capital changes significantly and vary within industries over time. [112]

Sathyamoorthi (2002) examined the Management of Working Capital in Selected Co-operatives in Botswana and found that the liquidity played a vital role in evaluating the short-term efficiency of the organization. The study showed that the cooperatives which had low liquidity results in weak position to pay short term debts.

Mare Deloof (2003) evaluated Working Capital Management effect on the profitability of selected Belgian firms and stated that there are companies which have large amount of cash invested in Working Capital . The study found that there is a significant negative relation between gross operating income and the number of days, accounts receivable, inventories and accounts payable of firms. The study suggested that the managers could create value for their shareholders by reducing the number of day's accounts receivable and inventories to a reasonable level. The negative relation between account payable and profitability is consistent with the view that less profitable companies wait longer to pay their bills**.**

Sunita Gupta and Sharma (2003) examined the patterns of financing Working Capital in food processing industry in India and also in different categories within this industry. They employed ratio analysis and found that the companies in the food processing industry over the years have relied on short-term funds particularly short-term bank credit and trade credit.

Gosh and Maji (2004) studied the Efficiency of Working Capital Management of the Indian Cement Industry during 1992-93 and 2001-02. For measuring the efficiency of Working Capital Management, performance, utilization, and overall efficiency, indices were calculated instead of using some common Working Capital Management ratios setting industry norms as target. They also tested the speed of achieving target level of efficiency by an individual firm during the period of study. Findings of the study indicated that the Indian cement industry, as a whole, did not perform remarkably well during that period.

Singh (2004) attempted to assess the significance of management of Working Capital in Lupin Laboratories Ltd., through working capital ratios and operating cycle. The study revealed that the liquidity position of the company was good and that the size of Current Assets was very high when compared to fixed assets. The operating cycle showed a declining trend. The element-wise analysis of Working Capital revealed that trade debtors constituted the highest percentage of Current Assets followed by loans and advances, inventories and cash and bank balances.

Chander and Kumar (2004) empirically analysed some aspects of Working Capital requirements in Small Scale Textile Units of Punjab. The study had used the percentage method, the need based method and the sales percentage method for estimating the Working Capital requirements. However, among all the three methods, the need based method was found most suitable method in determining the Working Capital requirements of the selected sample.

Raghunatha Reddy and Kameswari (2004) evaluated the working capital management Practices in Farm Industry and indicated that an efficient Working Capital Management is necessary for achieving both liquidity and profitability of a company. The study employed different ratios like current ratio, quick ratio, net Working Capital position, and the Working Capital turnover ratio to monitor, review, and control the Working Capital . They observed that a poor and inefficient management leads to blocking up of funds in idle assets, hence the liquidity and profitability of a company cannot be maintained effectively.

Parasuraman (2004) examined Working Capital practices in leading Pharmaceutical Companies in relation to the credit policy and profitability and correlated the relationship. The study found that the companies have employed larger Working Capital for enhancing profitability.

Kesseven Padachi (2006) studied the trends in working capital needs and profitability of the 58 Mauritian small medium firms to identify the causes for any significant differences between the industries. The study employed return on total assets as a measure of profitability and investigated the relationship between working capital management and corporate profitability using panel data analysis for the period 1998 – 2003. The panel data estimations showed that high investment in inventories and receivables is associated with lower profitability. The key variables used in the analysis are inventory days, accounts receivables days, accounts payable days and cash conversion cycle. The study found a strong significant relationship between working capital and profitability.

Abdul Raheman (2007) studied the link between Working Capital Management and Profitability of a sample of 94 Pakistani firms listed on Karachi Stock Exchange for a period of 6 years, that is from 1999-2004. The result shows that there is a strong negative relationship between variables of the Working Capital and profitability of the firm. As the cash conversion cycle increases it leads to the decrease in the profitability of the firm,.

Pradeep Singh (2008) compared the Inventory and Working Capital Management of Indian Farmers Fertilizer Cooperative Limited (IFFCO) and National Fertilizer Ltd. (NFL) and indicated that it is necessary to efficiently manage inventories in order to avoid unnecessary investments. A firm, which neglects the management of inventories, will have to face serious problems relating to long-term profitability and may fail to survive. The study admits that with the help of a better inventory management, a firm can reduce the levels of inventories to a considerable degree without any adverse effects on production and sales.

I.9. A Summary of select studies are given in Table - I

A quick review of the above studies show that a large number of studies are carried out on the role played by Working Capital on the firm performance. However, the studies failed to address indexing the efficiency in utilisation of Working Capital funds. Hence, the present study has focused on that aspect which has been neglected.

Table – I.1

Highlights of select literature on working capital management

Author	Year	Industry	Variables used	Observations
Sinha K.P, A.K.Sinha & S.C. Singh	(1988)	Fertilizer	Inventory and Receivables	Sample companies failed to mange Working Capital efficiently
Sharma	(1988)	Private Sector Textile Mills	Profitability, Capacity utilization	Textile mills mismanaged the Working Capital
Lal Verma	(1989)	Iron & Steel Sector	Surplus investments in Current Assets is the problem in these firms	Inefficient Working Capital Management is responsible for unsatisfactory performance of the industry
Jain P.K.	(1993)	Public Sector Paper Industry	Current Ratio & inventory ratio	The CR in PSUs was found to be highly erratic while the same in Private sector undertakings registered continuous decrease
Siddartho, Mr. and Das G.,	(1994)	Pharmaceuti cal Sector	Working Capital turnover ratio	Selected companies are very well in terms of utilization of Working Capital
Vijayakumar and Venkatachatam	(1996)	Sugar	Working Capital ratios	Found a moderate trend in the financial position and utilization of Working Capital
Subba Rao O.,	(1997)	Small Paper	Current ratio & Liquid ratio	Companies failed to ensure effective collection mechanism
Prasad	(2001)	Paper	Liquidity and profitability ratios	The executives properly recognized the role of efficient use of Working Capital , but in practice they could not achieve it.

Saravanan. P	(2001)	NBFC	Working Capital ratios	Companies had given more importance to the liquidity
Shanmugam R. and S.Poornima	(2001)	Textiles	Working Capital ratios	Effective Working Capital Management is still crucial in organization's success
Sunita Gupta and Sharma	(2003)	Food	Working capital Ratio analysis	Companies rely on short term trade & bank credit for Working Capital purpose
Santanu Kr. Gosh and Sante Gopal Maji	(2004)	Cement	Working Capital Management ratios	Indian cement industry, as a whole did not perform remarkably well during that period
Chander, Subash and Rajan Kumar	(2004)	Textile	Financial ratios.	Bank finance was the most widely used method next to owned funds.
Parasuraman, N.R.	(2004)	Pharmaceuti cal	Credit period and debtors turnover ratios	Days Sales outstanding had gone up in the sample companies
Pradeep Singh	(2008)	Fertilizer	Inventory and Working Capital Ratios	Firm, which neglects the management of inventories will have to face serious problems relating to long term profitability and fail to survive

I.10 The Indian Textile Industry – a Profile

The textile industry has a significant presence in the economic life of India. It plays a pivotal role through its contribution to industrial output, employment generation and export earnings of the country. Textile industry

- Contributes 14% of industrial production

Contributes 4% to the G.D.P

Contributes 17% to the country's exports

Contributes to the employment of 35 million people (both sexes)

I.10 A. History of Textile Industry

India is well known for her textile goods since the ancient times. The traditional Textile industry of India virtually decayed during the colonial regime. However, the modern textile industry took birth in India in the early nineteenth century.

The first textile mill was established at fort Gloster near Calcutta in 1818 in the country.

The real beginning was made in Bombay in 1854 by a Parsi cotton merchant.

The first cotton mill in Ahmedabad was established in 1861; it eventually emerged as a rival center to Bombay

During the period 1922 to 1937 the industry was in doldrums.

The number of mills increased from 178 in 1901 to 249 in 1921, 396 in 1941 and 417 in 1945.

Due to partition of the country, the Indian Union got 409 out of the 423 textile mills of the undivided India.

Pakistan got 14 mills and 22% of the land under cotton cultivation.

I.10 B. Structure of India's textile industry

Indian textile industry is extremely varied with major sectors as detailed below:-

The Hand Spun and Hand Woven Sector

The capital incentive, sophisticated Mill sector

The decentralized Power Looms / Hosiery and Knitting Sector

The organized Cotton Textile Sector/ Man-made Fibre Textile Mill Industry

The man-made fibre / filament yarn industry

The Wool and Woolen textile industry

The sericulture and silk textiles industry

Looms, handicrafts, divisions

Table I.2

Production of Spun Yarn (in million kgs)

Year	Cotton Yarn	Blended yarn & Ivory Non-cotton yarn	Total Spun yarn
2000 – 01	2267	893	3160
2001 – 02	2212	889	3101
2002 – 03	2177	904	3081
2003 – 04	2121	931	3052
2004 – 05	2272	951	3223
2005 – 06	2521	937	3458
2006 – 07	2824	989	3813
2007 – 08	2948	1055	4003
2008 – 09	2898	1016	3914
2009 – 10 (P. April to Oct)	1744	627	2371

Source: Annual reports of Ministry of Textiles, Government of India.

Table I & II shows that as on 31.10.2009, there were 1834 textile mills in the century with 37.07 million spindles, 4,89,718 rotors and 56,524 looms. The capacity utilization in the spinning sector ranged between 80 per cent to 90 per cent while in the weaving sector ranged between 41 per cent to 62 per cent.

Table II shows production of spun yarn (including SSI units) during the last nine years. Spun yarn production comprises cotton yarn and blended yarn. It has grown from 3160 million kgs in 2000 – 01 to 3914 million kgs in 2008 –09. It reports a growth of 24 per cent.

During the same period, cotton yarn and blended yarn also report similar increase. The cotton yarn production has grown from 2267 million kgs in 2000-01 to 2898 million kgs in 2008-09. It reports a growth of 27.8 per cent. The blended and non-cotton yarn also report similar rise. The blended and non-cotton production has increased from 893 million kgs in 2000-01 to 1016 million kgs in 2008. It shows a growth of 13.7 per cent.

Table I.3

Production of cloth in different sectors (in million sq.mts)

Mill Sector

Items	2000-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10 (Apr-Oct) (P)
Cotton	1106	1036	1019	969	1072	1192	1395	1249	1259	726
Blended	332	296	263	253	243	252	330	422	426	245
100% non-cotton	232	214	214	212	211	212	111	110	111	64
Total	1670	1546	1496	1434	1526	1656	1746	1781	1796	1035

Handlooms Sector

Cotton	6577	6698	5098	4519	4792	5236	5717	6076	5840	3448
Blended	111	95	118	117	146	145	99	123	118	70
100% non-cotton	818	792	764	857	784	727	720	748	719	424
Total	7506	7585	5980	5493	5722	6108	6536	6947	6677	3942

Decentralized Power looms Sectors

Cotton	6584	6473	6761	6370	7361	8821	9647	9923	9621	6252
Blended	5071	5025	4695	4688	4526	4632	5025	4918	4764	3096
100% non-cotton	12148	13694	14498	15889	16438	17173	18207	19884	19263	12519
Total	23803	25192	25954	26947	28325	30626	32879	34725	33648	21869

Decentralized Hosiery Sector

Cotton	6584	6473	6422	6182	7430	8624	9569	9948	10178	6556
Blended	5071	5025	800	1010	1117	1269	1428	1425	1458	939
100% non-cotton	12148	13694	659	655	565	525	507	431	441	284
Total	23803	25192	7881	7847	9112	10418	11504	11804	12077	7779

All Sectors

Cotton	20851	20580	19300	18040	20655	23873	26238	27196	26898	16982
Blended	10585	10441	5876	6068	6032	6298	6882	6888	6766	4350
100% non-cotton	13298	28394	16135	17613	17998	18637	19545	21173	20534	13291
Total	44734	59415	41311	41721	44685	48808	52665	55257	54198	34623

Source: Annual reports of Ministry of Textiles, Government of India

Cloth Production

Textile industry is generally divided into (a) Mill sector (b)Hand looms sector (c)Powerlooms and (d)Hosiery sector. Table 1.3 gives production particulars of cloth in different sectors. The total production of cloth (including all sectors) shows an overall increase in cloth production. It has increased from 44734 million sq.mts in 2000-01 to 54198 million sq.mts in 2008-09. It works out a growth rate of 21per cent.

Similar increase is found in production of cloth in mill and power loom sectors. In case of mill sector, the total production of cloth has grown from 1670 million sq.mts. in 2000-01 to 1796 million sq.mts. in 2008-09. It works out to 8%. The Power loom sector also witnessed a substantial increase in the production of cloth from 23803 million sq.mts. in 2000-01 to 33648 million sq.mts. in 2008-09. It reports a growth rate of 41per cent.

On the other hand, a negative growth rate is observed in case of handloom and hosiery sectors. In the case of hand loom sector, the production of cloth decreased from 7506 million sq.mts. in 2000-01 to 6677 million sq.mts. in 2008-09. It gives a negative growth of 11per cent. Similar decrease in production of cloth in hosiery sector is observed. The production decreased from 23803 million sq.mts. in 2000-01 to 12077 million sq.mts. 2008-09. It is working out to a negative growth of 49 per cent.

The lower panel of the table shows production of cloth under three different headings, i.e. pure cotton textiles, blended cotton textiles and non-cotton textiles. It is observed that there is a gradual growth in case of pure cotton, blended and non-cotton textile cloth.

The pure cotton textiles witnessed an increase in production from 19718 million sq.mts. in 2000-01 to 26898 million sq.mts.2008-09. It shows a positive growth of 36%. Similar trend can be seen for blended and non-cotton textiles. The production of blended textiles increased from 6351 million sq.mts. in 2000-01 to 6766 million sq.mts.in 2008-09. It reports a growth of 7 per cent. In the case of non-cotton textiles, the production shows an excellent increase from 13606 millions sq.mts. to 20534 million sq.mts. It indicates a growth of 51 per cent.

Table I.4

Sickness / Closure of textile mills

Year	No. of spinning mills	No. of composite mills	Total
2000-01	262	121	383
2001-02	295	126	421
2002-03	349	134	483
2003-04	374	94	468
2004-05	376	99	475
2005-06	387	96	483
2006-07	380	87	467
2007-08	318	63	381
2008-09	339	64	403
2009-10	347	69	416

Source: Annual reports of Ministry of Textiles, Government of India

Sickness / Closure of Textile Mills

The incidence of sickness and closure of textile mills in the industry is a matter of concern. The textile mills in the industry consists of spinning and composite mills. The overall sickness or closure of mills increased from 383 in 2000-01 to 403 in 2008-09. It shows a growth of 11 per cent in sickness and closure of mills. The number of spinning mills became sick / closed has increased from 262 in 2000-01 to 339 in 2008-09. It reports a growth of 29 per cent. The number of composite mills became sick/closure is 121 in 20001-02 has decreased to 64 in 2008-09. This decrease in percentage of sick/closure of composite mills is worked out to 53 per cent. This is due to various financial and non-financial efforts taken by the government of India in reviving sick mills.

Table I.5

India's Textiles Exports (Rs. in crores)

Item	2001-02	2002-03	2005-06	2006-07	2007-08	2008-09
1.Readymade garments	14747	13925	35358	37506	36498	47110
2.Cotton textiles	9357	9931	20369	25197	27600	21808
3.Man-made textiles	2961	3441	9030	10863	12785	15088
4.Wool & woolen	160	1053	2019	1919	1783	2200
5.Silk	786	1339	3069	3197	2647	3107
6.Handlooms	_	_	_	_	_	_
7.Total	10598	29680	69846	78683	81313	89313

Source: Annual reports of Ministry of Textiles, Government of India

Textile Exports

India’s textile export comprises of ready made garments, cotton textiles, man-made textiles, wool and woolen textiles, silk and handloom textiles. Table No.4 indicates an increase in overall textile exports from Rs.10,598 crore in 2001-02 to Rs. 89313 crores in 2008-09. It indicates a growth of 8 per cent in textile exports of the country. Similar increasing trend can be observed in the case of item-wise exports. The ready made garments exports increased from Rs.14747 crores in 2001-02 to Rs. 47110 crores in 2008-09. It shows a growth rate of 30 per cent. Likewise, cotton textiles exports increased from Rs. 9357 crores in 2001-02 to Rs. 21808 crores in 1008-09. It indicates a growth of 2 per cent. Man-made textile exports have grown from Rs. 2961 crores in 2001-02 to Rs. 15088 crores in 2008-09.It exhibits a growth of 5 per cent. A similar trend can be observed in woolen and silk items. Woolen textiles exports rose from Rs. 160 crores to Rs. 2200 crores for the same period which works out to be at 14 per cent rise. In case of Silk textiles exports increased from Rs. 786 crores to Rs. 3107 crores and it shows a growth of 4 per cent. This item-wise increase in exports facilitated textile sector to contribute 17 per cent towards India’s export earnings.

I.11 Organisation of the study

The study is presented in seven chapters:

Chapter one is the introduction dealing with the importance and benefits of Working Capital Management, Working Capital performance, the inter-relationship between Current Assets and Current Liabilities, and Working Capital Management and profitability. The chapter also discusses the review of earlier studies and chapterization.

Chapter two covers the objectives and methodology of the study.

Chapter three presents the theoretical framework of concepts and approaches of Working Capital Management

Chapter four covers Working Capital Management status in select textile firms under three dimensions.

Chapter five covers the trends and patterns of efficiency of Working Capital utilization with the application of indices of select group of firms.

Chapter six deals with the impact of different sizes of firms and their Working Capital Management on profitability of select group of firms.

Chapter seven provides the Summary and Conclusion.

CHAPTER – II

OBJECTIVES AND METHODOLOGY

CHAPTER II

OBJECTIVES AND METHODOLOGY

In this chapter an attempt is made to present the broad objectives of the study, methodology adopted, sample framework and tools of analysis. Further, a brief profile of the sample units in respect of their fundamentals is given.

II.1 Need for the present study:

The Working Capital (Working Capital) is regarded as the life-blood of any business as it plays a pivotal role in moving the wheels of operations. forecasting procurement and optimum utilization of funds are considered as key activities for success or failure of a Firm. Relevance of these activities is seriously felt by Indian enterprises, of late, due to the emerging competitive environment since the economic liberalizations. As there is no readymade, single solution for management of working capital in a firm, the responsibility of fund management has drawn greater attention for the smooth functioning of an enterprise. Therefore, the present study intends to examine whether there exists any relationship between efficient management of working capital funds and firm level profitability in select Cotton Textile units in India.

II.2 Significance of Working Capital (Working Capital)

Efficient management of working capital is essential in maintaining liquidity, solvency and profitability of a business organization, irrespective of its size and nature of operations. The management of Working Capital draws close attention of finance managers as it involves frequent and dynamic decision-making to determine the size of current assets required for uninterrupted flow of activities of a business.

Sufficient doses of working capital is required to facilitate the procurement of inputs, hire manpower, create value addition through transformation of inputs into output, carrying inputs and outputs for a better market time. Further, a series of market facilitating infrastructure such as warehouse, cold storage, transport, packaging and extension of credit time to customers are to be financed before the product realizes the investment made in it.

The length of operating cycle, availability of credit lines, lead-time in supply chain, and the market compulsions for extension of customer credit, determine the quantum of working capital required for financing each operating cycle. At the same time, an estimation and provision of such funds draws greater significance.

II.3 Research Problem:

A quick review of studies mentioned in Chapter I on the subject of management of Working Capital shows that optimum levels of inventory, control over receivables are found to influence the profitability (Sinha, Sinha and Singh, 1987; Jain, 1993; Pradeep Singh, 2008). A few others report the role of working capital on the size of liquidity and profitability of a firm. (Sharma, 1988; Siddarth and Das, 1994; Prasad, 2001; Deloof, 2003).

Specific studies conducted by different researchers, however, have showed the relationship between management of Working Capital and firm level profitability across different industries. For example Barida (2004) on steel industry, Chander, Subash and Rajan Kumar (2004) on small textile firms, Santanu Gosh and Santi Gopal Maji (2004) on cement Industry, Chundawat and Bhanswat (2000) on IDBI, Johinder Singh Dulta (2000) on horticulture industry, Siddarth (1994) on pharmaceuticals, and Singh on Luping Laboratories conducted their studies.

Although all the above studies tried to explore the relationship between the size of working capital and its impact on profitability, no serious attempt was made by them to workout on the degree of efficient utilization of different components of working capital. No study tried to estimate any index of Performance in the utilisation of funds. No logical statistical relationships have been estimated to establish a clear role played by different components of Working Capital on profitability.

Therefore, the present study has addressed issues not only relating to textile firms subsequent to liberalization measures, but also tried to establish the degree of efficiency exhibited by finance managers on the use of different components of Working Capital . Further, with clear logical relationships, Working Capital on profitability across different categories of firms are linked.

II.4 Objectives of the study

The primary objective of the study is to evaluate the impact of efficient utilization of working capital on profitability in select Textile units in India. Specifically, the study intends

i) To evaluate the size of working capital utilized by sample units in correspondence to the level of operations, turnover and total capital employed;

ii) To explore into relative proportions of different components of current assets, viz., cash, receivables and inventories maintained by the sample units;

iii) To construct an overall performance Index to measure the degree of efficient utilisation of short term resources by the sample units; and

iv) To identify the role of working capital on firm level profitability across various sizes of sample units.

II.5 Hypotheses:

Against the above stated objectives of the study, the following Hypothesis is intended to test

H_1: As the firm size increases, the size of Working Capital required to meet the increased level of operations proportionately increases.

H_2: A relative proportion of different components of Working Capital (cash, receivables and inventory) are likely to be constant irrespective of the size of a firm.

H_3: The overall index constructed to check the efficiency in utilization of short-term resources is likely to be the same for all firms.

H_4: The profitability of a firm may not always be dependent on either size or on efficient utilization of Working Capital.

II.6. Methodology and Sample

In order to test the above stated hypothesis and to address primary and secondary objectives of the study, the present study has chosen a cross section of cotton textile firms in India. The Indian Textile Industry has a long history of stability and growth. The demographic characteristics of the Indian sub-continent, export demand for India's cotton fabric has made the textile industry ever rich and solvent with a sizeable hinterland for cotton cultivation. The textile industry facilitated a large number of small, medium and large enterprises to co-exist. Competition from man-made fabrics, inefficient internal management and lowering margins has made this glorious industry to exhibit partial sickness, as well. These characteristics of textile industry have been drawing the attention of researchers and policy makers to document and facilitate better management practices for the survival of this industry.

While concentrating on the organized sector of textile manufacturing industry, the present study has drawn a sample of 53 firms, whose securities are regularly traded in Indian stock markets. Further, the ready availability of the financial information at least for the past 10 years (without any changes in accounting and other practices) has also contributed to the final selection of the sample.

These firms are classified into three major categories of small, medium, and large based on their total asset size. The stratification and catagorisation of sample units of the present study is based on total assets of sample units drawn from end year 2007-2008. The classification is given in Table II.1.

Table - II.1

Classification of Sample Firms

Serial no	Size category	Range of Assets	Sample units selected
1	Small	Upto 500 Crs	16
2	Medium	501 Crs to 1000 Crs	21
3	Large	More than 1000 Crs	16

The list of finally selected sample units are given in Table 2,

Table - II. 2

List of Firms selected under each category

Small Firms	Medium Firms	Large Firms
Banswara Syntex Ltd.	Alps Industries Ltd.	Abhishek Industries Ltd.
Garware-Wall Ropes Ltd.	Ashima Ltd.	Alok Industries Ltd.
Ginni Filaments Ltd.	D C M Ltd.	Arvind Mills Ltd.
Indian Acrylics Ltd.	Eastern Silk Inds. Ltd.	Century Enka Ltd.
Indo Count Inds. Ltd.	Eskay K'N'It (India) Ltd.	Forbes Gokak Ltd.
Malwa Cotton Spg. Mills	Futura Polyesters Ltd.	Garden Silk Mills Ltd.
Maral Overseas Ltd.	Himatsingka Seide Ltd.	Indo Rama Synthetics
Modern Syntex (I) Ltd.	J C T Ltd.	J B F Industries Ltd.
Modipon Ltd.	K S L Realty & Infra. Ltd.	Nahar Spinning Mills Ltd.
National Textile Corpn.	Krishna Lifestyle Tech Ltd	Prag Bosimi Synthetics
Pratibha Syntex Ltd.	Loyal Textile Mills Ltd.	R S W M Ltd.
Rajapalayam Mills Ltd.	Mafatlal Industries Ltd.	Raymond Ltd.
Shri Lakshmi Cotsyn Ltd.	N R C Ltd.	S Kumars Nationwide Ltd.
Siyaram Silk Mills Ltd.	Nahar Exports Ltd.	S R F Ltd.
Spentex Industries Ltd.	Parasrampuria Synthetics	Vardhman Textiles Ltd.
Suryalakshmi Cotton Mills	Recron Synthetics Ltd.	Welspun India Ltd.
	Sangam (India) Ltd.	
	Sanghi Polyesters Ltd.	
	Super Spinning Mills Ltd.	
	Uniworth Ltd.	
	Vardhman Polytex Ltd.	

II. 7 Period of study and sources of Data

The present study draws the sample from the list of textile firms whose securities are regularly traded. They are mostly in the organised sector. The financial information required for the present study is drawn from the secondary source. 'Prowess', corporate database developed by the CMIE (Centre for Monitoring Indian Economy) has been used as a principle source. The period of the study is 10 years starting from 1998-99 to 2007-08.

II. 8 Data Analysis

In order to analyze the efficiency of Working Capital in the select textile units different statistical techniques are used. These include descriptive statistics and different measures of variance. The linear trend in growth of Working Capital is computed by compound growth rate; And simple regression, multiple regression techniques are used to establish relationships. The analysis is carried out in the following three sections.

(i). Section I

The first part of analysis focusses on measuring components of Working Capital. The analysis focusses under three different dimensions viz., cash management, receivables management and inventory management in the select textile units. Different ratios have been used to capture the efficiency in utilization of these components in analysis. A set of ratios like a) Current ratio, b) Liquid ratio, and c) Absolute cash ratio are worked out to the find firm's performance in managing its cash balances. The Receivables management is captured through a) Debtors turnover ratios and b) Average credit period ratio. The performance of Inventory management is examined through a) Inventory turnover ratio and b) Inventory conversion period.

Further, a time series trend analysis was carried out and compounded annualized growth rate (CAGR) are worked out. The results across different firm sizes are processed through Mean, Standard Deviation and Coefficient of Variation. In order to estimate the growth in size of operations of a firm and corresponding levels of Working Capital utilized during the study period, annual growth rates and compound growth rates are worked out.

Linear relationships between a study variable (Y) and time variable (X) are worked out as follows:

$$Y = \alpha + \beta X \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (1)$$

by taking logarithm on both sides, it may be written as

$$Y = \log \alpha + \beta \log X$$

The least square estimates of alpha and beta are given by

$$\hat{\beta} = \left(\frac{\sum xy - \frac{(\sum x)(\sum y)}{n}}{\sum x^2 - \frac{(\sum x)^2}{n}} \right)$$

$$\alpha = Y - \beta X$$

Where, $\overline{Y} = \frac{\sum y}{n}$ and $\overline{X} = \frac{\sum x}{n}$

(ii). Section II

The second part of analysis focusses on examining the efficiency of Working Capital Management. Three different indices are estimated. They are: a) Performance Index (PI), b) Utilization Index (UI) and c) Efficiency Index (EI).

The principle followed in developing a model for measuring and monitoring the efficiency of working capital management is the same as in cost management. If there is more than a proportionate rise in current assets with the increase in sales, the costs of enterprise also increase, both in terms of blocking of additional funds and the interest thereon. A firm cannot be said to have an efficient working capital management if it is registering more than a proportionate rise in current assets. Modern day financial management aims at reducing the level of current assets without, ignoring the risk of stock outs, etc. This is similar to that of cost management, where quality cannot be sacrificed at the expense of reducing costs.

a. Performance Index (PI): *It focuses on relationship between the rate of change in sale to the rate of change in current assets. It is worked out for each component of the working capital for each year and compared with the sales index. It is computed as follows.*

Performance Index (PI) $$PI = \frac{I_S \sum_{i=1}^{n} \frac{W_{i(t-1)}}{W_i}}{N}$$

Where

Is	=	Sales index defined as S_{it} / S_{it-1}
Wi	=	Individual group of current assets
N	=	Number of current assets group, and
i	=	1, 2, 3 ….. N

b. Utilization Index (PI): *It is calculated to measure the degree of WORKING CAPITAL the firm has utilized to generate sales. It is worked out as follows*:

$$UI = \frac{A_{t-1}}{A_t}$$

Where,

$$A = \frac{Current\ assets}{Sales}$$ and

***c. Efficiency Index (EI)** : This index is the product of the overall Performance and Utilization indices. It is worked as*:

$$EI_{\text{Working Capital Management}} = PI_{\text{Working Capital Management}} \times UI_{\text{Working Capital Management}}$$

(iii). Section III:

The third part of analysis focusses on examining the impact of Working Capital on the firm's profitability. Multiple correlation and multiple regression techniques are used to capture the relationships.

The model specification is as follows:

$$Y_i = \alpha + \sum_{i=1}^{n} \beta X_i + \varepsilon_i$$

Where,

Y_i= Vector of profitability variables, i.e., gross profit margin, operating profit margin and return on asset.

X_i= Vector of working capital variables, such as Accounts Receivable Days (ARDYS), Accounts Payable Days (APDYS), Inventory Days (INDYS) and Cash Conversion Cycle (CCC).

Cash Conversion Cycle = (No of Days A/R + No of Days Inventory) – No of days A/P.

II. 9. Limitations of the Study

- The study period is limited to ten years only (from 1997-98 to 2007-08). Therefore, a detailed trend analysis covering a lengthy period has not been carried out.
- The study is based on secondary data collected from CMIE 'Prowess' (package). Therefore, the quality of study depends purely upon the accuracy, reliability and quality of the secondary data source.

- The study is limited to 53 companies of textile industry that too from the companies listed in Bombay Stock Exchange (BSE). Therefore, the results cannot be genaralised in a strict sense.

II.11 Profile of the sample units:

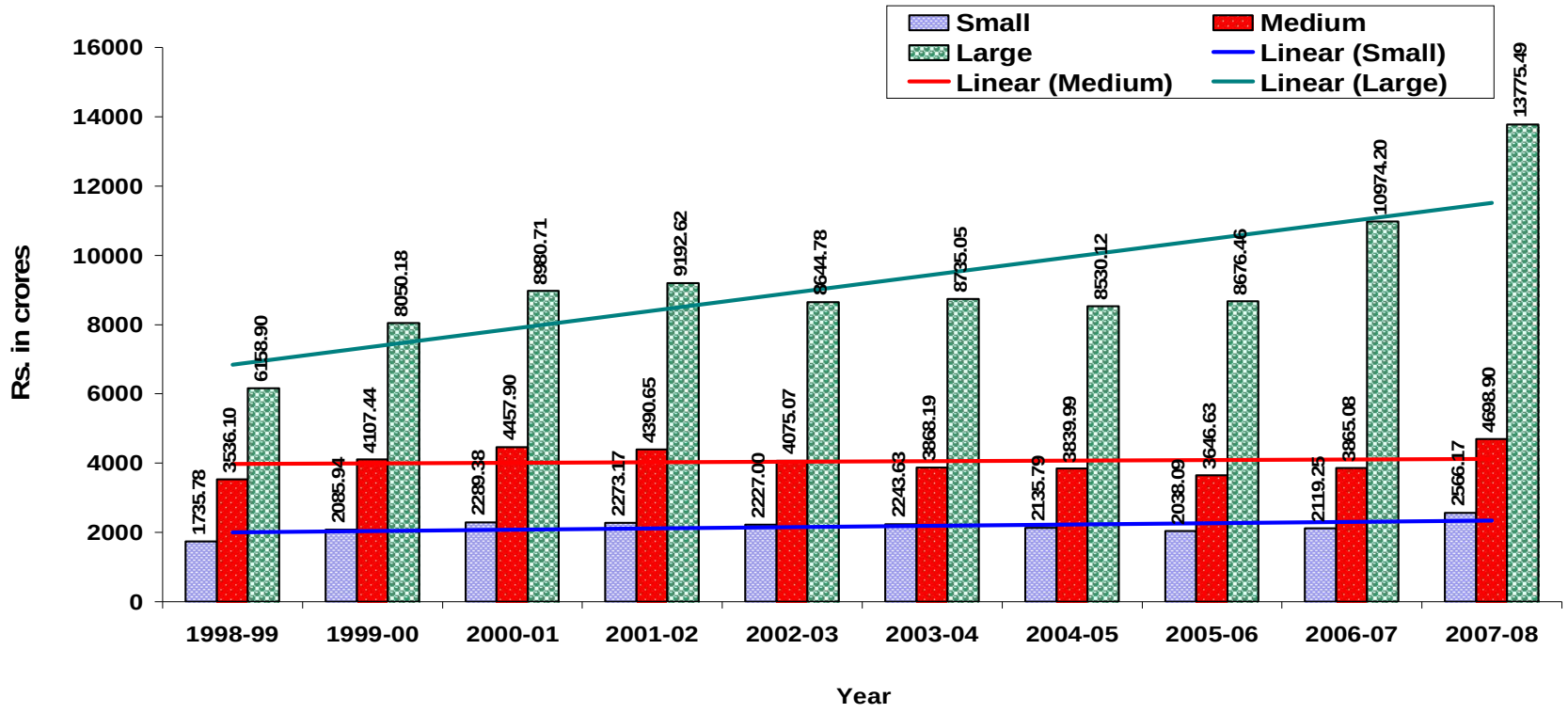
A brief profile of sample units in terms of size of operations, asset utilization, funds management and profitabilility is expected to provide a background for a deeper understanding. Therefore an attempt is made to present the profile of selected sample units in the following paragraph. However, for greater simplicity, sample units have been categorized into three groups and a group-wise profile is given. Specifically, the following issues are examined for the period of 10 years in order to understand the profile of sample firms, namely,

1. Fixed Assets	7. Current assets
2. Gross Profit	8. Current liabilities
3. Net Profit (PAT)	9. Cash and bank
4. Interest Paid	10. Inventory status
5. Shareholders' equity	11. Accounts receivable
6. Firms' debt (borrowed)	12. Sales

FIXED ASSETS:

The distribution of fixed assets across sample units has been presented in Appendix Tables 1-3 and the same is shown in the form of Figure II.1 across different classes.

Figure II.1 : Comparison of Fixed Assets of Textile Companies by Size Classes



The fixed assets of small size firms vary from Rs.1735.78 crore in 1998-99 to Rs.2566.17 crore in 2007-08 with an average of Rs.2171.42 crore over the study period. Among the firms of small size class, an average fixed assets of Modern Syntex (I) Ltd. is as high as Rs.554.31 crore and that of Shri Lakshmi Cotsyn Ltd is at the lowest value of Rs.48.28 crore (vide Appendix Table 1).

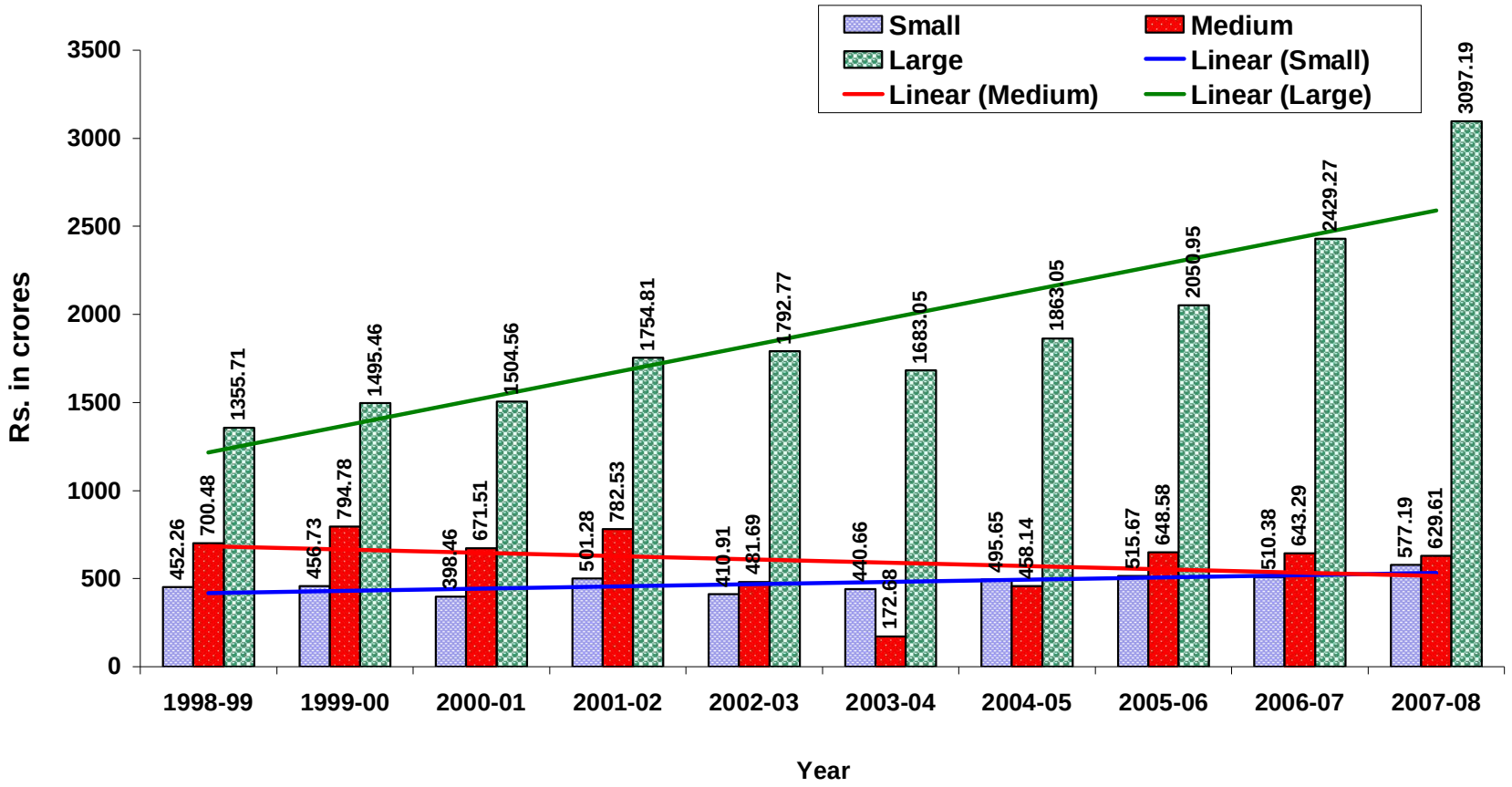
For all selected medium size textile firms the total fixed assets ranges from Rs.3536.10 crore in 1998-99 to Rs.4698.90 crore in 2007-08 with an average of Rs.4048.60 crore over the period (vide appendix table 2). Among the firms under this size class, the fixed assets of Sanghi Polyesters Ltd is as high as Rs.500.54 crore and as low as Rs. 45.02 crore for Eastern Silk Inds. Ltd., on an average, during the period under study.

The Fixed assets of large size textile firms (vide Appendix Table 3) have been in the upward trend from Rs.6158.90 crore in 1998-99 to Rs.13775.49 crore in 2007-08 which is triggering. Among the 16 large size textile firms, the average fixed assets of Arvind Mills Ltd is much higher and that of the Forbes Gokak Ltd is much lower when compared to that of the others. Overall, during the period of study, the fixed assets have stood at Rs.9171.85 crore for all selected large size textile firms when pooled together.

GROSS PROFIT:

The generation of gross profit across sample units has been shown in tables 4-6 and the same is shown in Figure II.2 across different size classes.

Figure II.2: Comparison of Gross Profit of Textile Companies by Size Classes



Regarding the Gross Profit of small size firms, results (vide appendix table 4) show that it is negative for National Textile Corporation and positive for other firms over the period of time. On an average, the positive GP of small size firms varies from Rs.12.42 crore (Sri Lakshmi Cotton and Synthetic) to Rs.84.34 crore (Siyaram Silk Mills Ltd.) during 1998-99 to 2007-08. During the period, the total GP of small size firms is at a maximum level of Rs.577.19 crore at the end of the period and a minimum of Rs.398.46 crore in 2000-01.

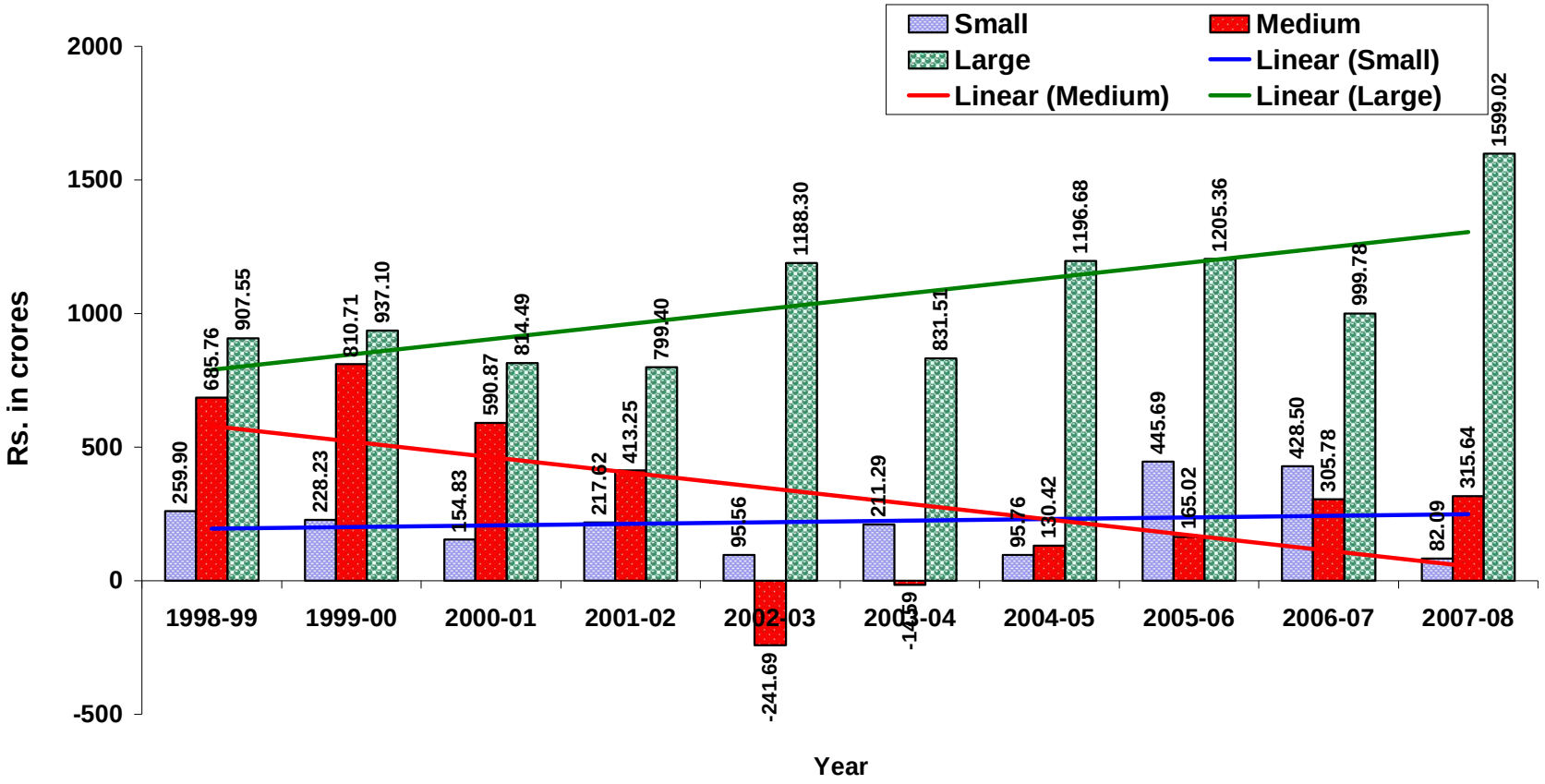
Relating to the Gross Profit, it is found that it is positive for all medium size firms and ranges from Rs.1.78 crore (Mafatlal Industries Ltd.) to Rs.55.35 crore (Nahar Exports Ltd.) on an average during the period (vide appendix table 5). During the period, the total GP of all medium size firms has stood at a maximum of Rs.671.51 crore in 2000-01and a minimum of Rs.172.68 crore in 2003-04 with an overall average of Rs.598.33 crore.

The Gross Profit of large size textile firms has increased to Rs.3097.19 crore at the end year from Rs.1355.71 crore with an alternate increase and decrease in between. (vide appendix table 6). On an average, the gross profit seems to be negative for Prag Bosimi Synthetics (Rs.-4.36 crore) while positive GP ranging from Rs.40.23 crore (J B F Industries Ltd.) to Rs.324.22 crore (Raymond Ltd) among the remaining firms over the study period.

PROFIT:

The generation of profit after tax (PAT) across sample units has been shown in tables 7-9 and the same is shown in Figure II.3 across different size classes.

Figure II.3: Comparison of Profit After Tax Before Interest of textile Companies by Size Classes



The profit after tax (PAT) is negative for National Textile Corporation, and positive for other firms of small size group (vide appendix table 7). Among the small size firms with positive PAT, Malwa Cotton Spg. Mills has earned more revenue after tax (Rs.26.51 crore) while Modern Syntex (I) Ltd has earned little (Rs.1.90 crore) on an average during the period. During the study period, the total PAT of all small firms stood at a maximum of Rs.445.69 crore in 2005-06 and a minimum of Rs.82.09 crore in 2007-08.

The profit after tax (PAT) is negative for 3 out of 21 medium size firms (vide appendix table 8) and positive for the remaining 18 medium size firms. Among the medium size firms with positive net earnings, average PAT is more for Himatsingka Seide Ltd (Rs.39.58 crore) and less for J C T Ltd. (Rs.1.34 crore) over the period. During 1998-99 to 2007-08, the total PAT of all medium size textile firms is more in the period 1999-2000 (Rs.810.71 crore) and it has been much less and negative in 2002-03 (Rs.-241.69 crore).

The profit after tax (PAT) is positive for all large size firms except for Prag Bosimi Synthetics, for which the PAT is negative (Rs.-0.72 crore), on an average during the period (vide appendix table 9). Among the large size textile firms under study, the average PAT between 1998-99 and 2007-08 is much higher for Raymond Ltd (Rs.170.83 crore) followed by Arvind Mills Ltd with Rs.129.08 crore, Indo Rama Synthetics with Rs.123.89 crore and Vardhman Textiles Ltd with Rs.112.61 crores. From 1998-99 to 2007-08, the total PAT of all large size textile firms has gone up from Rs.907.55 crore to Rs.1599.02 crore, but with ups and downs respectively.

4. INTEREST:

The payment of interest across sample units has been presented in tables 10-12 and the same is shown in the form of Figure II.4 across different classes.

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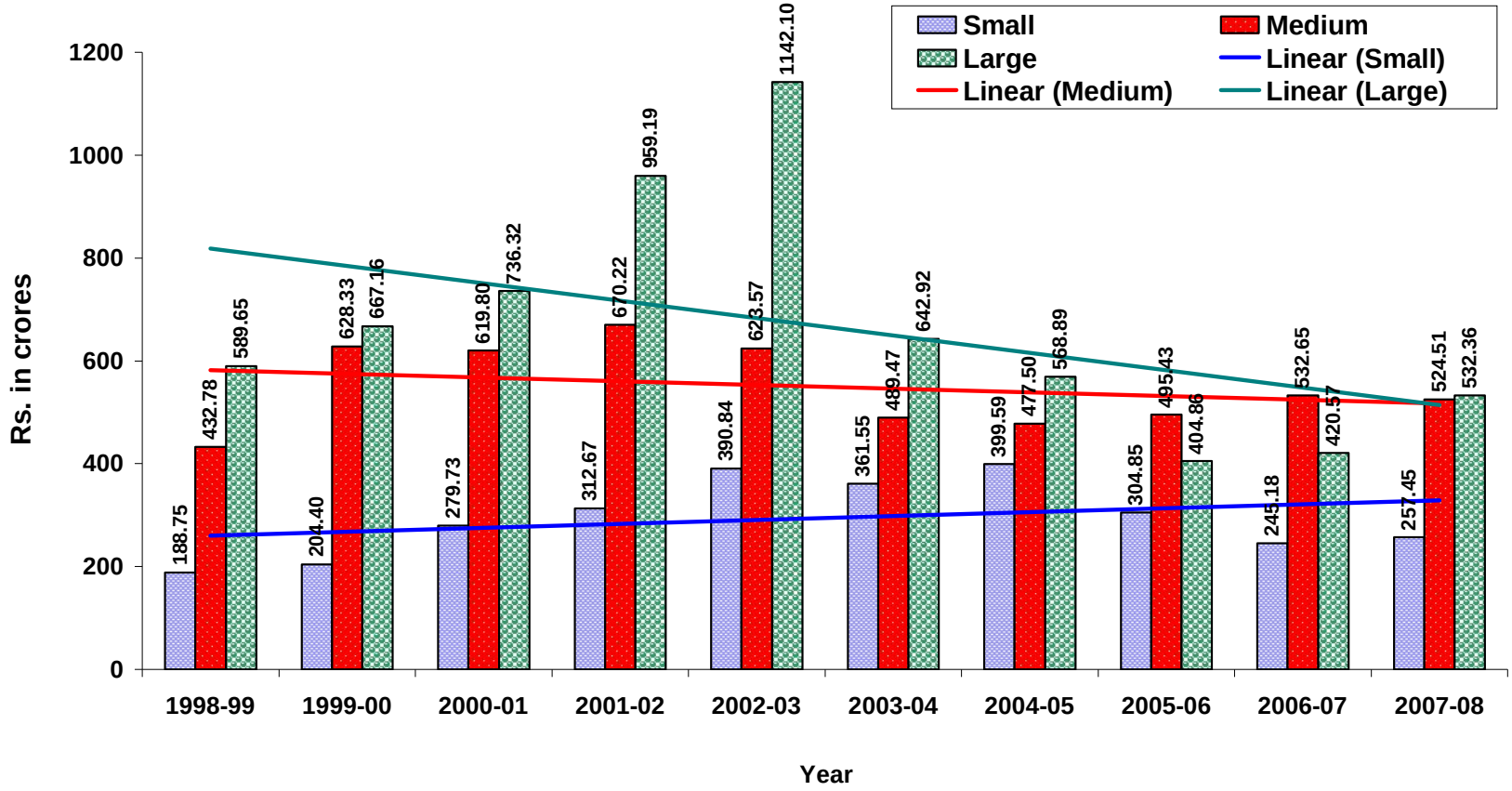
Figure II.4: Comparison of Interest on Borrowing of Textile Companies by Size Classes



Out of 16 small size firms, Modern Syntex (I) Ltd has paid as much as Rs.69.62 crore as interest on borrowings on an average from 1998-99 to 2007-08. The lowest amount of interest of Rs.5.24 crore has been paid by Shri Lakshmi Cotsyn Ltd over the period of time. The maximum and minimum of total interest paid by small size firms is Rs.390.84 crore in 2002-03 and Rs.188.75 crore in 1998-99 (vide appendix table 10).

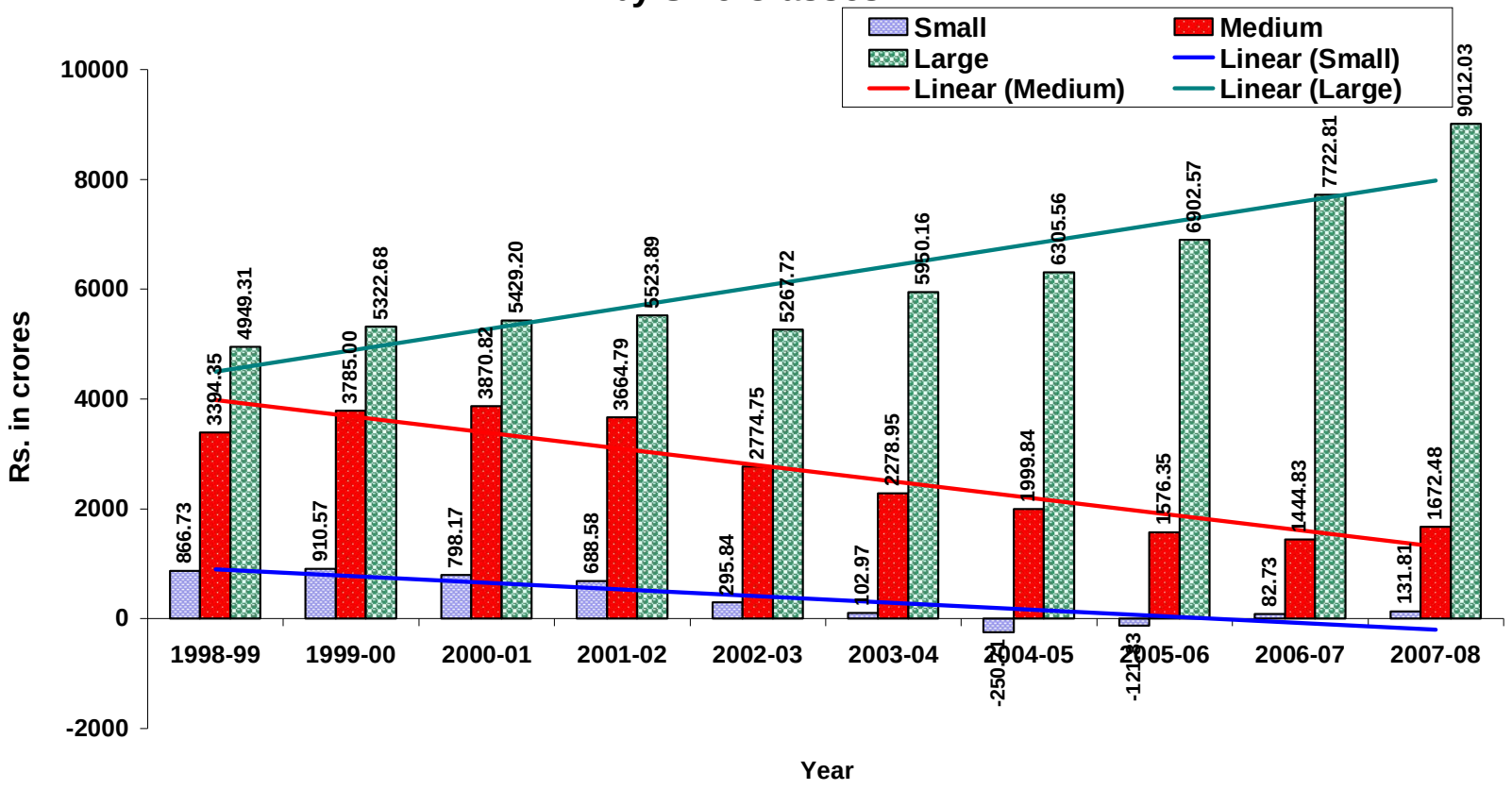
Among the medium size firms, interest liability is higher for Parasrampuria Synthetics (Rs.104.68 crore) and it is very low for Himatsingka Seide Ltd. (Rs.1.33 crore) on an average during 1998-99 to 2007-08 (vide appendix table 16). When all medium size textile firms are considered together, the total interest liability has touched at a maximum of Rs.670.22 crore in 2001-02 and a minimum of Rs.432.78 crore in 1998-99.

Interest on borrowing, on an average, varies at a high rate for Arvind Mills Ltd. (Rs.138.25 crore) and a very low rate for Prag Bosimi Synthetics (Rs.3.34 crore) (vide appendix table 11). The total interest on borrowings for all selected large size textile firms has reached the peak at Rs.1142.10 crore in 2002-03 from Rs.589.65 crore in 1998-99. But it has gone down to Rs.642.92 crore in 2003-04 and reached Rs.532.36 crore in 2007-08. Overall, the average interest liability for large size textile firms stood at Rs.666.40 crore over the period.

5. SHARE HOLDERS EQUITY:

The pattern of share holder's equity across sample units has been presented in tables 13-15 and the same is shown in the form of Figure II.5 across different classes.

Figure II.5: Comparison of Equity Capital of Textile Companies by Size Classes



Among the 16 small size firms, the average shareholders' equity (SHE) capital is found to be negative for National Textile Corporation (NTC) (Rs.-590.34 crore) and Modern Syntex (I) Ltd (Rs.-7.36 crore), which might be due to the loss adjusted with the paid up equity capital over the period of time (vide appendix table 13). For small size firms other than NTC and Modern Syntem, the SHE varies from Rs.29.16 core for Spentex Industries Ltd. to Rs.123.89 crore for Garware-Wall Ropes Ltd during the period. During 1998-99 to 2007-08, the total shareholders' equity of small size firms ranges from Rs.-250.71 crore to Rs.910.87 crore in 1999-2000.

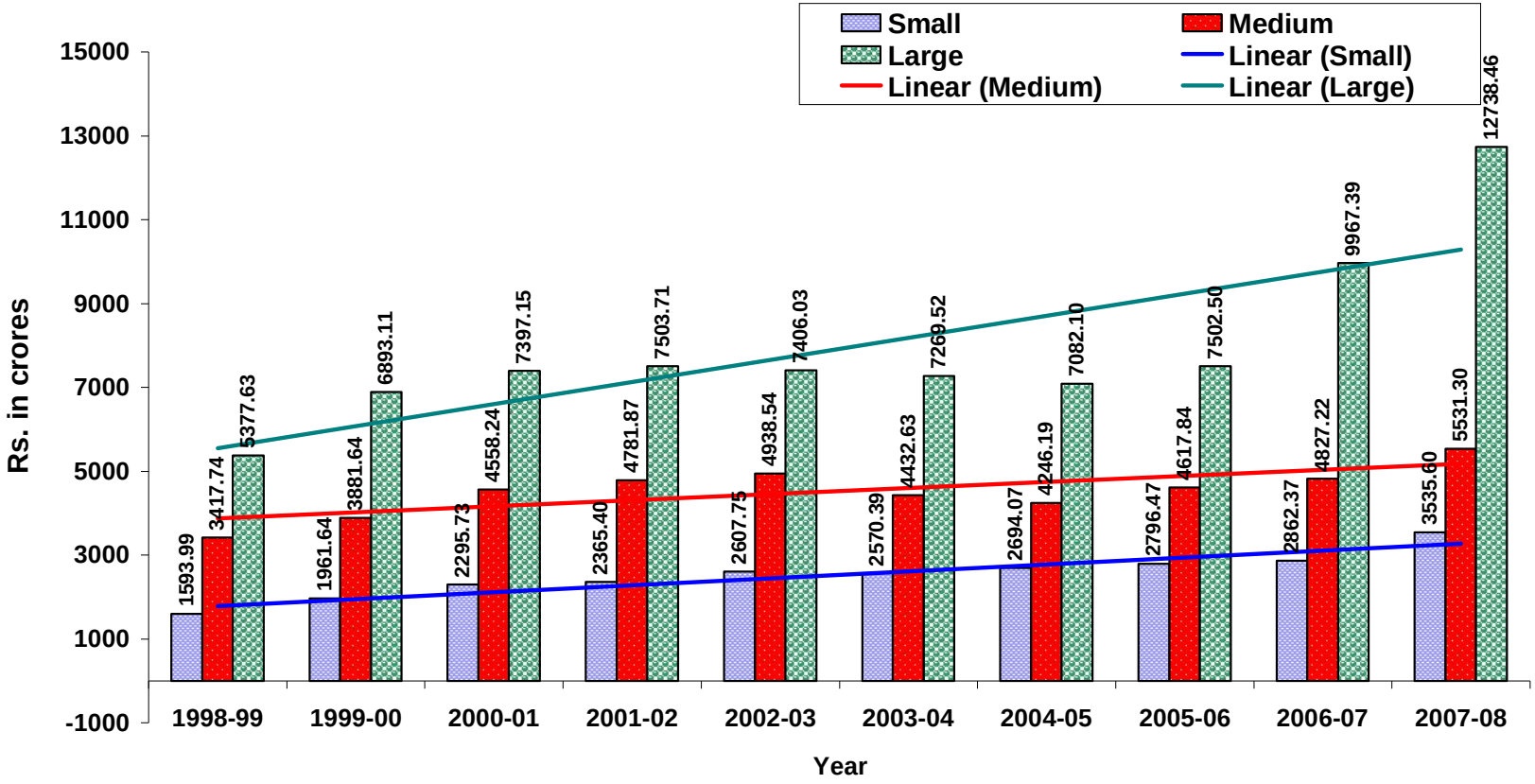
The equity capital is found to be negative for 3 out of 21 medium size textile firms (vide appendix table 14), on an average during the period. The average positive SHE among the remaining 18 medium size textile firms ranges from as low as Rs.54.17 crore in Sangam (India) Ltd and as high as Rs.591.54 crore in Krishna Lifestyle Tech Ltd. The total shareholders' equity capital for all 21 medium size textile firms ranges between Rs.1444.83 crore in 2006-07 and Rs.3870.82 crore in 2000-01, and is found to have declined from 1998-99 to 2007-08.

The equity capital (shareholders' equity or net worth) with an overall average of Rs.6238.59 crore ranges between as high as Rs.1014.16 crore for Arvind Mills Ltd to as low as Rs.50.61 crore for Prag Bosimi Synthetics during the study period (vide appendix table 15). The total shareholders' equity capital for all large size textile firms has been in the uptrend and increased from Rs.4949.31 crore in 1998-99 to Rs.9012.03 crore in 2007-08.

6. DEBT:

The pattern of borrowed fund (debt) across sample units has been presented in tables 16-18 and the same is shown in the form of Figure II. 6 across different classes.

Figure II.6: Comparison of Borrowed Capital (Debt) of Textile Companies by Size Classes



The total borrowed fund (debt) for all small size firms stood at its peak level of Rs.3535.60 crore at the end of the study period against its lowest level of Rs.1593.99 crore in the base year (vide appendix table 16). Among the small size firms, the average debt is higher for Modern Syntex (I) Ltd. (Rs.523.98 crore) and it is less for Garware-Wall Ropes Ltd. (Rs.53.03 crore) during 1998-99 to 2007-08.

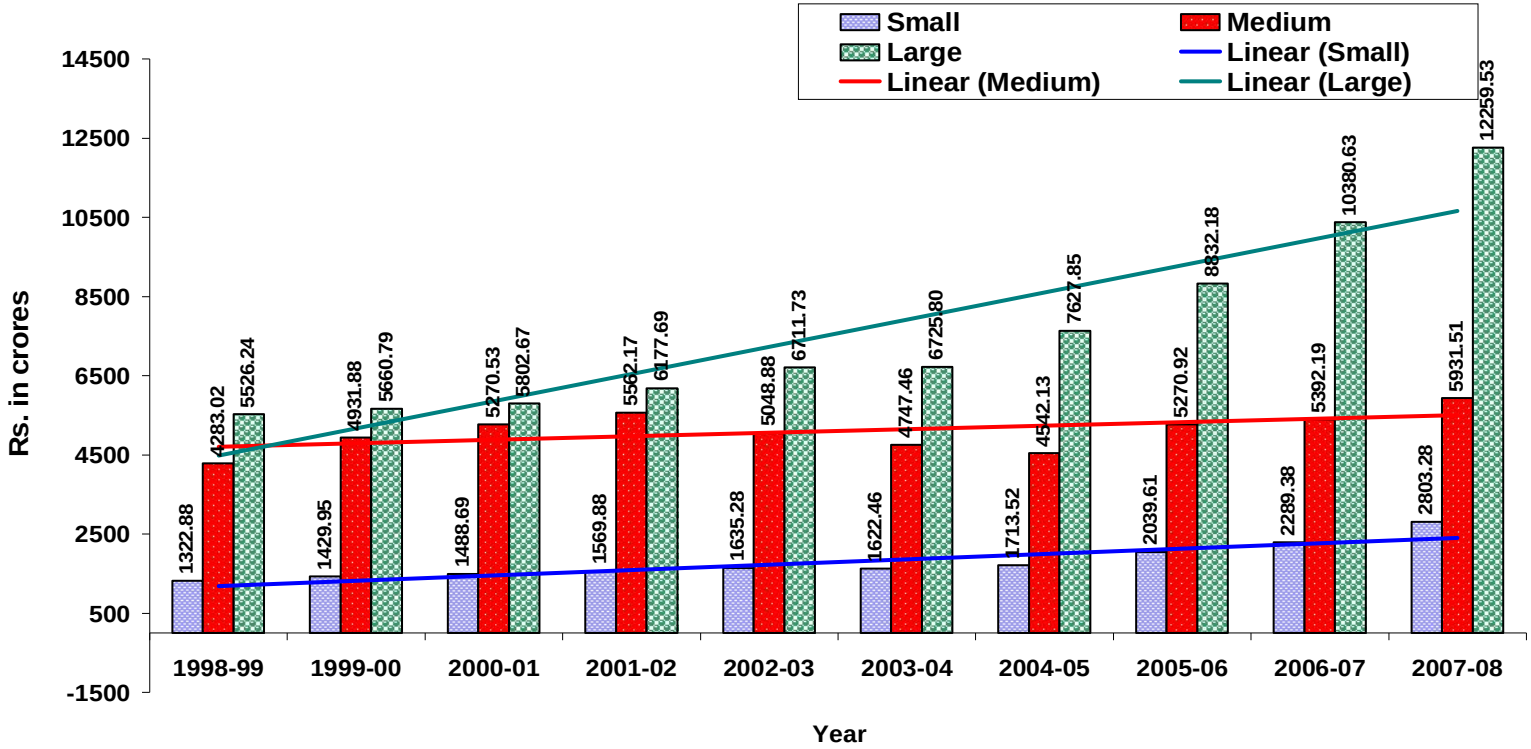
The total borrowed fund (debt) for all medium size firms (vide appendix table 17), which is Rs.3417.74 crore in 1998-99, has kept increasing up to 2002-03 before it started declining in 2003-04 and 2004-05. From 2005-06 onwards, it has, again, shown an upward trend until 2007-08. Among the medium size textile firms, the average debt is found to be higher for Sanghi Polyesters Ltd. (Rs.498.17 crore), whereas it has been very less for Himatsingka Seide Ltd. (Rs.21.19 crore) and K S L Realty & Infra. Ltd. (Rs.29.36 crore) when compared to the other counterparts during the study period.

The total debt for large size textile firms has gone up from Rs.5377.63 crore in 1998-99 to Rs.12738.46 crore in 2007-08 with an overall average of Rs.7913.76 crore (Arvind Mills Ltd.) during the 10 years (vide appendix table 18). Average debt among the firms ranges from Rs.124.21crore (Farbes Gokak Ltd) to Rs. 1625.98 crore (Aravind Mills Ltd.) during the period under study.

7. CURRENT ASSESTS:

The distribution of current assets across sample units has been presented in tables 19-21 and the same is shown in the form of Figure II.7 across different classes.

Figure II.7: Comparison of Current Assets of Textile Companies by Size Classes



Current assets of all small size firms (vide appendix table 19) is at its maximum in 2007-08 (Rs.2803.28 crore) and minimum in 1998-99 (Rs.1322.88 crore). Over the study period, Malwa Cotton Spg. Mills has owned higher current assets worth Rs.220.60 croe while Spentex Industries Ltd held current assets worth just Rs.40.19 crore on an average. During 1998-99 to 2007-08, the current assets for all small size firms have been Rs.1791.49 crore, on an average.

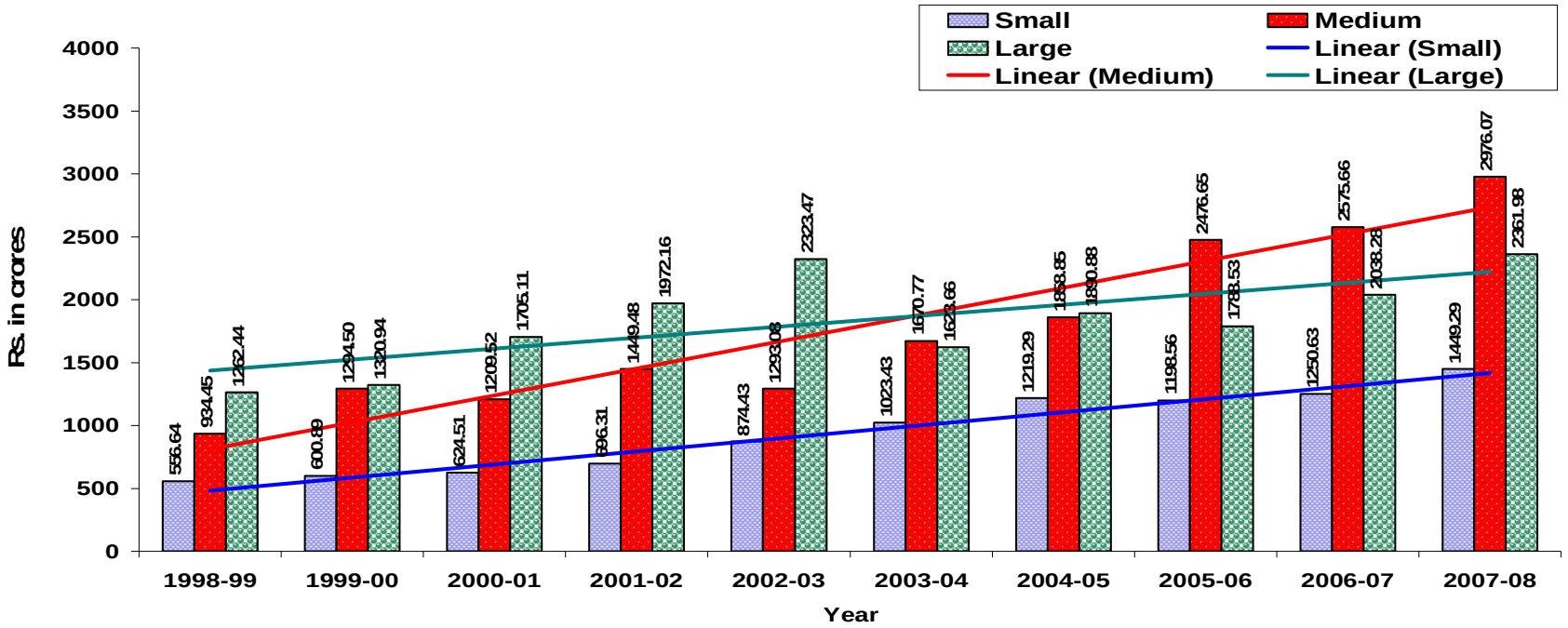
Current assets of all medium size firms (vide appendix table 20) is at its maximum at Rs.5931.51 crore in 2007-08 and minimum at Rs.4283.02 crore in 1998-99. During the years under study, the average current assets is more for Mafatlal Industries Ltd. (Rs.569.53 crore) and below Rs.100 crore for Sangam (India) Ltd. (Rs.69.09 crore) and Alps Industries Ltd. (Rs.78.99 crore) when compared to that of the others. The current assets for all medium size firms in all the years stood at Rs.5098.07 crore, on an average.

Overall, for large size textile firms, the total current assets (vide appendix table 21) has shown a positive trend and moved up to Rs.12259.53 crore in 2007-08 from Rs.5526.24 crore in 1998-99. From the comparison of mean of current assets for 10 years across firms, it is found that the CA is above Rs.1000 crore for Raymond Ltd and Arvind Mills Ltd. In the case of large size firms other than these two, the mean of current assets has varied from Rs.46.02 crore (Garden Silk Mills Ltd.) to Rs.741.47 crore (Vardhman Textiles Ltd) during the period.

8. CURRENT LIABILITIES:

The distribution of current liabilities across sample units has been presented in table 22-24 and the same is shown in the form of Figure II.8 across different classes.

Figure II.8: Comparison of Current Liability of Textile Companies by Size Classes



The total current liability (Table 22) for small size firms ranges from Rs.556.64 crore in 1998-99 to Rs.1449.29 crore in 2007-08. Individually, the current liability is much higher for NTC (Rs.284.48 crore) and lower for Shri Lakshmi cotsyn Ltd. (Rs.4.87 crore) on an average during 1998-99 to 2007-08.

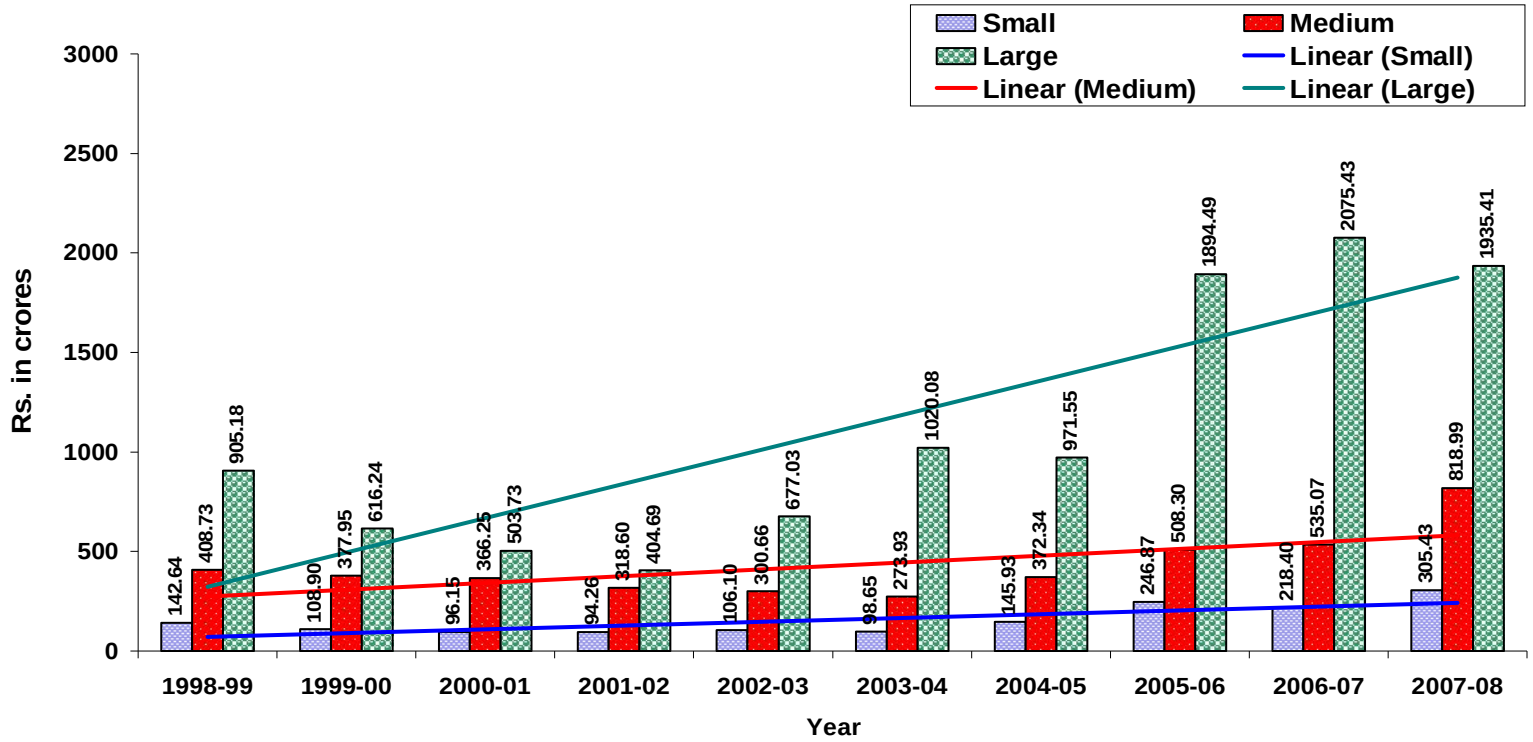
The total current liability (vide appendix table 23) for medium size firms, which varies from Rs.934.45 crore in 1998-99 to Rs.2976.07 crore in 2007-08 has exhibited an upward trend from 1998-99 to 2007-08. From the comparison of the mean of current liability across firms, it is found that the current liability is more for Mafatlal Industries Ltd. (Rs.318.64 crore) and below Rs.10 crore for Himatsingka Seide Ltd. (Rs.5.41 crore) and Sangam (India) Ltd. (Rs.9.68 crore) when compared to that of the remaining textile firms of medium size classes.

The total current liability (vide appendix table 24) for large size firms ranges from Rs.1262.44 crore to Rs.2361.98 crore during 1998-99 to 2007-08 respectively. This, in turn has shown an upward trend in CL with ups and downs from beginning to end years. Individually, the current liability is found to be more in Vardhman Textiles Ltd. (Rs.371.67 crore) and less in J B F Industries Ltd (Rs.27.88 crore), on an average during the study period.

9. CASH AND BANK BALANCE:

The distribution of Cash and bank balance across sample units has been presented in tables 25-27 and the same is shown in the form of Figure II. 9 across different classes.

Figure II.9: Comparison of Cash & Bank Balance of Textile Companies by Size Classes



On an average, the cash and bank balance (vide appendix table 25 vary from a minimum of Rs.0.37 crore, (Shri Lakshmi Cotsyn Ltd) to a maximum of Rs.25.25 crore (Rajapalayam Mills Ltd.) for small size textile firms during the study period. The total cash and bank balances of all small size firms has been more at Rs.305.43 crore in 2007-08 and less at Rs.94.26 crore in 2001-02.

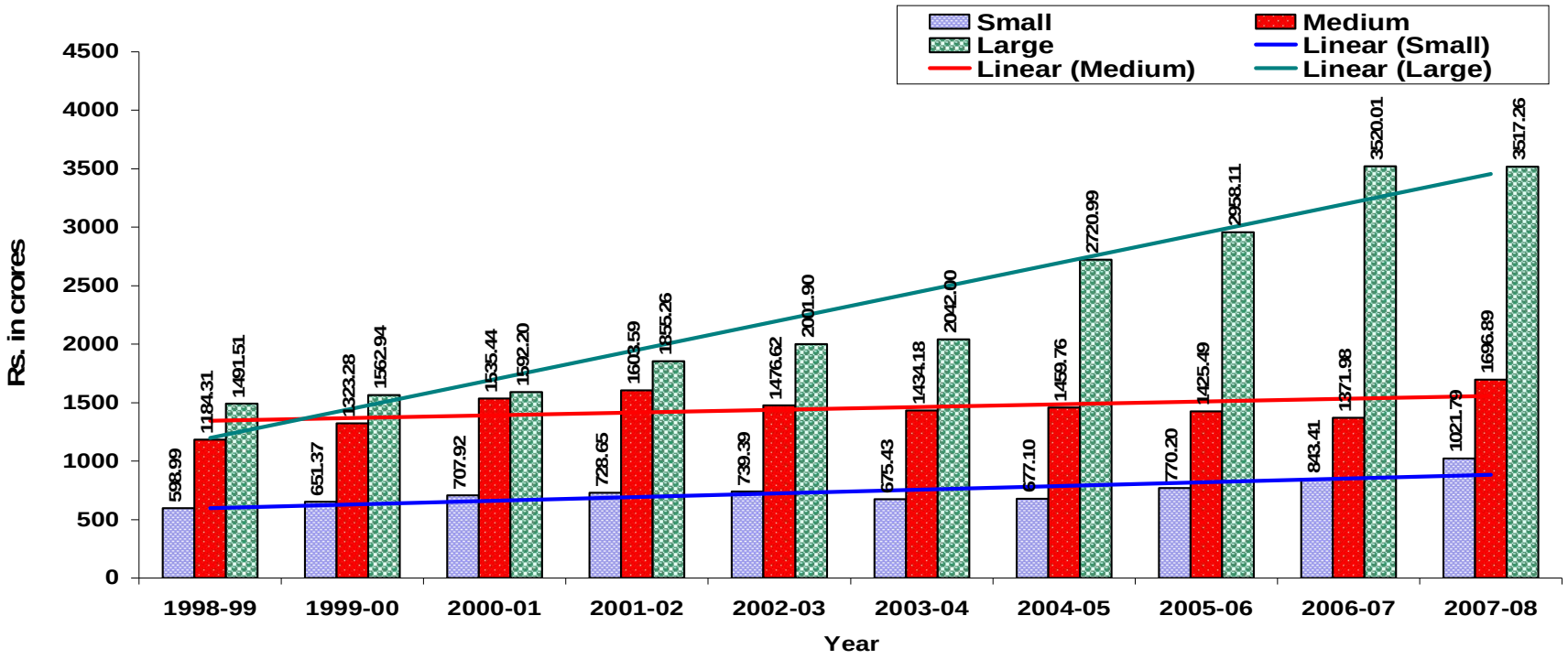
The cash and bank balances (vide appendix table 26), on an average, vary from a minimum of Rs.1.01 crore (Recron Synthetics Ltd.) to a maximum of Rs.92.52 crore (Himatsingka Seide Ltd.) for medium size textile firms during the study period. Further, the average cash balance is below Rs.5 crore in 6 out of 21 firms. The total cash and bank balances of all medium size firms have reached Rs.818.99 crore in 2007-08 from Rs.408.73 crore in 1998-99.

The minimum and maximum cash and bank balances (vide appendix table 27) is at Rs.3.74 crore (Prag Bosimi Synthetics) and Rs.258.03 crore (Raymond Ltd.), on an average among the large size textile firms during the period respectively. The total cash and bank balances of all large size textile firms have increased from Rs.905.18 crore in 1998-99 to Rs.1935.41 crore in 2007-08, exhibiting a positive but fluctuating trend. Overall, the average cash and bank balances amount to Rs.1100.38 crore for all large size textile firms put together during the period of study.

10. INVENTORY:

The inventory status across sample units has been presented in tables 28-30 and the same is shown in the form of Figure II.10 across different classes.

Figure II.10: Comparison of Inventory in Textile Companies by Size Classes



With regard to inventory status of the small size firms (vide appendix table 28), it is found that the inventory has been ranging from Rs.14.02 crore (Spentex Industries Ltd.) to Rs.85.71 crore (Malwa Cotton Spg. Mills) on an average over the period. The total inventory, i.e., the inventory of all small size firms has stood at its maximum level in 2007-08 (Rs.1021.79 crore) and minimum in 1998-99 (Rs.598.99 crore). For all small size firms during the study period, the value of inventory has been Rs.741.43 crore, on an average.

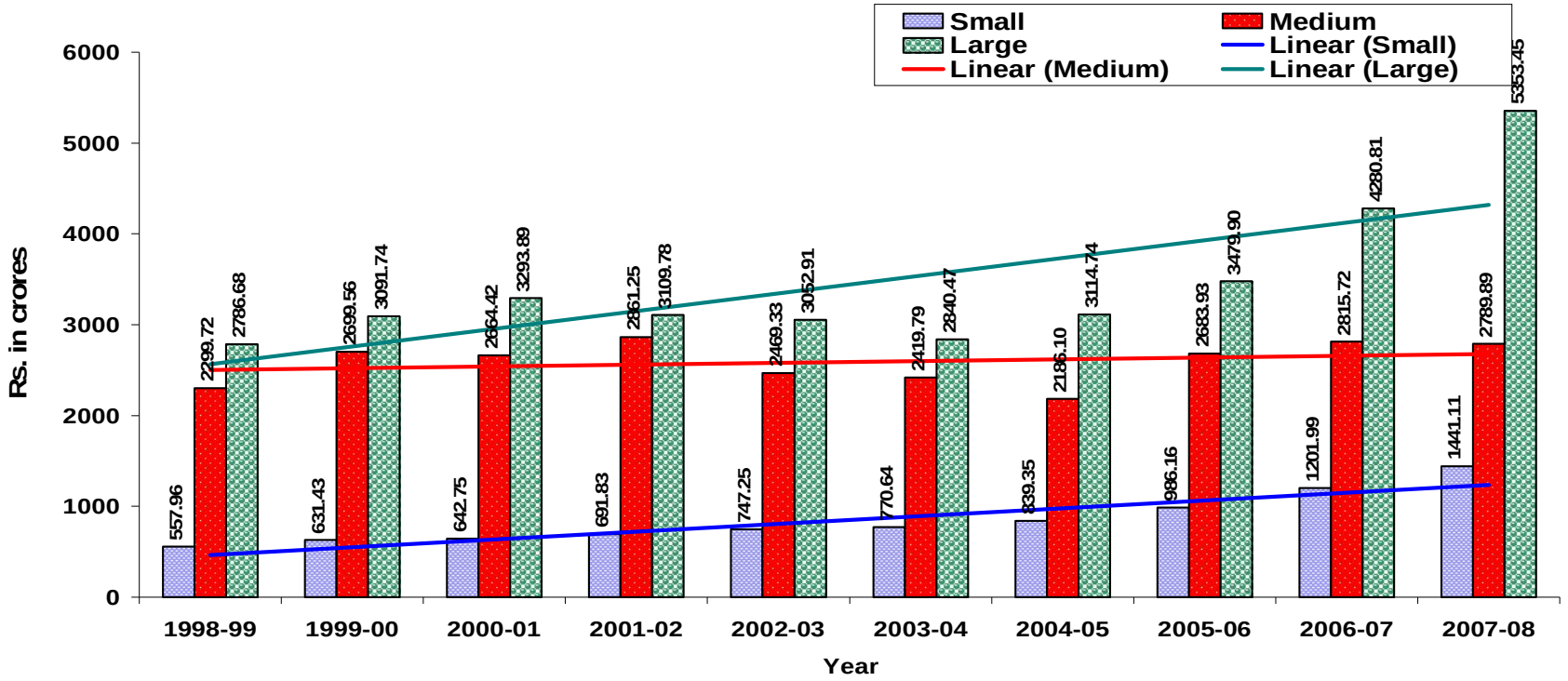
On an average, the inventory of the medium size textile firms (vide appendix table 29) ranges from Rs.18.43 crore (Sanghi Polyesters Ltd.) to Rs.195.84 crore (Krishna Lifestyle Tech Ltd) over the study period. The total inventory of all medium size textile firms has reached Rs.1696.89 crore in 2007-08 from Rs.1184.31 crore in 1998-99. Overall, for all medium size firms, the value of inventory has been Rs.1451.15 crore, on an average during the study period.

The value of inventory (vide appendix table 30) ranges from Rs.1491.51 crore in 1998-99 to Rs.3517.26 crore in 2007-08 and has a shown a continuous increase between beginning and end years for large size textile firms. The minimum and maximum average inventory is seen with Prag Bosimi Synthetics (Rs.11.74 crore) and Arvind Mills Ltd. (Rs.306.64 crore) respectively. When all large size firms are combined together, the overall mean inventory amounts to Rs.2326.22 crore during the years from 1998-99 to 2007-08.

11. ACCOUNTS RECEIVABLE:

The accounts receivable status across sample units has been presented in tables 31-33 and the same is shown in the form of Figure II.11 across different classes.

Figure II.11: Comparison of Accounts Receivable in Textile Companies by Size Classes



Regarding accounts receivable status (vide appendix table 31), it is seen that as much as Rs.1441.11 crore worth of goods sold on credit in 2007-08 by all small size textile firms are yet to have been received against Rs.557.96 crore in 1998-99. On an average, accounts receivable is found to be more in Modern Syntex (I) Ltd. (Rs.109.87 crore), Malwa Cotton Spg. Mills (Rs.108.69 crore) and in Modipon Ltd. (Rs.105.49 crore), whereas it is less in the case of Spentex Industries Ltd (Rs.13.82 crore), Indo Count Inds. Ltd (Rs.19.03 crore), and Ginni Filaments Ltd (Rs.21.37 crore) during the study period.

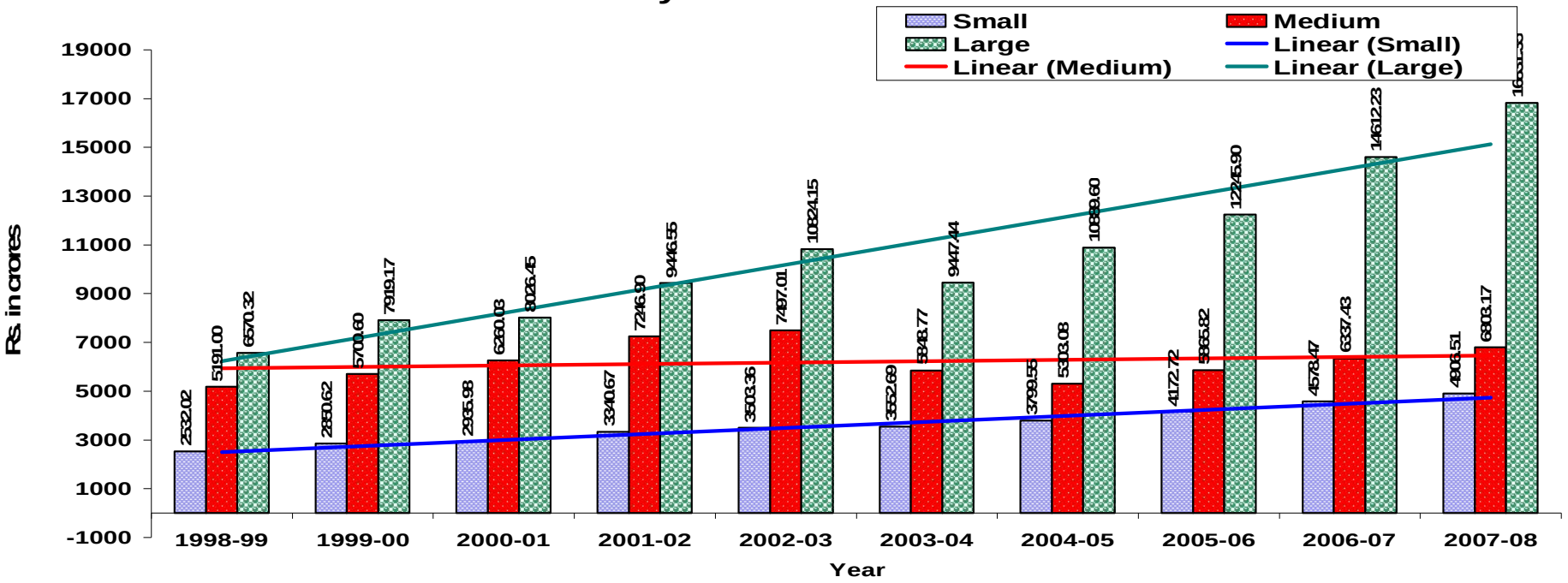
The average accounts receivable (vide appendix table 32) is between Rs.31.87 crore and Rs.92.17 crore for 63.64 per cent (14 out of 21) and between Rs.130.25 crore and Rs.306.19 crore for 36.36 per cent, (7 out of 21) medium size textile firms during the period. The total accounts receivable for all medium size textile firms has increased from Rs.2299.72 crore in 1998-99 to Rs.2789.89 crore in 2007-08 with an overall mean value of Rs.2588.97 crore.

Pertaining to accounts receivables of the large size firms (vide appendix table 33), it is found that the average of AR is lowest at Rs.30.46 crore (Prag Bosimi Synthetics) and highest of at Rs.810.06 crore (Arvind Mills Ltd) for the study period. The total accounts receivables of all large size textile firms have exhibited a positive trend and have reached Rs.5353.45 crore in 2007-08 from Rs.2786.68 crore in 1998-99. Altogether, the overall mean of accounts receivables is at Rs.3440.44 crore during the period of study.

12. SALES:

The sales pattern across sample units has been presented in tables 34-36 and the same is shown in the form of Figure II.12 across different classes.

Figure II.12: Comparison of Sales of Textile Companies by Size Classes



As far as the sales are concerned (vide appendix table 34), it is apparent that the total sales is found to have increased continuously from Rs.2532.02 crore in 1998-99 to Rs.4906.51 crore in 2007-08 for small size textile firms. From the comparison of average sales of each firm, it is found that it is more for Modern Syntex (I) Ltd. (Rs.539.59 crore) and less for Spentex Industries Ltd. (Rs.116.36 crore) during the study period.

Regarding turnover in medium size textile firms (vide appendix table 24), it is found that there has been an upward trend in total sales but with crisscross movements from Rs.5191.00 crore in 1998-99 to Rs.6803.17 crore in 2007-08. The Mean sales, on the other hand, vary from a minimum of Rs.111.80 crore for Himatsingka Seide Ltd to a maximum of Rs.758.97 crore for J C T Ltd from 1998-99 to 2007-08.

Regarding the turnover for large size textile firms, it is elicited that there has been an upward trend with a triggering movement in total sales as it increased from Rs.6570.32 crore in 1998-99 to Rs.16831.35 crore in 2007-08 (vide appendix table 36). From the comparison of the average sales of each firm, it is found that the turnover is more than Rs.1000 crore for Arvind Mills Ltd. (Rs.1256.15 crore), Indo Rama Synthetics (Rs.1613.81 crore) and Raymond Ltd. (Rs.1192.08 crore) and it varies from Rs.43.50 crore (Prag Bosimi Synthetics) to Rs.949.81 crore (Vardhman Textiles Ltd) for the remaining large size textile firms i.e during the years from 1998-99 to 2007-08. Overall, for all large size firms, the mean turnover is Rs.10681.32 crore during the years under study.

CHAPTER - III

CONCEPTS AND APPROACHES OF WORKING CAPITAL MANAGEMENT

CHAPTER III

CONCEPTS AND APPROACHES OF WORKING CAPITAL MANAGEMENT

In this chapter an attempt is made to present the structure and the theoretical determinants of Working Capital (WC) and the methods of forecasting the requirements, and the components of such Working Capital . This input may give proper insight into the theory, practice and the analysis of Working Capital Management (WCM). Working Capital Management often becomes a difficult task as the concept of Working Capital cycle gets disturbed for various reasons particularly when credit sales are disproportionate and creditors liability increase. **(Choudary C.S.)**

III.1 Significance of Working Capital

Working Capital is considered as the lifeblood and nerve centre of any business (Khan and Jain) In the present day modern industrial world the term Working Capital refers to the short term funds required for financing the entire duration of the operating cycle of a business known as "Accounting Year". It is a trading capital not retained in the business in a particular form for more than a year. This is used for carrying out the routine or regular business operations consisting of purchase of raw materials, payment of direct and indirect expenses, carrying out production, investment in stock, etc. In short it represents the fund by which the day-to-day business is carried on **(Gregfilbeck).**

Working Capital refers to that part of the firm's capital, which is required for financing short-term business requirements or Current Assets (CAs) such as Cash, marketable securities, debtors and inventories. Funds so invested in Current Assets keep revolving fast and are being constantly converted into Cash and this Cash turns out again in exchange for other Current Assets. Hence, it is also known as revolving or circulating or short-term capital (Gupta K. Shashi and Sharma R.K.)· "Working Capital is the amount of funds necessary to cover the cost of operating enterprise". Circulating capital means Current Assets of a company that are changed in the ordinary course of business from one form to another, Eg, from Cash to inventories; inventories to recievables, to cash.

III.2 Concept of Working Capital (V.K. Bhalla)

There are two possible interpretations for Working Capital

A. Balance Sheet Approach (BSA)

B. Operating Cycle Approach (OCA)

III.2.1. Balance Sheet Approach

There are two interpretations of Working Capital under the BSA, viz.,

(i) Gross Working Capital Approach (GWC), and

(ii) Net Working Capital Approach (NWC)

In the broad sense, the term Working Capital refers to the Gross Working Capital and represents total amount of funds invested in Current Assets. Gross Working Capital is the capital invested in total Current Assets of the enterprise. Although Current Assets vary from industry to industry, they constitute between 50 to 60 per cent of the total assets of manufacturing concerns **(Subhash Chander and Rajan Kumar)**

Current Assets are those assets which, in the ordinary course of business, can be converted into Current Assets within a short period of time, say, one year. The constituents of Current Assets are: -

- Cash in hand and bank balance
- Bills receivables
- Sundry debtors less provision for bad debts
- Short-term loans and advances
- Inventories of stock – Raw materials, work-in-progress, stores and spares, finished goods,
- Temporary investment of surplus funds
- Prepaid expenses, and
- Accrued incomes (Gupta K. Shashi and Sharma R.K.)

In a narrow sense, the term Working Capital refers to Net Working Capital. When accountants use the term Working Capital, they generally refer to Net Working Capital, which is the difference between Current Assets and Current Liabilities **Van Horne. C. James and Wachowicz John M.(Jr).**

Net Working Capital refers to the difference between Current Assets and Current Liabilities. Current Liabilities are those claims of outsiders that are expected to mature for payment within an accounting year and include the following:

- Bills Payables
- Sundry Creditors
- Accrued or outstanding expenses
- Short-term loans, advances and deposits
- Dividends payable
- Bank overdraft, and
- Provision for taxation, if it does not amount to appropriation of profits (Pandey I.M.)

The Net Working Capital may be positive or negative. A positive Net Working Capital will arise when Current Assets exceed Current Liabilities. Negative Net Working Capital occurs when Current Liabilities are in excess of Current Assets. (Srinivasan N.P. and Shakthivel Murugan.M)**.** The Current Liabilities that amounted to 24 per cent unrepresented by Current Assets, which, in turn, drastically affected turnover levels of heavy engineering (Mukhapadhyay). The Gross Working Capital is financial or going concern concept while Net Working Capital is an accounting concept of Working Capital. These two concepts of Working Capital are not exclusive. The Net Working Capital may be suitable only for proprietary form of organizations such as sole-trader or partnership firms. The gross concept of Working Capital, on the other hand, is suitable to the company form of organization where there is diverse between ownership, management and control **(Gupta K. Shashi and Shrama R.K.)**

III.2.2 Operating Cycle Approach

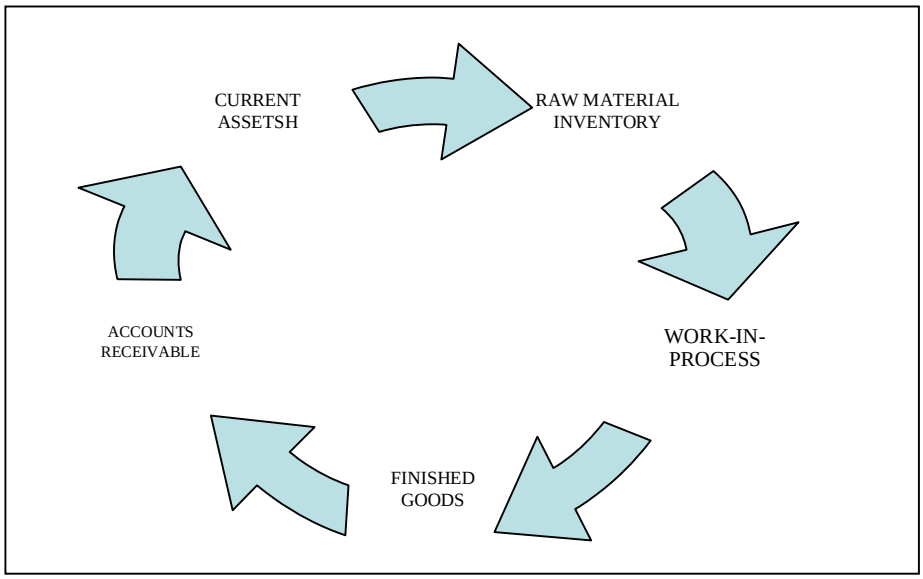
In terms of liquidity, there is a difference between current and fixed assets. To recover the initial investment in fixed assets, a firm requires many years. On the contrary, investments in Current Assets are turned over many times in a year. Investments in Current Assets such as inventories and debtors (accounts receivables) are realized during the firm's operating cycle, which is usually less than a year. **(Moyer R.C. et.al).**

Operating cycle is the time duration required to convert sales, after the conversion of resources into inventories and that into Current Assets. The operating cycle of a manufacturing company involves three phases.

- Acquisition of resources such as raw materials, labor, power and fuel.
- Manufacture of the product, which includes conversion of raw materials into work-in-progress, work-in-progress into finished goods.
- Sale may be either for Cash or on credit. Credit sales create accounts receivable for collection.

These phases affect Cash flows, which are neither synchronized nor certain. They are not synchronized because Cash outflows usually occur before Cash inflows. Cash outflows are relatively certain whereas the Cash inflows are difficult to be forecast due to the time gap between sales and collections. This requires the firm to invest in Current Assets for uninterrupted operations. Liquidity has to be maintained to purchase raw materials and pay expenses, as there is hardly a matching between Cash inflows and outflows. Cash is also held to meet any future obligations. Stock of raw materials and work-in-progress are kept to ensure smooth production and to guard against non-availability of raw materials and other components. The firm holds stock of finished goods to meet the demands of customers on continuous basis and sudden demand from some other customers. Debtors are created because goods are sold on credit for marketing and competitive reasons. Thus, a firm makes adequate investment in materials, and debtors, for smooth, uninterrupted production and sales.

Figure III. (1) Operating Cycle



Source: Ravi M. Kishore, "Financial Management", Taxmann's, New Delhi, 3rd edition, p. 174.)

The length of the operating cycle of a manufacturing firm can be defined as the sum of inventory conversion period (ICP) and debtor's conversion period (DCP). (I.M. Pandey)**.** The operating cycle ranges from 96 days to 158 days in Case of Lupin Laboratories Ltd**. (Singh.P.K.)**

Inventory Conversion Period (ICP)

It is the total time needed for producing and selling the product which includes raw materials conversion period (RMCP), work-in-progress conversion period (WIPCP) and finished goods conversion period (FGCP).

Raw Material Conversion Period refers to the period in which the raw materials are generally kept in stores before they are issued for manufacturing to production department. Work-in-Progress Conversion Period refers to the period for which the raw material remains in the manufacturing process before it is taken out as finished product. Finished Goods Conversion Period refers to the period for which finished products remain in stores before being sold to a customer.

Debtors Conversion Period (DCP)

It is the time required to collect the outstanding amount from customers.

Gross Operating Cycle (GOC)

The total of inventory conversion period and debtors' conversion period is referred to as Gross Operating Cycle (GOC) and symbolically represented as

GOC = RMCP + WIPCP + FGCP + DCP

$$RMCP = \frac{\text{Average Stock of Raw materials}}{\text{Raw materials consumption per day}}$$

$$WIPCP = \frac{\text{Average Stock of Work-in-progress}}{\text{Total cost of production per day}}$$

$$FGCP = \frac{\text{Average Stock of Finished Goods}}{\text{Total cost of Sales per day}}$$

$$DCP = \frac{\text{Average Accounts Receivable}}{\text{Net Credit Sales per day}}$$

However, a firm may acquire resources for production activities, on credit and temporarily postpone the payment of certain expenses, which can be invested in Current Assets. The Payable Deferred Period (PDP) is the length of time the firm is able to defer payments on various resource purchases. The difference between Gross Operating Cycle and the Payable Deffered Period is Net Operating Cycle (NOC) **(Kishore M. Ravi)** Thus,

NOC = GOC – PDP

Where,

$$PDP = \frac{\text{Average Payments}}{\text{Net Credit Purchases per day}}$$

III.2.3 Classification of Working Capital on the basis of time

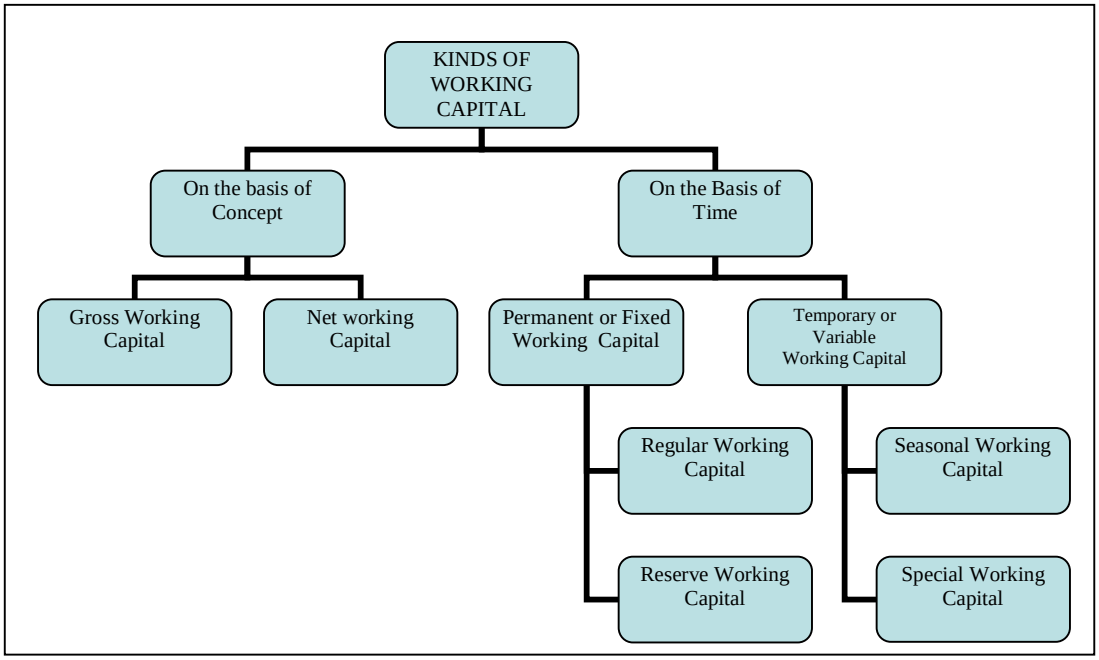
Working Capital , on the basis of time can be categorized as:

A. Permanent or Fixed Working Capital

B. Temporary or Variable Working Capital

The classification is shown in figure III. (2).

Figure III. (2) Classification of Working Capital



Source: Gupta K. Shashi and Sharma R. K, "Management Accounting – Principles and Practice", Kalyani Publishers, New Delhi, 10th edition (2005), p. 23.6.)

III.3.1 Permanent or Fixed Working Capital

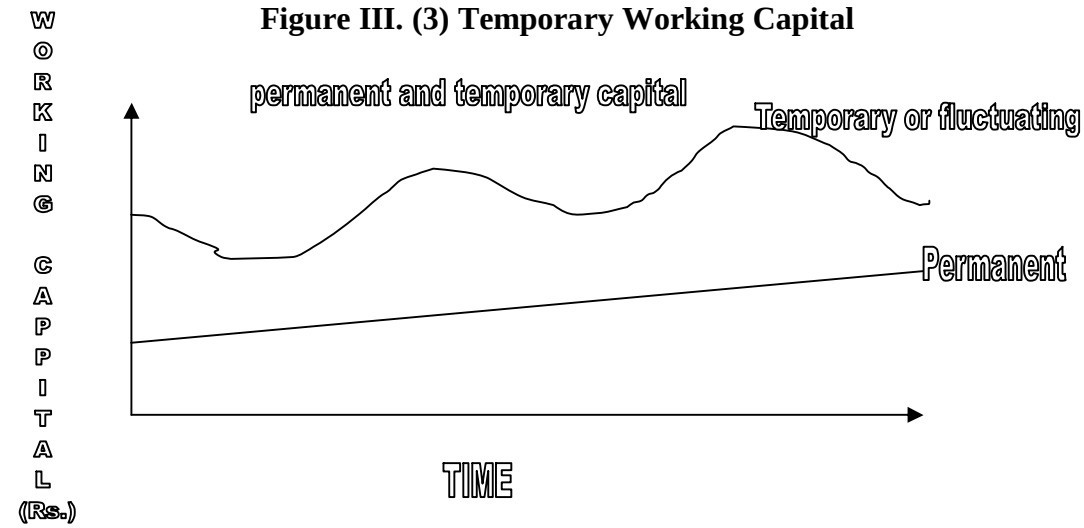
It is the minimum amount required to ensure effective utilization of fixed facilities and for maintaining the circulation of Current Assets. There is always a minimum level of Current Assets, which is continuously required by the firm to carry out its normal business operations such as raw materials, work-in-progress, finished goods and cash balance. This minimum level of Current Assets, which is permanently blocked, is called permanent or fixed Working Capital **(IM.Pandey).**

It is further be classified as regular Working Capital and reserve Working Capital . Regular Working Capital , as the name implies, refers to the Working Capital required for regular conduct of operations. Reserve Working CapitaL is the excess over the requirements for regular Working Capital , which may be provided for contingencies, such as strikes and rise in prices.

III.3.2 Temporary or Variable Working Capital

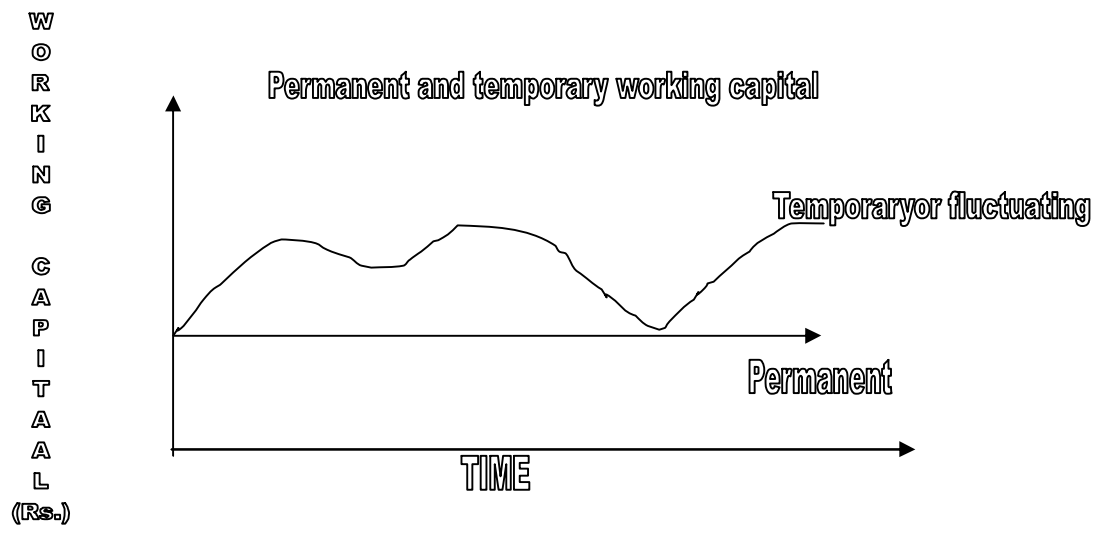
It is the amount of Working Capital required to meet the seasonal demands and some special exigencies.(Kulkarni.P.V. and Satya Prasad B.G.)**.** It can be further classified as seasonal Working Capital and special Working Capital. The capital needed to meet the seasonal needs of the business is termed as seasonal or variable working capital . It is that part of the Working Capital which is required to meet special exigencies, such as special campaign, conducting research and new product launch, which is known as special Working Capital (Kulparni.P.V.)**.** The requirements of the temporary Working Capital is shown in figure III. (3) and III (4).

Figure III. (3) Temporary Working Capital



Source: Pandey I. M. "Financial Management", (2004), Vikas Publishing House (P) Ltd., New Delhi, 8th edition, p. 808.

Figure III. (4) Temporary Working Capital



Source: Pandey I. M. "Financial Management", (2004), Vikas Publishing House (P) Ltd., New Delhi, 8th edition, p. 808.

Adequacy of Working Capital

The maintenance of the required amount of Working Capital is termed as adequate Working Capital . The adequate Working Capital results in the following benefits, viz, protects business from adverse effects of shrinkage in the value of Current Assets, ensures to a great extent the maintenance of company's credit standing and provides for emergencies like strikes (Vasudevan)**.** It also permits the carrying of inventories at a level that will enable a business to serve satisfactorily to the need of its customers, enables a company to offer favourable credit terms to customers, to operate its business more efficiently as there is no delay in obtaining materials due to credit difficulties, to withstand in periods of depression smoothly, there can be operating losses or decreased retained earnings, there can be excessive non operating or ordinary losses. **(Pandey.I.M.).**

Inadequate Working Capital

It is a situation where the production facilities could not be utilized fully for want of Working Capital . This results in the following dangers.

- ❖ May not be able to take advantage of Cash discount facilities.
- ❖ Credit worthiness of the company can be jeopardized due to lack of liquidity.

- ❖ May not be able to take advantage of profitable business opportunities.
- ❖ Modernization and even routine repairs and maintenance facilities may be difficult to administer.
- ❖ Will not be able to pay dividends due to non-availability of funds.
- ❖ May have to borrow funds at exorbitant rates of interest.
- ❖ Low liquidity will lead to low profitability.
- ❖ Loses its reputation on account of not honouring its short-term obligations.

Excessive Working Capital

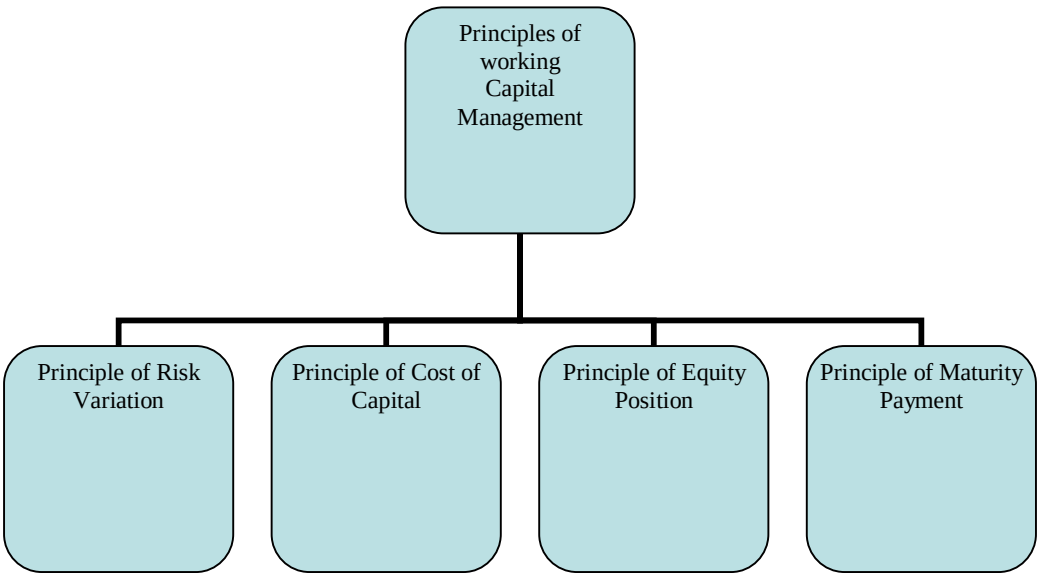
It refers to a situation of idle funds, which earn no profits for the firm. The evils of excessive Working Capital are:

- ❖ May be tempted to over trade and loose heavily.
- ❖ Unnecessary accumulation of materials.
- ❖ Imbalance between liquidity and profitability.
- ❖ High liquidity will involve a company to undertake greater production that may have a matching demand. It will find itself in a very embarrassing position; its marketing policies are not properly adjusted to boost up the market for its products **(Bhattacharya and Singh).**
- ❖ May invest in fixed equipment heavily, which will not be justified by actual sales of production leading to over capitalization.
- ❖ May lead to inefficiency of operations.

Determination of adequacy of Working Capital poses problems to both corporate and the banking sector **(Prasanna Chadra).**

Hence it is absolutely essential to maintain the right amount of Working CapitaL on a continuous basis, and then only a proper functioning of the business operations will be ensured. Sound financial and statistical techniques, supported by judgment, should be used to predict the quantum of Working Capital needed at different time periods. **(Pondey I.M.)**

Figure III. (5) Principles of Working Capital Management



Source: Gupta K. Shashi and Sharma R. K, "Management Accounting – Principles and Practice", Kalyani Publishers, New Delhi, 10th edition (2005), p. 23.12.)

III.4 Principles of Working Capital Finance

1. Principle of Risk Variation

Risk variation refers to an ability of a firm to maintain sufficient Current Assets to pay for its obligations. If Working Capital varied in relation to sales, the amount of risk that a firm assumes is also varied and the opportunity for gain or loss is increased. It means that there is a definite relationship between the degree of risk and the rate of return **(Barida S.C.).**

2. Principle of Equity Position

The amount of Working Capital invested in each component should be adequately justified by a firm's equity position. Every paise contributed in the Working Capital must contribute the Net Working Capital of the firm **(Barida S.C.)**.

3. Principle of Cost of Capital

It emphasizes the different sources of finance and each source has a different cost of capital. The cost of capital moves inversely with risk. As such additional risk capital results in the decline in the cost of capital **(Kulkarni.P.V. and Satyaprasad.B.G.)**

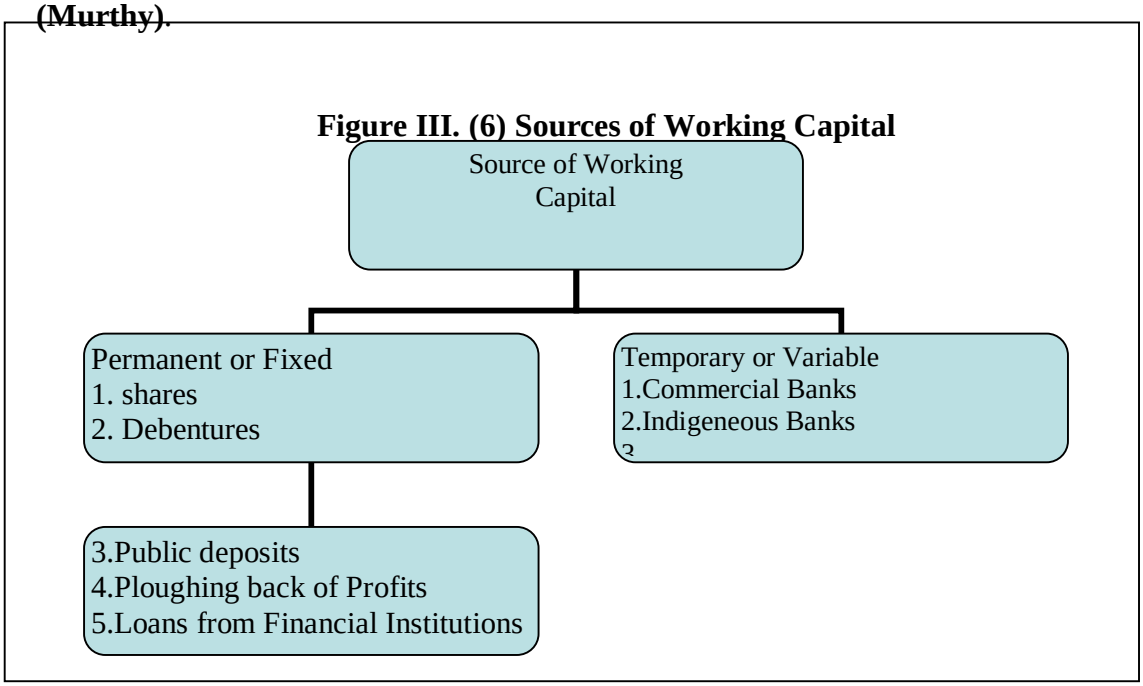
4. Principle of Maturity of Payments

A firm should make every attempt to relate maturities of payments to its flow of internally created funds. The failure to meet such a match of generation to outside demand would accentuate the risk **(Vasudevan)**.

Sources of Working Capital

Working Capital can be procured from various sources by manufacturing concerns. A snapshot of the various sources is depicted in the following figure **(Murthy)**.

Figure III. (6) Sources of Working Capital



Source: K. Shashi and Sharma R. K, "Management Accounting – Principles and Practice", Kalyani Publishers, New Delhi, 10th edition (2005), p. 23.36.)

III.5 Sources of financing Permanent or Fixed Working Capital

- **Shares**: The most important source for the permanent or long-term Working Capital is the issue of equity, preference and deferred shares.
- **Debentures**: Another important source for raising the permanent Working Capital is the issue of debentures, which means a debt where the debenture holder is considered as the creditor of the company.
- **Retained Earnings**: Otherwise called ploughing back of profits. It means the reinvestment by the company's surplus earnings in its business.
- **Loans from Financial Institutions**: Financial institutions such as Commercial banks, Life Insurance Corporation of India, Industrial Finance Corporation of India, State Finance Corporation, Industrial Development Bank of India, etc., also provide term loans for Working Capital needs.
- **Public Deposits (Fixed)**: These deposits are fixed in nature and are accepted by a business enterprise directly from the public.

Sources of financing temporary or variable or short-term Working Capital

- **Commercial Banks**: The major portion of Working Capital needs is provided by the commercial banks. The different forms of credit offered by banks are loans and advances, cash credits, overdrafts and purchasing, factoring, forfeiting key Cash credit, transit receipt and discounting bills.
- **Indigenous Bankers**: Private moneylenders and other country bankers are also used to be a source of finance prior to the establishment of commercial banks. Even now, some business houses depend upon them.
- **Trade credit**: It refers to the credit extended by the suppliers of goods in the normal course of business. It may also take the form of an open account or bills payable.
- **Installment credit**: Under this source the assets are purchased and possession of goods is taken immediately but the payment is made in installment over a period of time.
- **Advances**: Receiving of payment in advance from customers and agents against order of goods.

- **Accrued Expenses**: The expenses, which have been incurred but not yet due and hence not yet paid.
- **Deferred Income**: Incomes received in advance before supplying goods.
- **Commercial Papers**: It represents unsecured promissory notes issued by firms to raise short-term funds, the maturity period ranging from 91 to 180 days.

III.6 Approaches for financing Working Capital

Depending on the mix of short and long term financing, there are three basic approaches. They are:

- ❖ Matching approach/Hedging approach
- ❖ Conservative approach
- ❖ Aggressive approach

III.6.1 Matching or Hedging Approach

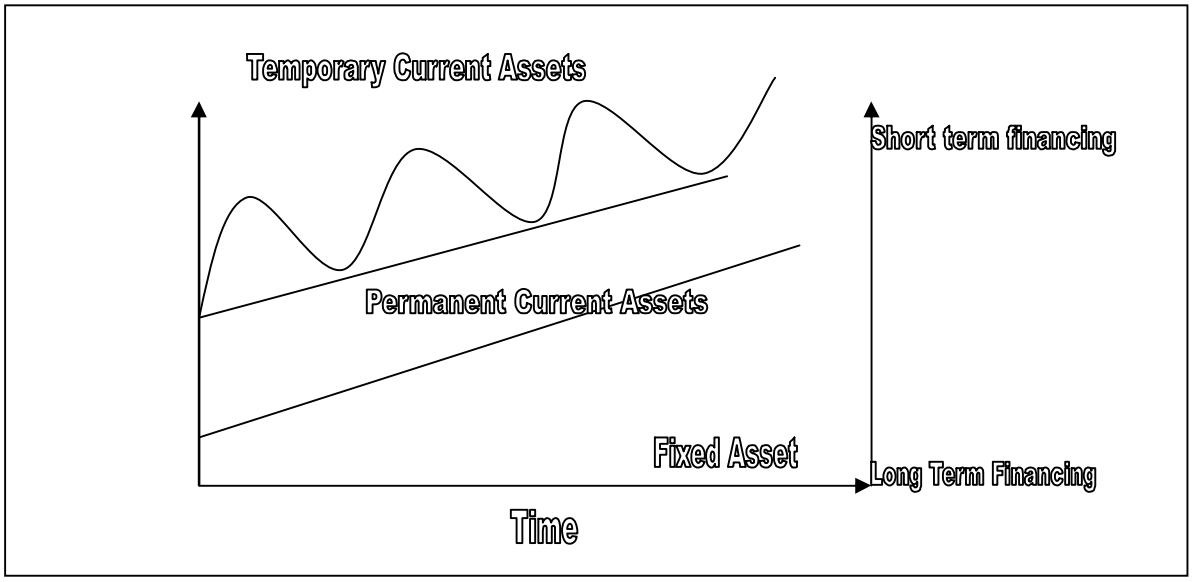
The term hedging is very often used in the sense of risk reducing investment strategy involving transactions of a simultaneous but opposing nature so that the loss arising out of one transaction is likely to offset in the other due to the financing mix. The term hedging can be said to refer to the process of matching maturities of debt with the maturities of financial needs. That is why it is called matching approach. According to this approach, the maturity of the sources of funds should match the nature of the assets to be financed. For analytical purpose Current Assets can be broadly classified into:

- ❖ Those, which require certain amount for given level of operation and hence do not vary over time.
- ❖ Those, which fluctuates over time.

This approach suggests that long-term funds should be used to finance the fixed portion of Current Assets requirements as spelt out in a manner similar to the financing of fixed assets.

The purely temporary requirement that is the seasonal variation over and above the permanent financing needs should be appropriately financed with short-term funds or Current Liabilities **(John Hampton).**

Figure III. (7) Matching/Hedging Approach of Working Capital Management

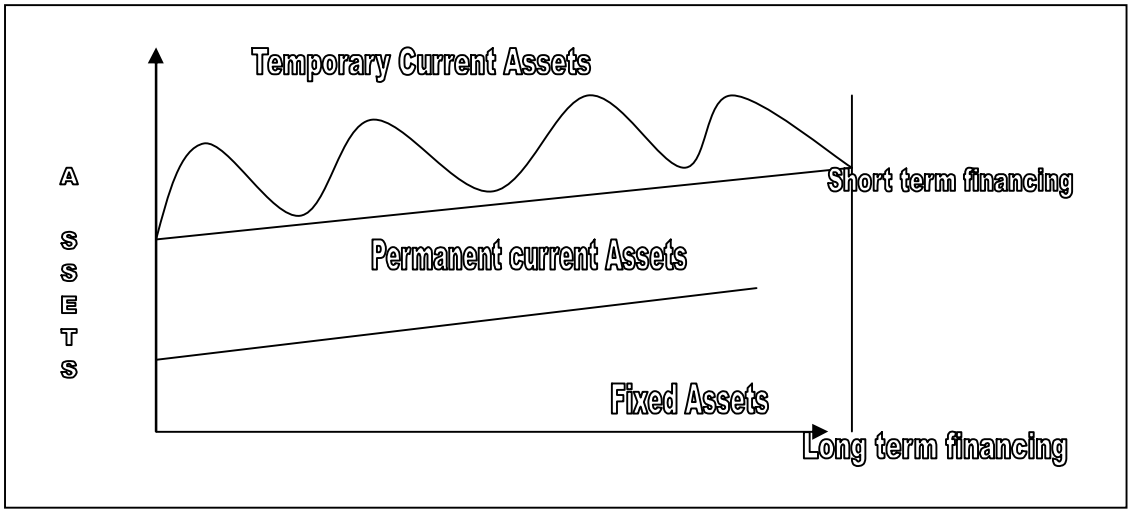


Source: Weston J. Fred and Eugene F. Frighan, "Managerial Finance", Dryden Press, Illinois, (1975), p. 510.)

III.6.2 Conservative Approach

The financing policy of the firm is said to be conservative when it depends more on long-term funds for financing needs. Under this approach, the firm finances its permanent assets and also a part of temporary Current Assets with long-term financing. In the periods when the firm has no need for temporary Current Assets, the idle long-term funds can be invested in tradable securities to conserve liquidity. This is shown in figure III. (8).

Figure III. (8) Conservative approach of Working Capital Management

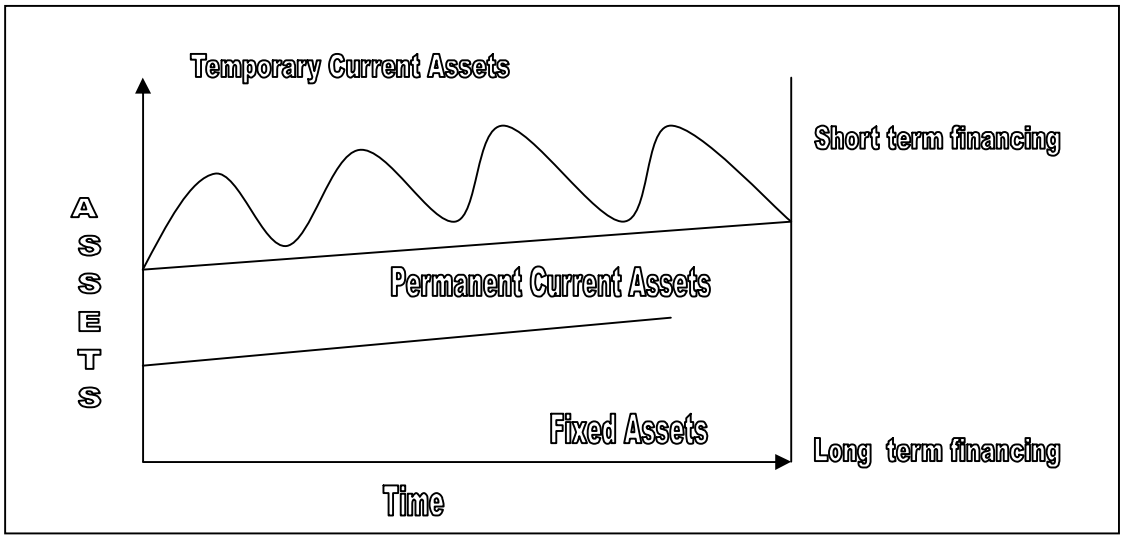


Source: Weston J. Fred and Eugene F. Frighan, "Managerial Finance", Dryden Press, Illinois, (1975), p. 511.)

III.6.3 Aggressive Approach

A firm may be said to be adopting an aggressive policy when it used more of short-term financing than warranted by the matching plan. Under this approach, the firm finances a part of its permanent Current Assets with short-term financing. Some extremely aggressive firms may even finance a part of their fixed assets with short-term financing. Relatively more the use of short-term financing makes the firm more risky **(Pandey I.M.).** The aggressive financing is shown in figure III. (9).

Figure III. (9) Aggressive Approach of Working Capital management



Source: Weston J. Fred and Eugene F. Frighan, "Managerial Finance", Dryden Press, Illinois, (1975), p. 512.)

III.7 Liquidity Vs. Profitability: Risk-return trade-off

The firm would make just enough investment in Current Assets if it were able to estimate Working Capital needs exactly. Under perfect certainty, the Current Assets holdings would be at the minimum level. Large investment in Current Assets under certainty would mean low rate of Return on Investments (ROI) of the firm, as excess investments in Current Assets will not earn enough return. A smaller investment in Current Assets, on the other hand, would mean interrupted production and sales, because of frequent stock-outs and inability to pay to its creditors in time due to restrictive policy. The higher the turnover, the greater will be the profitability of the company **(Narware)**.

The firm must decide about the levels of Current Assets to be carried for which a firm's technology and production policy, sales and demand condition, operating efficiency is taken into consideration in the policy decision. It may follow a conservative risk-return trade-off (Van Horne)**.** The rank correlation of liquidity and profitability were inversely related to each other. It implies that as the liquidity increases and profitability decreases, and the rank correlation of Can Bank factor is stronger than SBI factor **(Reddy. Y.V.).**

A conservative policy means lower return and lower risk, while an aggressive policy produces higher return and higher risk. The two important aims of the Working Capital Mananagement are profitability and solvency. Solvency refers to the firm's continuous ability to meet maturity obligations. To ensure solvency, the firm should be very liquid, which means larger Current Assets holdings enabling in meeting its obligations towards creditors so as to fill all sales orders resulting in smooth production operations. Even though the risk of insolvency is very less, taking into account the cost associated in maintaining the liquidity as the firm's funds gets tied up in Current Assets becoming idle, it leads to reduction in profit. To have higher profitability, the firm may sacrifice solvency and maintain a relatively low level of Current Assets. When the firm does so, its profitability will improve as less funds are tied up in idle Current Assets, but its solvency is affected. Hence, Working Capital policy has to solve the solvency and profitability tangle and trade-off between risk and return **(Pandey I.M.).**

The liquidity maintained by the Steel Authority of India Ltd., is year-to-year and changes on the relationship with profitability. The liquidity and profitability are found to move in the same direction **(Bardia. S.C.).**

III.8 Determinants of Working Capital

There is no set of universally acceptable rules to ascertain the Working Capital needs of a business organization. The following is the description of factors, which generally influence the Working Capital requirements of firms.

Nature of Business The Working Capital requirements of a firm basically depends upon the nature of its business. Public utility undertakings like Electricity, Water Supply and Railways need very limited Working Capital because they offer only cash sales and supply services. As such no funds are tied up in inventories and receivables. On the other hand, trading and financial firms require less investment in fixed assets, but have to invest large amount in Current Assets like materials, receivables and Cash. The manufacturing firms also require sizable Working Capital along with fixed investments.

Size of Business/Scale of Operation The greater the size of a business unit, the larger will be the requirements of Working Capital. In some cases a smaller concern may also need more Working Capital due to high overhead charges, inefficient use of available resources and other economic disadvantages of small size.

Production Policy The demand is subject to wide fluctuations due to seasonal variations, where the requirement of Working Capital depends upon the production policy. Production could be kept either steady by accumulating inventories during slack periods with a view to meet high demand during the peak season or the production could be curtailed during the slack season and increased during the peak season. If the policy is to keep production steady by accumulating inventories it will require higher Working Capital .

Manufacturing Process or Length of Production Cycle The requirement of Working Capital increases in direct proportion to the length of manufacturing process. The longer the process period of manufacture, the greater will be the amount of Working Capital required.

Seasonal Variations In certain industries raw materials are not available throughout the year. They have to buy raw materials in bulk during the season to ensure an uninterrupted flow and process it during the entire year. A huge amount is blocked in the form of material inventories during such season which gives rise to more Working Capital requirements. Generally, during the busy season, a firm requires larger Working Capital than in the slack season.

Working Capital Cycle In a manufacturing concern, the Working Capital cycle starts with the purchase of raw materials and ends with the realization of Cash from the sale of finished products. The speed with which the Working Capital completes one cycle determines the requirement of Working Capital. The larger the period of cycle, the greater will be the requirement of Working Capital.

Rate of Stock Turnover There is a high degree of inverse relationship between the quantum of Working Capital and the velocity or speed with which the sales are affected. A firm having a high rate of stock turnover will need lower amount of Working Capital as compared to a firm having a low rate of turnover.

Credit Policy A firm, which purchases its requirements on credit and sells its product or services on cash requires lesser amount of Working Capital . On the other hand, a concern buying its requirements for cash and allowing credit to its customers shall need a larger amount of Working Capital.

Business Cycle Business cycle refers to alternate expansion and contraction in general business activity. The period of boom needs larger amount of Working Capital. On the contrary, in times of depression firms may also require large amount of Working Capital.

Rate of Growth of Business The Working Capital requirements of a concern increases with the growth and expansion of its business activities. In a fast growing concern large amount of Working Capital is required even though the relationship between the growth in the volume of business and the growth in the Working Capital is difficult to determine.

Earning Capacity and Dividend Policy Firms with high earning capacity may generate cash profits from operations and contribute to the Working Capital. Likewise, a firm that maintains a steady high rate of cash dividend, irrespective of its quantum of profits, needs more Working Capital.

Price Level Changes Generally the rising prices will require the firm to maintain larger amount of Working Capital as more funds will be required to maintain the same Current Assets. Some firms may be affected much while some others may not be affected at all by the rise in prices.

Other factors Certain other factors such as operating efficiency, management ability, irregularities of supply, import policy, assets structure, importance of labor and banking facilities also influence the requirements of Working Capital **(Gupta K. Sasi and Sharma R.K.)**

III.9 Committees and their Recommendations on Working Capital

To regulate and control bank finance the Reserve Bank of India (RBI) has been issuing directions and guidelines to the banks from time to time on the recommendations of certain specially constituted committees entrusted with this task. The important recommendations of the various committees are discussed below.

III.9.1 Dehejia Committee Report (1968) The national credit council constituted a committee under the chairmanship of Sri. V. T. Dehejia in 1968 to determine 'the extent to which credit needs of industry and trade are likely to be inflated and how such trends could be checked'.

Recommendations:

1. The banks should finance the industry on the basis of the study of borrower's total operations rather than on security basis alone.
2. The customer should be required to confine his dealings to one bank only.
3. The total credit requirements of the borrower should be segregated into 'Hard core and Short term' component. The hard-core component-, which represents the minimum level of inventories where the industry was required to hold for maintaining the given level of production, should be put on a formal term loan basis and subject to repayment schedule.

III.9.2 Tandon Committee Report (1974) This committee was set up under the chairmanship of Sri. P. L. Tandon in July 1974. The terms of reference of the committee were to suggest the guidelines for commercial banks to follow up and supervise credit from the point of view of ensuring proper end use of funds.

Recommendations:

1. A proper financial discipline has to be observed by the borrower. He should supply to the banker information about his operational plans well in advance. The banker must carry out a realistic appraisal of such plans.

2. The banker should know the end use of bank credit i.e., it is used only for the purpose for which it is made available.

3. The lending norms have been suggested under three alternatives.

   a) The borrower will have to contribute a minimum of 25 per cent of the Working Capital gap from long-term funds i.e. owned funds and term borrowings. This will give the current ratio of 1.71:1.

   b) A minimum of 25 per cent of the total Current Assets that will give the current ratio of 1.33:1 is to be provided by the borrower. Those who are in the category two should move towards category three and shall not fall into category one.

   c) The borrower's contribution from long-term funds will be to the extent of the entire core Current Assets and a minimum of 25 per cent of the balance Current Assets should be provided by them so that the current ratio can be 1:1, which is an ideal one. The term core Current Assets refers to the absolute minimum level of investment in all Current Assets, which is required at all times to carry out minimum level of business activities.

III.9.3 Chore Committee Report (1979) This committee was appointed under the chairmanship of Sri. K.B. Chore to review the working of cash credit system in recent years with a particular reference to the gap between sanctioned limits and the extent of their utilization and to suggest alternative types of credit facilities, which should ensure greater credit discipline.

Recommendations

- The banks should obtain quarterly statements in the prescribed format from all the borrowers showing Working Capital credit limits of Rs.50 lakh and above.
- The banks should undertake a periodical review of limits of Rs.10 lakh and above.
- The banks should not bifurcate cash credit accounts into demand loan and cash credit components.
- If a borrower does not submit the quarterly returns in time the banks may charge penal interest of one per cent on the total amount outstanding for the period of default.
- Banks should discourage sanction of temporary limits by charging additional percentage interest over the normal rate on these limits.
- The bank should fix separate credit limits for peak level and non-peak level, wherever possible.
- Banks should take steps to convert cash credit limits into bill limits for financing sales. **(RBI Report).**

III.9.4 Marathe Committee Report (1982) This committee was appointed under the chairmanship of Shri. Marathe to review the working of credit authorization scheme and suggest measures for giving meaningful directions to the credit management functions of the RBI.

Recommendations

1. The third method of lending as suggested by the Tandon Committee has to be dropped. In future the banks would provide credit for Working Capital according to the second method of lending.
2. A fast track system should be introduced to improve the quality of credit appraisal in banks. The banks can realize without prior approval of the RBI for 50 per cent of the additional credit required by the borrowers after satisfying the following conditions:

a. The estimates or projections with regard to production, sales, chargeable as Current Assets, other Current Assets, Current Liabilities other than bank borrowings and net Working Capital are reasonable in terms of the past trends and assumptions regarding most likely trends during the future projected period.
b. The classification of assets and liabilities as current and non-current is in conformity with the guidelines issued by the RBI.
c. The projected current ratio is not below 1.33: 1.
d. It is to be ensured that the borrower submits quarterly information and operating statements for the past six months within the prescribed time and undertakes to do the same in future also.
e. The borrower undertakes to submit to the bank his annual accounts regularly and promptly. Further, the bankers are required to review the borrower's facilities at least once in a year even if the borrower does not need enhancement in credit facilities **(RBI Report).**

III.9.5 Chakravarty Committee Report (1985) This committee was appointed under the chairmanship of Shri. Sukhamoy Chakravarty to review the working of the monetary system of India in 1985.

Recommendations

1. Penal interest for delayed payments: The government must insist that all public sector units, large private sector units and government departments must be included with penal interest clause in contracts for the payments delayed beyond a specified period. The penal interest may be fixed at two per cent higher than the minimum lending rate of the supplier's bank.

2. Classification of credit limit under three different heads are:

    - ❖ Cash credit I – to include supplier to government.
    - ❖ Cash credit II – to cover special circumstances.
    - ❖ Normal working limit – to cover the balance credit facilities (RBI Report)

III.9.6 Kannan Committee Report (1997) The Indian Banks Association (IBA) constituted a committee headed by Sri. K. Kannan to examine all the aspects of Working Capital finance including assessment of maximum permissible bank finance (MPBF).

Recommendations:

1. The arithmetical rigidities imposed by Tandon Committee and reinforced in the Chore Committee in the form of MPBF computation which has so far been in practice should be scrapped.

2. Freedom is given for each bank with regard to creating its own system of Working Capital finance for a faster credit delivery so as to serve various borrowers more effectively.

3. The Line of Credit System (LCS) as practiced in many advanced countries should replace the existing system of assessment/fixation of sub limits within total Working Capital requirements.

4. To shift emphasis from Liquidity Lending (Security Based Lending) to the cash Deficit Based Lending called Desirable Bank Finance (DBF).

These recommendations were favourably considered and implemented by the RBI in its Working Capital financing **(Gupta K. Sasi and Sharma R.K.).**

III.10 Optimal Level of Working Capital Investment

The Working Capital policy of a concern plays a prominent role in maximizing the shareholders wealth, even though Working Capital is also an investment made by the shareholders. To achieve this goal a sound policy of Working Capital Requirement (WCR) is essential. The policy determination is not an easy one, as it is a function of such factors including the variability of sales and Cash flows and the degree of operating and financial leverage employed by the firm. The firm need not be concerned about the level of Current Assets but has to determine the properties of short and long-term debt to be used in financing the Current Assets. These Current Assets financing decision also involves trade-off between profitability and risk. The requirement of Working Capital is vibrant, based on each firm's characteristics; the exact determination of an optimum level is not easy.

Firms may have an optimum level of Working Capital that maximizes their value. Large inventory and a generous trade credit policy lead to high sales. Larger inventory reduces the risk of stock - out. Trade credit may increase sales because it allows customers to assess product and quality before paying. Another component of

Working Capital is it is accounts payable. Delaying payments to suppliers allows a firm to assess the quality of bought products, and can be an inexpensive and flexible source of financing the firm. On the other hand, late payment of invoices can be very costly if the firm is offered a discount for early payment **(Srinivasan M.P. and Sathivel Murugan)**

III.11 Methods of Working Capital (WC) Estimation

No business can be successfully run without an adequate amount of Working Capital. An estimate of Working Capital Requirement should be made in advance, in order to procure adequate Working Capital and thereby avoid shortage of it. A large number of factors have to be considered in estimation, viz., cost of material and operating cycle. The following criteria can be adopted in its estimation.

a) Working Capital as a percentage of net sales.

b) Working Capital as a percentage of total assets or fixed assets.

c) Working Capital estimation based on operating cycle.

d) Working Capital estimation based on Regression Analysis.

III.11.1 Working Capital as a percentage of Net Sales

This method is based on the fact that the Working Capital for any business is directly related and linked to sale volume of the business. The assumption here is that the higher the sales level; the greater would be the need for Working Capital. As such the Working Capital is solely dependent on sales forecast, which is expressed as a percentage of expected sales for a particular period. The steps involved in the estimation of Working Capital are: an estimate of total Current Assets as percentage of estimated net sales; an estimate of Current Liabilities as percentage of estimated net sales. The difference between the two represents the Net Working Capital under this method.

III.11.2 Working Capital as a percentage of total assets or fixed assets

Under this method, estimation of Working Capital is based on the fact that the total assets of the firm consists of fixed assets and Current Assets. A relationship between total Current Assets and total fixed assets or total assets of the firm is established on the basis of past experience. The total Current Assets represents Gross

Working Capital or Net Working Capital, which is Current Assets minus Current Liabilities. The estimation of Working Capital is also determined as a percentage of fixed assets, even though fixed assets determination is a capital budgeting decision. But the efficient and optimal way of using the fixed assets solely depends upon the availability of Working Capital , which in turn makes the Working Capital Requirement resorting to a percentage of total fixed assets.

III.11.3 Working Capital estimation based on operating cycle

Under this method the Working Capital is estimated on the basis of operating cycle as the length varies from one industry to another. The components used for calculation of the operating cycle are Current Assets and Current Liabilities. Current Assets here means cash and bank balance, inventory and receivables. Current Liabilities represents creditors for purchases and expenses.

III.11.4 Working Capital estimation based on Regression Analysis

A statistical technique can also be used for estimating Working Capital R. The Working Capital estimation is made after establishing the average relationship between sales and Working Capital and its various components in the past years. The relationship between sales (X) and Working Capital (Y) is given by equation:

$$Y = a + bx$$

The value of 'a' and 'b' can be obtained by the method of simultaneous linear equations which are given below.

$$\Sigma y = na + b\Sigma x$$

$$\Sigma xy = ax + b\Sigma x^{2.}$$

Where,

a = fixed component

b= variable component

x=sales

y= inventory

n= number of observations.(Srinivasan N.P. and Sakthivel Murugan).

III.12 Impact of Inflation on Working Capital Requirement

When the inflation rate is high, it will have its direct impact on the requirement of Working Capital as explained below:

- Inflation will figure at a higher level even when there is no increase in the quantity of sales. The higher sales means the higher the levels of balances in receivables.
- Inflation will result in the increase of raw material prices and hike in the payment for expenses and as a result, increase in balances of trade creditors and creditors for expenses.
- Increase in valuation of closing stocks results in showing higher profits but without realizing it into cash, causing the firm to pay higher taxes, dividend and bonus. This will lead the firm to serious problems of fund shortage to meet its short-term obligations.
- Increase in requirement in Current Assets means the increase in requirements of Working Capital without corresponding increase in sales or profitability of the business firm.
- Considering the above mentioned factors, the finance manager should be careful about the impact of inflation in the assessment of Working Capital Requirement and its management.

Zero Level Working Capital (ZLWC)

Zero Level Working Capital is one of the latest trends of Working Capital Management, which is practiced by modern corporate firms. The modern corporate firms are said to have Zero Level Working Capital when the Current Assets are equal to Current Liabilities. This avoids maintaining excess investment in Current Assets and the business firm is able to meet its Current Liabilities. The firm also saves opportunity cost in excess investment in Current Assets and as bank cash credit limits are linked to the inventory levels; interest costs are also saved. There would be a self-imposed financial discipline on the business organization to manage their activity within their Current Assets and Current Liabilities, which avoids tendency of over borrowing.

Zero Level Working Capital ensures a smooth and uninterrupted Working Capital Cycle (WCC), which would help the finance manager to improve the quality of the Current Assets at times to keep them 100 per cent realizable. There would be constant displacement in Current Liabilities and the possibility of having overdue may diminish. The tendency to postpone payments towards Current Liabilities has to be curbed and Working Capital should always be the maintained at zero level. Zero Level Working Capital would create a time balancing act in financial management and would bring success in the financial health of the business organization **(Srinivasan N.P. and Sathivel Murugan)**

III.13 Working Capital Management Efficiency (WCME)

To measure Working Capital Management Efficiency, there are major indices viz., Performance Index, Utilization Index and Efficiency Index are used.

III.13.1 Performance Index (PI)

Performance Index of Working Capital Management represents average Performance Index of the various Current Assets. A company may be said to have managed its Working Capital efficiently if the proportionate rise in sales is more than the proportionate rise in Current Assets during a particular period **(Santanu Kr.Ghosh and Santi Gopal Maji).**

Where I_s = sales index defined as: $\frac{S_t}{S_{t-1}}$

Wi = individual group of Current Assets.

N = number of Current Assets group and

i = 1,2,3……N

III.13.2 Utilization Index (UI)

While Performance Index represents the average overall performance in managing the components of Current Assets, Utilization Index indicates ability of the company for the utilization of its Current Assets as a whole for the purpose of

generating sales. If an increase in total Current Assets is coupled with more than a proportionate rise in sales, the degree of utilization of these assets with respect to sales is said to have been improved and vice versa. This ultimately reflects in the operating cycle of the firm. This can be shortened by means of increasing the degree of utilization. Thus, a value of Utilization Index >1 is desired. **(Santanu Kr. Ghosh and Santi Gopal Maji).**

III.13.3 Efficiency Index (EI)

Efficiency Index is a measure of performance, which reflects the combined effect of both the Performance Index and Utilization Index i.e., this is the product of the Peformance Index and Utilization Index and measures ultimately the efficiency of the Working Capital Management of a firm. Hence, the values of Utilization Index >1 is desirable. Efficiency Index of Working Capital Management (EIWCM) can be calculated by multiplying The Overall Performance Index of Working Capital Management with the Working Capital Utilization Index. Thus Efficacies Index of $_{\text{WORKING CAPITAL MANAGEMENT}}UI = PI_{\text{WORKING CAPITAL MANAGEMENT}} \times UI_{\text{WORKING CAPITAL MANAGEMENT}}$. **(Santanu Kr. Ghosh and Santi Gopal Maji).**

III.13.4 Profitability

Profit is the difference between revenue and expenses. The profit and loss account (P & L A/c) or income and expenditure statement shows the profitability of the firm by giving details about revenue and expenses, during a period of time and measures its profitability. Some companies calculate profit before depreciation, interest and taxes as their gross profit. The difference between the revenue (sales value) and cost of goods sold is called the *gross profit*. When all the other expenses are deducted (including interest and taxes form gross profit), the profit after taxes (PAT) or *net profit* (NP) is obtained.

Operating profit is the difference between gross profit and operating expenses consisting of general, administrative, selling expenses and depreciation. It is also known as profit or earnings before interest and taxes (EBIT).

III.14 Incentives in Financing Working Capital to Textile Industry

The textile and clothing sector is the largest employer after agriculture and its importance in India's economy is recognized for its contribution to industrial production and export earnings. In order to enable Indian textile industry to compete in the global market, the government of India (GOI) have set up a 'reconstruction fund' with the objective of reducing the cost of capital of existing textile units in the organized sector. This effort will bring down the ultimate rate of interest to borrowers to around 7-8 per cent. The 'Technology Upgradation Fund Scheme (TUFS)' presently operated by GOI through Industrial Development Bank of India (IDBI) extends interest subsidy on new loans for modernization/technology upgradation in the textile industry. The aim of the reconstruction fund will be to reconstruct the industry's existing high cost rupee loans tied up in the past. It is proposed that all existing term loans, excess drawing of Working Capital and unpaid interest (which would be converted into term loans) would be eligible to be converted under the fund. As a part of restructuring exercise, FIs /Banks would reduce the rate of interest on their existing term loans to 14 per cent p. a. (if the existing rates are lower, they would be maintained at that level). The rate of interest on Working Capital would be brought down to Prime Lending Rate (PLR). An incentive of maximum 6 per cent would be extended on the rate of interest leading to final interest cost to the textile units on term borrowings at 7-8 per cent p. a. while the textile units would pay interest at the rate of 7-8 per cent, interest incidence of upto 6 per cent would be compensated to FIs/Banks out of the proposed fund. The loans converted under TUFS and FC loans would not be eligible under the fund.

A Textile Reconstruction Fund (TRF) would be constituted. The fund size would be in the range of Rs. 4000 – 5000 crore spread over a period of 7-8 years. The institutional term loan/Working Capital TL to eligible units will be so restructured that such repayment is tailored to suit project cash flows within stipulations.

CHAPTER – IV

WORKING CAPITAL MANAGEMENT STATUS IN SELECT TEXTILE FIRMS

CHAPTER IV
WORKING CAPITAL MANAGEMENT STATUS IN SELECT TEXTILE FIRMS

This chapter intends to examine the utilization efficiency of Working Capital (WC) in select Textile firms during the study period. The efficiency in utilization of Working Capital has been analyzed by taking each of its components separately, and the results are presented under the following sections:

1. Cash Management
2. Receivables Management
3. Inventory Management

SECTION I

CASH MANAGEMENT

The Working Capital cycle in any organization starts and ends with Cash balance. Management of Cash is significant because firms require sufficient Cash balance to meet its day-to-day requirements (**transaction motive**); firms need Cash to meet different bills and creditor obligations on specific due dates (**precautionary motive**); and firms need Cash to meet out any contingencies and to explore the opportunities (**speculative motive**)

IV.1 Cash Management Tools

To examine and explain the Cash management efficiency of the textile firms in terms of liquidity as well as absolute Cash level relative to short-term obligations (Current Liabilities) of the select textile firms, the present study has resorted to use the following traditionally used ratios:

- Current Ratio
- Liquid Ratio
- Absolute Cash Ratio (ACR)

IV.1.1. Current Ratio (CR)

Current Ratio explains the quantum of Current Assets (CAs) available in a firm in order to meet out its current obligations. Current Assets include Cash, Bank Balance and other near Cash items realizable in the short period. These elements include the inventories and dues from accounts receivables. The current obligations often refer to the immediate payments pending on different due dates. These obligations include trade creditors, outstanding expenses and taxes.

Although the Cash receipts and Cash payments do not perfectly synchronize, the inflows and outflows are likely to have large gaps occasionally. A firm's ability to meet its current obligations has a significance not only for business continuity but also it is necessary for credit rating among the suppliers. This ability is evaluated using Current Ratio. The formula for calculating Current Ratio is as follows**:**

$$\text{Current Ratio (CR)} = \frac{\textit{Current Asset (CA)}}{\textit{Current Liabilities (CL)}}$$

Where,

CA = Cash + Bank balance + Accounts receivables + Inventories; and

CL= Trade creditors + Accounts payables + Taxes payable.

As the Working Capital Management (WCM) is the management of Current Assets and the Current Liabilities and their inter-relationship, the trends in growth of Current Assets and the Current Liabilities and coefficient of variation (CV) are analyzed first.

The data relating to the Current Ratio for select textile firms has been collected, processed and presented in table IV.1.

The Current Assets of **all firms** put together are on an average workout to Rs.14460 crore per annum, whereas the Current Liabilities of the same workout to an average of Rs.4550 crore giving a ratio of 3.25. The Current Ratio being 3.25 shows that all firms are not maintaining the standard Current Ratio of 2:1. The inter-firms differences in Current Assets and Current Liabilities have been worked out by means of standard deviation and expressed in terms of coefficient of variation (CV). The Coefficient Variation indicates that all firms are resorting to the use of more Current Liabilities (CV=27.41) to finance Current Assets (CV=21.10).

The Compound Annual Growth Rates (CAGR) of Current Assets and Current Liabilities also show that the Current Liabilities of this category firms are growing on an average at the rate of 9.44 percent (LGR = Rs. 405 crore) for the period under study when compared to 6.55 percent (LGR = Rs. 911.28 crore) in the growth of Current Assets. It indicates that the contribution of Current Liabilities. towards Current Assets is not satisfactory.

The Current Assets of **small-sized firms** on an average work out to Rs.1800 crore per annum, whereas the Current Liabilities of the same work out on an average to Rs.950 crore giving a ratio of 1.98. The Current Ratio being 1.98 shows that small-seized firms are maintaining the standard ratio of 2:1. The inter-firms differences in Current Assets and Current Liabilities are worked out by means of standard deviation and expressed in terms of coefficient of variation (CV). The Coefficient Variation indicates that the small sized firms are resorting to the use of more Current Liabilities (CV=34.00) to finance Current Assets (CV=26.00).

The Compound Annual Growth Rates (CAGR) of Current Assets and Current Liabilities also show that the Current Liabilities of this category firms are growing on an average at the rate of 10.04 per cent (LGR = Rs. 104.06 crore) for the period under study compared to 7.80 per cent (LGR = Rs.136.44 crore) in the growth of Current Assets. It indicates that firms are trying to finance their Current Assets with Current Liabilities.

While the size of Current Assets in between firms vary at the rate of 25.5 per cent of the average Current Assets (Rs.1800 core), Current Liabilities work out to 33.9 per cent of the average Current Liabilities (Rs.950 crore).

Table IV.1

Current Ratios of All Select Firms, Small, Medium and Large Sized firms in Textile Industry in India (Year wise Totals)

Measures	Current Assets (Rs. in Crore)	Current Liabilities (Rs. in Crore)	Current Ratio (Times)
SMALL-SIZED FIRMS			
Mean	1791.49	949.40	1.9722
Standard Deviation	457.45	321.80	0.3582
Coefficient of Variation (%)	25.53	33.89	18.16
CAGR (%)	7.80	10.04	-2.04
Linear Growth Rate (LGR)	136.44***	104.06***	-0.0853***
(Trend)	(5.95)	(13.61)	-(2.94)
MEDIUM-SIZED FIRMS			
Mean	5098.07	1773.90	3.1993
Standard Deviation	492.44	682.25	1.0033
Coefficient of Variation (%)	9.66	38.46	31.36
CAGR (%)	3.31	12.28	-7.99
Linear Growth Rate (LGR)	89.08*	213.84***	-0.3134***
(Trend)	(1.85)	(8.51)	-(8.25)
LARGE-SIZED FIRMS			
Mean	7570.51	1828.75	4.1485
Standard Deviation	2256.38	370.43	0.8069
Coefficient of Variation (%)	29.80	20.26	19.45
CAGR (%)	8.29	6.46	1.72
Linear Growth Rate (LGR)	685.76***	87.22**	0.1491**
(Trend)	(6.65)	(2.87)	(1.91)
ALL FIRMS			
Mean	14460.07	4552.05	3.2500
Standard Deviation	3050.90	1247.94	0.3978
Coefficient of Variation (%)	21.10	27.41	12.24
CAGR (%)	6.55	9.44	-2.64
Linear Growth Rate (LGR)	911.28***	405.12***	-0.1054***
(Trend)	(5.99)	(15.09)	-(3.80)

Source: Computed from financial Statements of Textile Firms from 1998-99 to 2007-08.

CAGR – Compounded Annualized Growth Rate.
Figures in parenthesis are t-values for the linear growth rates.

*Significant at 10% level; **Significant at 5% level; ***Significant at 1% level

The analysis of Current Ratio of **medium-sized firms** reveals that the Current Assets and Current Liabilities have been on an average at Rs.5100 crore and Rs.1700 crore respectively, giving at the ratio of 3.2. This indicates that the medium sized firms are resorting to high Current Ratio when compared to small sized firms.

The inter-firm differences in this category are also worked out with Coefficient Variation. The Coefficient Variation of Current Assets and Current Liabilities also shows that the Current Liabilities vary at a higher rate of 38 per cent in medium-sized firms as against Current Assets 10 of small-sized firms. It indicates that inter-firm differences are found to be more with respect to use of Current Liabilities to finance Current Assets.

The Compound Annual Growth Rate (CAGR) of Current Assets and Current Liabilities also show that the Current Liabilities of medium-sized firms are growing on an average at the rate of 12 (LGR = Rs.214 crore) and the Current Assets are growing on an average at the rate of 3 (LGR=Rs.89 crore) during the study period.

A closer look at the Current Ratio of **large-sized sample firms** indicates the following. The average size of Current Assets of this category is Rs.7600 crore and Current Liabilities is Rs.1800 crore, giving a ratio of 4. Similar to medium-sized firms the large-sized firms also report a high Current Ratio.

The inter-firm differences in Current Assets and Current Liabilities are captured to the Coefficient Variation. The Coefficient Variation of Current Liabilities to the variations in Current Assets also shows that the Current Liabilities are working out to 20 per cent of the average size against the change in Current Assets (30 per cent). This indicates excessive use of long-term funds for financing Current Assets in large-seized firms.

The Compound Annual Growth Rate (CAGR) also shows that the same trend by Current Liabilities growing at a lesser speed at the rate of 6.5 per cent (LGR = Rs. 87.00 crore) per annum for the growth of 8.00 per cent (LGR = Rs. 686 crore) of Current Assets per annum.

The Current Ratio is higher in Siyaram Silk Mills (CR = 3.3) in the group of small-sized firms, Himat Singka Seide Ltd. (31.3) in the group of medium-seized firms and Nahar Spinning Mills Ltd. (12.66) in the group of large-sized firms. The CR is 31.3:1, which is very high in the case of Himart Singka Sewida Ltd among all the selected textile firms.

In conclusion, from the above table, the following observations are made:

- The total investment in Current Assets of the three sizes of firms are viz., small Rs.1800 crore, medium Rs.5100 crore and large Rs.7600 crore respectively.
- The above investment in Current Assets works out to the following proportions when compared with total investment in the sample firms.

  (A) Small-sized firms Rs.1800 crore of Working Capital, out of 4000 crore of total investment.

  (B) Medium-sized firms Rs.5100 crore of investment in Current Assets out of total investment of Rs. 9000 crore.

  (c) Large-sized firms Rs.7600 crore investment in Current Assets out of Rs.17000 crore of total capital employed.
- Growth in Current Assets are 8 per cent in small, 3 per cent in medium and 8 per cent in large-sized firms as against 6 per cent, 3 per cent and 8 per cent growth of total assets of small, medium and large-sized firms respectively. Thus there is parity in investment in all the three categories.

IV.1.2 Quick Ratio OR Liquid Ratio or Acid Test Ratio

Quick Ratio (QR) is yet another widely used parameter for judging the short-term repaying ability of a firm in the near future. This ratio is a refinement over Current Ratio as it considers the quality of Current Assets. This ratio is also known as Liquid Ratio or Acid Test Ratio. This ratio excludes inventories, which is considered to be slow-moving assets in relation to other Current Assets, thus it can assess the liquidity position of a firm more effectively. The general rule of thumb for Quick Ratio is 1:1. The formula for calculating Quick Ratio is as follows:

$$\textbf{Quick Ratio (QR)} = \frac{\textit{Quick Asset (QA)}}{\textit{Quick Liabilities (QL)}}$$

Where,

Quick assets = Current Assets + Bank balance + Accounts receivables; and

Quick liabilities = Trade creditors + Accounts payables + taxes payable.

Generally Quick Assets are the Current Assets and the other near Current Assets that can be converted into Cash fairly soon, such as accounts receivables and marketable securities minus inventories. Quick liabilities are current liabilities less the current portion of subordinate debt and deferred revenue and less accrued bonuses due to employees.

In order to examine ability of sample firms in meeting out their short-term obligations, the data relating to Quick Assets and Quick Liabilities of all the firms are analyzed and presented in Table IV.2.

The Quick Assets of **all sample firms** on an average works out to Rs.9941 crore per annum (out of a total Current Assets of Rs.14460 crore) whereas the Quick Liabilities of the same work out on an average at Rs. 3851 crore, making a ratio of 2.65, indicating that the small-sized firms are maintaining more than sufficient liquidity to meet their short term obligations.

The inter-firm differences in Quick Assets and Quick Liabilities are worked out by means of standard deviation and expressed in terms of Coefficient of Variation. The calculated Coefficient of Variation value shows that the firms differ to the extent of 20 percent value of the average size of Quick Assets and 28 per cent value of the average size of Current liabilities.

The Quick Assets of **small-sized sample firms** on an average works out to Rs.1050 crore per annum (out of total Current Assets of Rs.1800 crore) whereas the Quick Liabilities of the same work out on an average at Rs.900 crore, making a ratio of 1.23, indicating that the small-sized firms are maintaining sufficient liquidity to meet their short term obligations.

The inter-firm differences in Quick Assets and Quick Liabilities are worked out by means of standard deviation and expressed in terms of Coefficient of Variation. The calculated Coefficient of Variation value shows that the firms differ to the extent of 1/3 value of the average size of Quick Assets as well as liabilities.

Table IV.2

Quick Ratios of all select firms, small, medium and large-sized firms in Textile Industry in India (Year wise Totals)

Measures	Quick Assets (Rs. in Crore)	Quick Liabilities (Rs. in Crore)	Quick Ratio (Times)
SMALL-SIZED FIRMS			
Mean	1050.07	876.31	1.2299
Standard Deviation	344.90	301.85	0.1894
Coefficient of Variation (%)	32.85	34.45	15.40
CAGR (%)	9.42	10.03	-0.55
Linear Growth Rate (LGR)	104.67***	96.98***	-0.0273
(Trend)	(6.58)	(11.86)	-(1.37)
MEDIUM-SIZED FIRMS			
Mean	3646.92	1518.36	2.7679
Standard Deviation	389.68	657.62	1.0122
Coefficient of Variation (%)	10.69	43.31	36.57
CAGR (%)	3.17	13.67	-9.24
Linear Growth Rate (LGR)	65.26	206.59***	-0.3155***
(Trend)	(1.66)	(8.71)	-(8.07)
LARGE-SIZED FIRMS			
Mean	5244.29	1472.22	3.6200
Standard Deviation	1514.91	319.15	0.8328
Coefficient of Variation (%)	28.89	21.68	23.01
CAGR (%)	8.04	5.76	2.16
Linear Growth Rate (LGR)	434.86***	59.75*	0.1176
(Trend)	(4.97)	(1.95)	(1.34)
ALL FIRMS			
Mean	9941.28	3851.73	2.6582
Standard Deviation	2134.86	1074.54	0.4241
Coefficient of Variation (%)	21.47	27.90	15.95
CAGR (%)	6.51	9.63	-2.85
Linear Growth Rate (LGR)	604.79***	349.50***	-0.1045***
(Trend)	(4.72)	(16.02)	-(3.17)

Source: Computed from financial Statements of Textile Firms from 1998-99 to 2007-08.

CAGR – Compounded Annualized Growth Rate.
Figures in parenthesis are t-values for the linear growth rates.
*Significant at 10% level. ***Significant at 1% level

The Compound Annual Growth Rate (CAGR) of Quick Assets and Quick Liabilities are found to grow @ 10 per cent during the study period. The analysis of Quick Ratio of **medium-sized sample firms** indicates the following:

The Quick Assets and Quick Liabilities of this category of firms have been on an average at Rs.3600 crore (out of the total Current Assets of Rs.5100 crore) per annum and Rs.1500 crore (out of total Current Liabilities of Rs.1800 crore) respectively, making a ratio of 2.8, indicating that the medium-sized firms are maintaining a high liquidity when compared to small-sized firms.

The inter firm differences in this category are also worked out in terms of Coefficient of Variation. The Coefficient of Variation of Quick Assets and Quick Liabilities show that Quick Liabilities vary at a high rate of 43 per cent to the 11 per cent variation in Quick Assets. This indicates that inter firms differences are found to be more with respect to immediate obligations.

The Compound Annual Growth Rate of Quick Assets and Quick Liabilities show that the Quick Liabilities **medium-sized sample firms** are growing on an average at the rate of 14.00 per cent (LGR = Rs.207 crore) and the Quick Assets are growing on an average at the rate of 3.00 per cent (LGR = Rs. 65 crore) during the study period.

Analysis of Quick Ratio of **large-sized sample firms** are carried out and presented as follows. The average size of Quick Assets are on an average at Rs.5200 crore (out of the total Current Assets of Rs.7600 crore) and Quick Liabilities are on an average at Rs.1500 crore (Out of the total Current Liabilities of Rs.1800 crore), giving a ratio of 3.60, as well as indicating maintenance of higher Quick Ratio.

The inter-firm difference in this category has been worked out with the help of Coefficient of Variation. The Coefficient of Variation of Quick Liabilities to the variations in Quick Assets also shows that the Quick Liabilities work out to 22 per cent of the average size as against the change in Quick Assets (29 per cent).

The Compound Annual Growth Rate of Quick Assets and Quick Liabilities show that both variables are growing at the rate of 6-8 per cent (LGR= Rs. 60 crore and Rs. 435 crore).

To sum up the following observations are made from the above table:

- Total investment in Quick Assets of three sizes of firms is, small Rs.1050 crore, medium Rs.3600 crore and large Rs.5200 crore respectively.
- The above investment in Quick Assets works out to the following proportions when compared with total investment in Current Assets of the sample firms.
    a) Small-size Rs.1050 crore of liquid assets out of Rs.1800 crore of the total Current Assets.
    b) Medium-size Rs.3600 crore of investment in Quick Assets out of the total uses of Rs.5100 crore of Current Assets.
    c) Large-size Rs.5200 crore of liquid assets out of Rs.7600 crore of the total Current Assets.
- Growth in Quick Assets are at @ 9 per cent in small, 3 per cent in medium and 8 per cent in large as against 8 per cent, 3 per cent and 8 per cent growth of total Current Assets respectively.

Among the selected textile firms, the Quick Ratio of Sri Lakshmi Cotsym Ltd (12.58) in the category of small-sized, Krishna life Style Technologies Ltd (60.00) in medium-sized and Nahar Spinning Mills Ltd (22.00) in the large sized firms are the highest of all in the respective sized groups.

From the table IV.1 and IV.2 the study makes the following observation: while Current Ratio works out 2, 3, 4 respectively; the Quick Ratio follows the Current Ratio closely. The Quick Ratio works at 1.3, 2. 8 and 3.6 in small, medium and large-sized firms respectively.

From the above two tables, the study observes that the medium and large-sized firms not only use excess Working Capital in their operations, but also excess liquidity. The excess use of Working Capital and liquidity may provide ease in operations, but is certainly likely to reduce the profit ratio due to the locking up of capital.

IV.1.3 Absolute Current Assets Ratio

The absolute Cash ratio is also called as Cash position ratio or Cash to short term obligation ratio. This ratio indicates the real liquidity of a firm and is used to find out whether Cash balances held by the firm is sufficient to meet the current obligations or not. The requirements of Cash balances vary from industry to industry and also firm to firm even in the same industry depending upon its size and level of operations. The Financial Analysts are of the view that the Cash and near Cash balances should ranging from 6 to 10 per cent of the total current assets. They are also of the view that the Cash and near Cash balances should be sufficient to asses at least one months current expenditure. The Formula for calculating this ratio is as follows:

$$\textbf{Absolute Cash Ratio} = \frac{\textit{Cash and near Cash Balance}}{\textit{Quick Liabilities (QL)}}$$

Where,

Current balance and near Cash = Cash in Hand and Bank + Marketable Securities

A better ratio indicates a better position of the firm to pay off its immediate liabilities.

This ratio is worked out in the present study in order to indicate the Cash position of select textile firms. It is significant in the sense that it tests short-term liquidity in terms of Cash and marketable securities. While the above two ratios Current Ratio and Quick Ratio indicate the size of Current Assets, the pattern of financing them and availability of liquid assets to meet out short term obligations; the absolute Cash ratio has a different purpose. This ratio tests the efficiency of Cash management in terms of availability of liquid Cash to meet the day-to-day obligations, operating expenses, payments to suppliers on due date etc.

In order to examine the ability of sample firms in meeting out its short-term obligations, the data relating to absolute Cash and Quick liabilities of all firms are analyzed and presented in table IV.3.

Table IV.3

Absolute Cash Ratios of all select firms, small, medium and large-sized in Textile Industry in India (Year Wise Totals)

Measures	Absolute Cash (Rs. in Crore)	Quick Liabilities (Rs. in Crore)	Cash to Debt Ratio (Times)
SMALL-SIZED FIRMS			
Mean	156.33	876.31	0.1802
Standard Deviation	74.65	301.85	0.0550
Coefficient of Variation (%)	47.75	34.45	30.51
CAGR (%)	7.91	10.03	-1.92
Linear Growth Rate (LGR)	18.99***	96.98***	-0.0021
(Trend)	(3.41)	(11.86)	-(0.33)
MEDIUM-SIZED FIRMS			
Mean	452.63	1518.36	0.3290
Standard Deviation	149.25	657.62	0.1209
Coefficient of Variation (%)	32.97	43.31	36.75
CAGR (%)	6.88	13.67	-5.97
Linear Growth Rate (LGR)	28.05*	206.59***	-0.0314***
(Trend)	(1.96)	(8.71)	-(3.62)
LARGE-SIZED FIRMS			
Mean	1100.38	1472.22	0.7615
Standard Deviation	631.87	319.15	0.4011
Coefficient of Variation (%)	57.42	21.68	52.67
CAGR (%)	7.90	5.76	2.02
Linear Growth Rate (LGR)	172.63***	59.75*	0.0803**
(Trend)	(4.16)	(1.95)	(2.15)
ALL FIRMS			
Mean	1684.80	3851.73	0.4304
Standard Deviation	834.95	1074.54	0.1408
Coefficient of Variation (%)	49.56	27.90	32.72
CAGR (%)	7.71	9.63	-1.75
Linear Growth Rate (LGR)	225.78***	349.50***	0.0108
(Trend)	(4.03)	(16.02)	(0.68)

Source: Computed from financial Statements of Textile Firms from 1997-98 to 2007-08.

CAGR – Compounded Annualized Growth Rate.
Figures in parenthesis are t-values for the linear growth rates.
*Significant at 10% level. **Significant at 5% level. ***Significant at 1% level

The analysis pertaining to Absolute Cash Ratio (ACR) of all the three categories of firms in the textile industry shows the following.

In the Case of **all sample firms** the average Cash balances was just Rs.1685 crore as against the Quick Liabilities of Rs.3852 crore. This reveals that the Cash balances available in the small-sized firms are 4.3 per cent of its immediate requirement.

In the Case of **small-sized sample firms** the average cash balances was just Rs. 156 crore against the Quick Liabilities of Rs. 876 crore. This reveals that the Cash balances available in the small sized firms are 1.8 per cent of its immediate requirement. A similar trend is observable in medium and large-sized sample firms.

In the Case of **medium-sized sample firms**, the ready cash is just Rs.452 crore as against immediate obligations of Rs.1518 crore, thus working out 33 per cent of the requirement. On the other hand**, large-sized sample firms** seem to be maintaining greater Cash of Rs. 1100 crore of Cash balance for meeting out Rs.1500 crore obligation.

From the above table the following observations could be made:

- The selected sample firm seems to maintain higher control on their Cash balances. While small firms are managing with 18 per cent, the medium firms with 33 per cent, the large firms are found to keep 76 per cent of the ready Cash to meet its immediate obligations.

- A glance at the table further reveals that the growth rate in Cash balances and liabilities are growing at a rate of around 8 to 10 per cent over a ten year period of study. It is a positive indicator for controlling the size of liquid assets in any firm.

- 18 to 33 per cent of Cash sometimes results in greater strain of Cash management. It may result in Occasional Cash out situations, making the firms to resort to quick short-term borrowings.

- A comparison of Table IV.1, IV.2 and IV.3 reveals the following:

- The Current Ratio, and Quick Ratio of sample textile firms indicates the size and quantum of Current Assets and Current Liabilities . The efficient use of liquidity is observed in table IV.3.

- The Compound Annual Growth Rate of Current Assets, Current Liabilities, Quick Assets and Quick Liabilities and the absolute Cash balances indicate a range of 8 to 12 per cent, greater control of use of Current Assets, and investment in Working Capital requirements of the selected firms.

SECTION II:

RECEIVABLES MANAGEMENT

"Business firms generally sell goods on credit. Credit is granted to facilitate sales. It is valuable to customers as it augments their resources. It is particularly appealing to those customers who cannot borrow from other sources, or find it very expensive or cumbersome to fund it". The credit sales create Bills Receivables (B/R) or book debts whenever firms sell goods on credit to its customers.

The "Receivables is defined as debt owed to the firm by customers arising from sale of goods or services on the ordinary course of business"

Firms maintain perpetual balances in the form of Accounts Receivables (A/Rs) in their operating cycle. The Accounts Receivables balance constitutes a significant component in the total working capital held up in the operating cycle. This component of working capital is expected to meet the following.

- ❖ Liberal extension of credit to customers increases sales turnover, thus leading to clearing up of the production made by the firm.
- ❖ Increased sales turnover is likely to increase the gross-profit (unrealized) and the profit potential of the firm.
- ❖ Credit supply of goods to customers constitutes the provision of trade credit and provides a facility in case of members in channels of distribution.
- ❖ The amount of credit, credit terms, and provision of credit terms naturally depends upon the level of competition in which the firm operates, industry norms and firms-specific objectives like market share maximization**.**

- The management of Accounts Receivables is significant in the light of locking up of funds in the hands of customers, overhead expenses in managing and administering Accounts Receivables balances and likely risks incidental there to. A company's management generally determines the levels of Accounts Receivables that the firm can afford to consider trade off between competition and the locking up of Working Capital under this head. The receivables management includes maintenance of debtors at optimum level, the degree of credit sales to be made and making the collection fast.

IV.2.1 Receivables Management Tools

Firms have to manage their receivables at optimum level with a view to trade off between business necessities and competition. Excessive locking up of amount in receivables reduces profit. Hence, it is always better to maintain optimum investment in receivables. To measure the level of investment in Accounts Receivables of textile firms in receivables management**, the present** study has used the following ratios.

1. **Receivables (debtors) Turnover Ratio (RTR)**
2. **Average credit period ratio (ACR)**

IV.2.2 Accounts Receivables Turnover Ratio and Average Collection Period:

The Accounts Receivables turnover ratio and average collection period are the indicators of indicating efficiency in management of receivables. By closely monitoring these ratios on a monthly or quarterly basis one can quickly under score any change *in collection.* ***The formula used for calculating these ratios are:***

$$\textbf{Receivables turnover ratio} = \frac{\textbf{Net Sales}}{\textbf{Average accounts receivables}}$$

$$\textbf{Average collection period} = \frac{\textbf{Debtors}}{\textbf{Sales}} \times \textbf{365 days}$$

Or

$$= \frac{\textbf{Average Account Receivables}}{\textbf{Sales}} \times \textbf{365 days}$$

Using the above ratios, the select textile firms are analyzed, in terms of data collected, processed and they are presented in table IV.4, relating to receivables management**.**

The table shows that on an average an annual sales turnover of Rs.20504 crore is reported in the Cash of **all sample firms**. If this is the year-end figures of uncollected credit, sales balance of these small-sized firms is found to be Rs.6880 crore, indicating that the size of Accounts Receivables working out to 34 percent of sales. In terms of days, the average collection period for this group was 124 days indicating the ability of all firms to collect Accounts Receivables within the specified period of 90 days revealing inefficiency in the collection policy.

The table shows that on an average an annual sales turnover of Rs.3600 crore is reported in the case of **small sized sample firms**. If this is the year-end figures of uncollected credit, sales balance of these small sized firms is found to be Rs.850 crore, indicating that the size of Account Receivables working out to 24 per cent of sales. In terms of days, the average collection period for this group was 84 days indicating the ability of the firms to collect Accounts Receivables within the specified period of 90 days revealing efficiency in collection policy.

The inter-firm differences in net sales and Accounts Receivables are worked out by standard deviation and expressed in terms of Coefficient of Variation. The Coefficient Variation of net sales have been on an average at the rate of 21 per cent and Account Receivables have been at the rate of 33 percent.

Table IV.4

Accounts Receivable Turnover Ratios of All Select Firms, Small, Medium and Large-sized firms in Textile Industry in India. (Year Wise Totals)

Measures	Net Sales (Rs. in Crore)	Accounts Receivable (Rs. in Crore)	Accounts Receivable Turnover Ratio (Times)	Average Collection Period
SMALL-SIZE FIRMS				
Mean	3617.26	851.05	4.3719	84.37
Standard Deviation	763.84	280.84	0.4407	9.80
Coefficient of Variation (%)	21.12	33.00	10.08	11.62
CAGR (%)	6.84	9.95	-2.83	2.92
Linear Growth Rate (LGR) (Trend)	248.94*** (17.18)	85.61*** (6.78)	-0.1079*** -(3.12)	2.39*** (3.09)
MEDIUM-SIZE FIRMS				
Mean	6205.38	2588.97	2.4005	153.46
Standard Deviation	779.69	231.36	0.2580	14.64
Coefficient of Variation (%)	12.56	8.94	10.75	9.54
CAGR (%)	2.74	1.95	0.78	-0.77
Linear Growth Rate (LGR) (Trend)	57.68 (0.65)	19.68 (0.75)	0.0051 (0.17)	-0.45 -(0.27)
LARGE-SIZE FIRMS				
Mean	10681.32	3440.44	3.0838	121.11
Standard Deviation	3169.51	793.26	0.4672	20.23
Coefficient of Variation (%)	29.67	23.06	15.15	16.70
CAGR (%)	9.86	6.75	2.92	-2.84
Linear Growth Rate (LGR) (Trend)	989.40*** (8.18)	194.89*** (3.15)	0.1188*** (3.41)	-5.26*** -(3.61)
ALL FIRMS				
Mean	20503.96	6880.46	2.9746	123.98
Standard Deviation	4263.31	1197.27	0.3140	13.50
Coefficient of Variation (%)	20.79	17.40	10.56	10.89
CAGR (%)	7.16	5.44	1.63	-1.61
Linear Growth Rate (LGR) (Trend)	1296.01*** (6.66)	300.18*** (3.30)	0.0638** (2.21)	-2.97** -(2.52)

Source: Computed from financial Statements of Textile Firms from 1998-99 to 2007-08.

CAGR – Compounded Annualized Growth Rate.
Figures in parenthesis are t-values for the linear growth rates.
**Significant at 5% level; ***Significant at 1% level

The Compounded Annual Growth Rate of net sales and Account Receivable show that the net sales have been growing on an average at the rate of 7 per cent (LGR=Rs 249 crore) and Account Receivable are growing on an average at the rate of 10 per cent (LGR=Rs.86 crore).

The **medium-sized sample firms** report an annual sales turnover of Rs 6200 crore. Out of this the uncollected credit sales balance of these medium sized firms is found to be Rs 2600 crore, revealing the size of Account Receivable worked out to 42 per cent of sales and in terms of 153 days. In this group the collection period is higher revealing lenient Collection policy which is an indication of inefficient management of the component of the Working Capital.

As far as inter-firms differences are concerned the Coefficient of Variation of net sales and Account Receivable for the same firms were at the rate of 13 per cent and 9 per cent respectively.

The Compounded Annual Growth Rate of net sales and Account Receivable show the same trend namely 3.00 per cent (LGR=Rs. 58 crore and 2.00 per cent and LGR = Rs. 20 crore).

The net sales of **large-size sample firm** reported Rs.10700 crore. Out of these the uncollected credit sales balance of these large-size firms is found to be Rs.3400 crore per annum, revealing the size of Account Receivable working out to approximately 32 per cent of sales. The average collection period becomes 120 days which is also on the higher side. This shows a liberal credit policy of the sample firms ignoring principle of liquidity.

The inter-firm differences have been worked out and expressed in terms of Coefficient of Variation. The Coefficient of Variation of net sales and Account Receivable were on an average at the rate of 30 per cent and 23 per cent respectively. The Compounded Annual Growth Rate of net sales and Account Receivable show that the net sales have been growing at the rate of 10 per cent (LGR =Rs.989 corer) and Account Receivable at the rate of 7 per cent (LGR = Rs.195 crore)

To sum up the following observations are made from the above table:

- The sales made by the three categories of firms are, small Rs.3600 crores medium Rs.6200 crores and large Rs.10700crores respectively
- The above sales created Account Receivable to the extent of 24 per cent of sales in small, 42 percent of sales in medium and 32 percent in large-firms respectively
- The Accounts Receivable turnover ratio worked out as 4.0, 2.0 and 3.0 and average collection period 84 days, 153 days and 120 days.

From the above, the inference could be made relating to the management of receivables and average collection period of small-sized sample firms by following the norm of 4 times and average collection period of 90 days. On the other hand, the medium and large-sized sample firms are not able to follow the norm.

SECTION III

IV.3. Inventory Management

Inventory management deals with the management of stock required for making finished goods. Inventory consists of major components of ***Working Capital*** . It includes management of raw material (RMs), finished goods (FGs) as well as work-in progress (WIP). Management of RMs includes classification of materials, analysis of the consumption pattern, determination of economic order quantity (EOQ), understanding lead-time and maintaining better supply claim. Management of finished goods (FGs) includes storage, carriage, distribution, logistics and price maintenance, buffer stocks and managing channels of distribution. WIP management includes production, planning, machine scheduling, assembling, line balancing, work force allocation and material handling. Better inventory management is essential for avoiding unnecessary locking up of capital in inventories and consequent losses.

The higher the turnover of inventories, the better is the management of that component of the Working Capital. If the materials are in stock for lesser days it indicates fast turn over of these material into finished products and thus increasing the sales. So, the lesser the conversion of inventory into finished products, the greater would be the sales.

IV.3.1 Inventory Management Tools:

If a firm maintains efficiency in inventory management, it leads to greater profitability. Too much of investment in inventory will attract complexity in use due to obsolete as well as poor stock maintenance. Hence, it is always better to maintain optimum investment in inventory. To measure the inventory management the following ratios are computed and used.

(I) INVENTORY TURNOVER RATIO (ITR)

(II) INVENTORY CONVERSION PERIOD (ICP)

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$$

$$\text{Inventory Conversion Period} = \frac{365 \text{ days}}{\text{Inventory Turnover Ratio}}$$

In order to examine ability of sample units in conversion of inventory and inventory cycle period of selected units of the three categories, related data has been collected, processed and presented in Table IV.5.

Table IV.5

Inventory (Stock) Turnover Ratios and Inventory Cycle Period of Select Firms in Textile Industry (Year Wise Totals)

Measures	Inventory (Rs. in crore)	Cost of Goods sold (Rs.in crore)	Inventory Turnover Ratio (Times)	Inventory cycle period
SMALL-SIZED FIRMS				
Mean	741.43	3141.34	4.2106	87.99
Standard Deviation	119.26	723.20	0.5368	11.43
Coefficient of Variation (%)	16.09	23.02	12.75	12.99
CAGR (%)	5.49	7.61	2.01	-1.97
Linear Growth Rate (LGR)	31.77***	236.22***	0.1461***	-31.17***
(Trend)	(3.86)	(18.84)	(4.12)	-(4.45)
MEDIUM-SIZED FIRMS				
Mean	1511.44	5805.76	3.8415	95.61
Standard Deviation	147.27	751.28	0.3285	7.76
Coefficient of Variation (%)	9.74	12.94	8.55	8.12
CAGR (%)	3.20	2.76	-0.42	0.42
Linear Growth Rate (LGR)	18.18	57.96	-0.0042	0.14
(Trend)	(1.14)	(0.68)	-(0.11)	(0.15)
LARGE-SIZED FIRMS				
Mean	2330.69	8819.82	3.8403	95.94
Standard Deviation	789.73	2657.09	0.3932	9.72
Coefficient of Variation (%)	33.88	30.13	10.24	10.13
CAGR (%)	8.96	10.16	1.11	-1.10
Linear Growth Rate (LGR)	250.94***	837.03***	-0.0047	1.11
(Trend)	(9.97)	(8.98)	-(1.04)	(1.05)
ALL FIRMS				
Mean	4583.55	17766.91	3.8793	94.45
Standard Deviation	940.07	3680.32	0.2620	6.04
Coefficient of Variation (%)	20.51	20.71	6.75	6.39
CAGR (%)	6.46	7.28	0.77	-0.76
Linear Growth Rate (LGR)	300.89***	1131.21***	-0.0020	0.02
(Trend)	(11.11)	(7.19)	-(0.07)	(0.03)

Source: Computed from financial Statements of Textile Firms from 1998-99 to 2007-08.

CAGR – Compunded Annualized Growth Rate.

Figures in parenthesis are t-values for the linear growth rates.

Significant at 5% level; * Significant at 1% level

Observations of he above table shows that the average level of inventory of **all sample firms** for the period of study was Rs. 4584 crore and the average cost of goods sold during the same period was Rs. 17767 crore, giving a ITR of 4 times. The textile industry being processing industry, (including activities were of ginning, spinning, weaving and printing) the ratio is an indication of better management of inventory. The inventory conversion period (ICP) of all sample firms is calculated by dividing the number of days in a year by the ITR (i.e. 4) worked out as 94 days.

The average level of inventory of **small-sized sample firms** for the period of study was Rs. 741 crore and the average cost of goods sold during the same period was Rs. 3150 crore, giving a ITR of 4, indicating inventories were turning over on an average 4 times per year. The textile industry being processing industry, (including activities were of ginning, spinning, weaving and printing) the ratio is an indication of better management of inventory. The inventory conversion period (ICP) of small-sized sample firms is calculated by dividing the number of days in a year by the ITR (i.e. 4) worked out as 88 days.

The inter-firm difference between inventory and cost of goods sold are worked out by way of standard deviation and expressed in terms of coefficient of variation. The Coefficient of Variation of inventory balances works out to 16 per cent of average balance of Rs.740 crore. The cost of goods sold at proxy of sales turnover was also found varying across firms. The Coefficient of Variation indicates the inter-firm differences of 23 per cent of the average sales of Rs.3150 crore.

The Compound Annual Growth Rate of inventory and cost of goods sold are growing at the rate of 5 per cent (LGR= Rs. 32 crore) and at the rate of 8 per cent (LGR= Rs. 236 crore) respectively.

The average inventory of **medium-sized sample firms** was Rs. 1500 crore and the cost of goods sold was Rs.5800 crore, giving an Inventory Turnover Ratio of almost 4 times indicating normal turnover. The Inventory Conversion Period in the Current Assets of medium-sized sample firms, worked out as 96 days, which is just above the norm.

The Coefficient of Variation of cost of goods sold varied at a higher rate of 13 per cent to the variation in inventory at a lower rate of 10 per cent. This indicates that inter-firm differences are less in medium-sized firms when compared to the small-sized firms.

The Compound Annual Growth Rate of inventory was growing on an average at the rate of 3 per cent (LGR =Rs. 18 crore) giving a negative growth.

The average level of inventory of the **large-sized sample firms** were Rs.2300 crore and the cost of goods sold were Rs. 8800 crore, giving a turnover ratio of 4 times, a normal turnover. In the Current Assets of this category of firms, Inventory Conversion Period was worked out as 96 days.

The inter firm differences in respect of large-sized firms between inventory and cost of goods sold worked out as Coefficient Variation of inventory as 34 per cent and Coefficient Variation of cost of goods sold as 30 per cent. The Compound Annual Growth Rate of these two variables have been growing at the rate of 9 per cent (LGR=Rs.251 crore) and 10 per cent (LGR= Rs.837 crore) respectively.

From the above table the following major observations could be made:

- The textile firms seem to maintain large balances of inventory to the tune of 3 to 4 months of the annual requirement.
- Almost a similar trend is observed across different sizes of firms with large inter- firm differences.
- The average inventory of 4 times and conversion cycle of 90 days indicate that the raw materials flow slowly in this industry.
- The annual growth rate of 5 to 7 per cent in inventory levels catch up with the growth rate in sales turnover which is found to be on higher side.

IV. 4 Overall Management Of *Working Capital* :

Working Capital is expected to facilitate ultimately in the creation of sales. If one takes up the concept of operating cycle, the result of all operations is to create sales. In this section, we have tried to examine the degree of efficiency of selected textile firms in utilizing Working Capital in generating sales.

If the ***Working Capital*** is efficiently utilized, the , the investment made in the Current Assets (partially funded by CL) and other components of Current Assets like inventory and Account Receivable are expected to contribute to the overall activities of the firm and facilitate the creation of sales. It can be noted with traditionally used turnover ratios. The present study tries to find out the relative roles played by Current Assets, Current Liabilities and other components of Working Capital across different groups of firms.

TABLE IV.6

Overall Management of Working Capital in Small, Medium and Large-Sized Textile Firms

Measures	Net Sales (Rs. in Crore)	Current Assets	% of Current Assets on Sales	Current Liabilities	% of Current Liabilities on Sales	A/Rs	% of A/Rs on Sales	Inventory	% of Invent. on Sales	Current Assets	% of Current Assets on sales
SMALL SIZE FIRMS			50%		26%		24%		21%		4%
Mean	3617.26	1791.49		949.50		851.05		741.43		156.33	
Standard Deviation	763.84	457.45		321.80		280.84		119.26		74.65	
Coefficient of Variation	21.12	25.53		33.89		33.00		16.09		47.75	
CAGR	6.84	7.80		10.04		9.95		5.49		7.91	
Linear Growth Rate (Trend)	248.94*** (17.18)	136.44*** (5.95)		104.06*** (13.16)		85.61*** (6.78)		31.77*** (3.86)		18.99*** (3.41)	
MEDIUM SIZE FIRMS			82%		40%		42%		24%		7%
Mean	6205.38	5098.57		1773.90		2588.97		1511.44		452.63	
Standard Deviation	779.69	492.44		682.25		231.36		147.27		149.25	
Coefficient of Variation	12.56	9.66		38.46		86.88.		9.74		32.97	
CAGR	2.74	3.31		12.28		1.95		3.20		6.88	
Linear Growth Rate (Trend)	57.68 (0.65)	89.08* (1.85)		213.84*** (8.51)		19.68 (0.75)		18.18 (1.14)		28.05* (1.96)	
LARGE SIZE FIRMS			73%		17%		33%		21%		1.3%
Mean	10681.32	7570.51		1828.75		3440.44		2330.69		1100.38	
Standard Deviation	3169.51	2256.38		370.43		793.26		789.73		631.87	
Coefficient of Variation	29.67	29.80		20.26		23.06		33.88		57.42	
CAGR	9.86	8.29		6.46		6.75		8.96		7.90	
Linear Growth Rate (Trend)	989.40*** (8.18)	685.76*** (6.65)		87.22** (2.87)		194.89*** (3.15)		250.94*** (9.97)		172.68*** (4.16)	

Source: Computed figures from Tables IV.1 to IV.5

Small-Sized Firms:

Small-sized firms report an average sales turn over of Rs. 3600 crore and the average Current Asset balances work out to Rs.1800 crore, out of which Current Liabilities are financing the Current Assets to the extent of Rs.950 crore. It indicates that the Current Assets contributes towards 50 per cent of sales and Current Liabilities towards 26 per cent of sales. In other words, the investment made in Current Assets have made two operating cycles per year possible.

Among the components of Current Assets, Inventories and Current Receivables report almost all play an equal role in generating sales. The inventories in the Current Assets of small firms are working out Rs. 741 crore. It constitutes 21 per cent of the total sales. In terms of operating cycles, inventory is found converted 5 times in a year with a conversion cycle of 24 months, The Account Receivable are working out Rs.850 crores. It is found to be 4 per cent of the sales. Thus, one-fourth of the sales on an average is held up in the hands of debtors. On the other hand, liquid Current Assets maintained by these small-sized firms works out to Rs 156 crore. As a percentage to sales, it is 4.0 per cent. From the above, the degree of efficiency of Working Capital utilization in generating sales seems to be very low as the Working Capital turnover ratio is working out just 2 times in a year. Either locking up of capital in inventories or in Account Receivable may be the reason for tardy utilization of Working Capital in sample textile firms.

Medium-Sized Firms:

Medium-sized sample firms' shows on an average sales turnover of Rs.6200 crore and correspondingly average Current Assets balances are working out Rs 5100 crore. Out of this, Current Liabilities is financing the Current Assets to the extent of Rs. 1700 crore. It shows that the Current Assets contributes 82 per cent and Current Liabilities 40 per cent of sales. In other words the investment made in Current Assets has been one and half operating cycles per year.

Among the components of Current Assets, the inventories, Account Receivable and Cash balance report play a slightly different role in generating sales when compared to small sized sample firm. The inventories in the Current Assets of medium-sized firms work out to Rs 1500 crore and constitutes 24 per cent of the total sales. In terms of operating cycle inventory it is found to be converted 4 times in a year with a conversion cycle of 3 months.

The Account Receivable are working out to Rs 2600 crore and constitute 42 per cent of the sales. Thus, almost half of the sales turnover on an average is held up in the hands of debtors. On the other hand, the liquid Current Assets maintained by this group of medium sized firms is working out to Rs.452 crore and constitutes 7 per cent of sales.

Overall, the degree of efficiency of ***Working Capital*** utilization in generating sales seems to be improved when compared to small-sized sample firms. However, medium-sized sample firms' utilization of ***Working Capital*** in generating sales is also low as the Working Capital turnover ratio, 3 times in a year. Here also the same reasons are attributed as in the case of small-sized firms.

Large-Sized Firms:

Large-sized sample firms report an average sales turnover of Rs. 10700 crore and the average Current Asset balances are working out at Rs.7600 crores, out of which Current Liabilities are financing the Current Assets to the tune of Rs.1800 crore. It reports that the Current Assets contribute 73 per cent and Current Liabilities 17 per cent of sales. In other words, the investment made in Current Assets has been approximately one and half operating cycle per year.

Among the components of Current Assets the inventories, Account Receivable and Cash balance report almost all play an equal role in generating sales. The inventories in the Current Assets of large-sized sample firms work out to Rs.2300 crore and constitute 24 per cent of the total sales. In terms of operating cycle, inventories are found to be converted 4 times in a year with a conversation cycle of 2.4 months. The Accounts Receivable work out to Rs.3400 crores, which accounts for 33 per cent of sales. Thus 1/3 rd the sales on an average is locked up in the hands of debtors. On the other hand, liquid Cash held by this group of firms is working out to Rs.1100 crores, making for 1.3 per cent of sales.

In conclusion, the degree of efficiency of ***Working Capital*** utilization in generating sales seem to be low as the ***Working Capital*** turnover ratio of 3 times in a year. This may be due to blocking up of capital in the form of inventories and Account Receivable leading to inefficient use of Working Capital in sample textile firms.

CHAPTER – V

TRENDS AND PATTERNS OF EFFICIENCY OF WORKING CAPITAL UTILIZATION: EMPIRICAL RESULTS ON THE CONSTRUCTION AND APPLICATION OF INDICES

CHAPTER V
TRENDS AND PATTERNS OF EFFICIENCY OF WORKING CAPITAL UTILIZATION: EMPIRICAL RESULTS ON THE CONSTRUCTION AND APPLICATION OF INDICES

In this chapter an attempt is made to estimate different performance indices for utilization of Working Capital (WC) in select firms. The performance indices used are: (a) Working capital performance index (b) Working Capital Utilization index and (c) Working capital efficiency index. This study also tried to capture the speed of adjustment of firms with their industry performance.

Efficient management of Working Capital is essential for the smooth functioning of operations of an enterprise. For examining the efficiency in utilization of Working Capital three different indices, viz., Performance Index (PI), Utilization Index (UI) and Efficiency Index (EI) are calculated. These indices were work originally developed by **H. Bhattacharya**, Professor of Finance and Control at the Indian Institute of Management, Calcutta. Taking the Indian Cement Industry as sample **Santanu Kr. Ghosh and Shanthi Gopal Majji** adopted the Bhattacharya's model for constructing the Performance Index, Utilisation Index and Efficiency Index during the period 1992-93 to 2000-2002.

The basis for construction of indices is similar to the exercise of cost estimation and control. A firm is said to be efficient when

- Its sales are rising annually
- Costs are under control
- Size of working capital is not out of proportion in comparison to rising sales.
- Profit is rising

Sales is the kingpin around which the business system rotates. The rotational force is coming from a flow of funds in the form of assets and costs. The sales performance of the business can be measured by indexing sales from year to year by value or quantity. If cost and current assets of the business have moved with the sales index to generate profits, an index can be worked out by comparing cost with sales. It is necessary to develop such indices that are expected to capture the operational efficiency of a firm.

A firm's efficiency in cost control can be judged by developing separate performance indices for different cost functions. Such an index is simply a comparison of the rate of change in cost components with that of a change in sales turnover.

V.1. A Note on Index making

Different indices are worked out on the basic premise that the change in turnover if achieved with less than proportionate change in cost, the firm is said to be efficient. A similar logic was applied to study the efficiency in utilization of Working Capital by a firm.

The logic put forth behind the construction of Index can be illustrated with the help of a hypothetical situation given below.

Case - 1 (Illustration)

If sales turnover rose from Rs.100 to Rs.150 in the current year, then sales index may be calculated by taking a ratio of the current year sales divided by previous year sales. As per the above ratio, the sales index for the hypothetical data is Rs.150 ÷ Rs.100 which is equal to 1.5 times.

Thus, sales have grown by 150 per cent. During the same period if there are no changes in current cost, compared to the previous year cost, the ratio of cost index can be calculated as the previous year cost divided by the current year cost.

In the hypothetical case, it is 100 ÷ 100 ie., equal to one. The cost index thus works out to be just one.

The overall efficiency index of a firm is the product of sales index and cost index, i.e., 1.5 x 1.0 = 1.5 times. Thus, when there is no change in the cost, the overall efficiency index is equal to sales index.

Case - 2 (Illustration)

The sales now grown by 150 per cent between the current and previous years, the sales index would be 150 ÷ 100 which is equal to 1.5 times. Suppose during the same period, if costs also increased by the same percentage, i.e., 100 to 150, then the cost index is equal to previous year cost divided by current year cost, i.e., 100 ÷150 = 2/3 = 0.667.

Then overall efficiency index is a product of sales and cost indices, i.e., 1.5 x 0.667 = 1.0. When cost rise is similar proportion to that of sales, the efficiency index works to 1.0. From the above two cases, it can be inferred that the overall efficiency index works out to more than 1 whenever the firm achieves the cost control. A greater control on cost yields a better overall efficiency index greater than 1.0 times. There is an absolute control on cost, i.e., no change in cost proportional to changes in sales, as an extreme case gives an overall efficiency index equal to the sales index.

V.2 Calculation of the Efficiency Index for Working Capital Utilization

In the present study, the overall efficiency index is worked out on similar lines as illustrated above. It is also calculated by considering the firm's sales index as the ratio of current year sales to the previous year sales.

The efficiency of the firm in utilization of Working Capital in generation of sales turnover is captured by constructing an overall efficiency index which is the product of the sales index and the working capital index. The operational efficiency for four different components of Working Capital , viz., cash and bank balance, accounts receivables, inventories and short term investments are separately calculated and averaged by using the following model:

Performance Index ($PI_{W\,CM}$) $$PI = \frac{I_s \sum_{i=1}^{n} \frac{W_{i(t-1)}}{W_i}}{N}$$

Where

Is - Sales index defined as S / S

Wi - Individual group of current assets

N - Number of current assets group, and

I = 1,2,3,……N

The two indices are calculated and interpreted as was explained above. A more than 1.0 overall efficiency index indicates greater control in the use of Working Capital resources. Using this logic, the present study has calculated the overall efficiency indices.

a) Performance Index (PI)

b) Utilization Index (UI)

c) Efficiency Index (EI) as product of PI and UI.

These indices are calculated for each year of study. Separate efficiency indices are worked out for small, medium and large sized firms.

Construction of indices: Empirical Results

The tables V.2 to V.4 show the calculated year wise Performance Index, Utilization Index and Efficiency Index indices respectively for small, medium and large-sized firms as well as for all firms. The formula used for construction of each of these indices are as follows:

Performance Index (PI) = Sales Index x Working Capital Utilization Index

PI = {Current Year sales/Previous Year sales} x {Previous year size of WC (Component wise)/ Current year size of WC (Component wise)}

(b) Utilization Index (UI)

The P1 represents the average overall performance in managing the components of Current Assets, but UI indicates the ability of the firm in utilizing its Current Assets as a whole for generating sales, ie., change in current assets to change in sales.

$UI_{wcm} = A_{t-1} / A_t$

Where A = Current Assets/Sales.

Alternatively,

UI = {Current Year sales/Previous Year sales} x {Previous year size of WC / Current year size of WC }

(c) Efficiency Index (EI):

EI is the product of PI and UI. It is computed by multiplying the overall PI with UI. Thus the formula for calculating the EI is as follows:

$EI_{wcm} = PI_{wcm} x\ UI_{wcm}$

Where EI_{wcm}= Efficiency Index of $_{wcm}$

$P1_{wcm}$= Performance Index of $_{wcm}$

UI_{wcm}= Utilization Index of $_{wcm}$

Empirical results of the above model followed by Dr. Santanu Kr. Ghosh & Santi Gopal Maji (2002) to examine the Working capital management efficiency of Indian Cement Industry. Their study results are illustrated in Table V.1

Table V.1
PI, UI and EI of 20 select cement firms Values of Indices from 1992-93 to 2001-02

SI. No.	Name of companies	Performance Index		Utilisation Index		Efficiency Index	
		Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
l	Associated Cement Companies Ltd.	1.29 (94-95)	.85 (92-93)	1.25 (95-96)	.86 92-93)	1.61 (94-95)	.72 (95-96)
2	Birla Corporation.	1.53 (2001-02)	.78 (92-93)	1.23 (94-95)	.73 (92-93)	1.87 (2001-02)	.57 (92-93)
3	Narmoda Cement Co. Ltd.	1.75 (93-94)	.75 (92-93)	1.87 (99-2000)	.69 (98-99)	2.45 (93-94)	.47 (98-99)
4	Gujarat Sidhee Cement Ltd.	3.00 (2000-02)	.93 (94-95)	1.44 (95-96)	.85 (94-95)	3.52 (2001-02)	.79 (94-95)
5	Dalmia Cement (Bharat) Ltd.	1.68 (94-95)	.88 (95-96)	1.33 (94-95)	.86 (93-94)	2.24 (94-95)	.77 (95-96)
6	KCP Ltd.	2.02 (98-99)	.83 (99-2000)	1.28 (92-93)	.80 (96-97)	3.86 (98-99)	.70 (99-2000)
7	Madras Cement Ltd.	1.57 (98-99)	.86 (96-97)	1.35 (98-99)	.81 (99-2000)	2.11 (98-00)	.77 (97-98)
8	India Cement Ltd.	1.30 (98-99)	.84 (96-97)	1.19 (98-99)	.58 (97-98)	1.54 (98-99)	.54 (97-98)
9	Andra Cement Ltd.	10.67 (92-93)	.98 (97-98)	3.95 (95-96)	.25 (93-94)	10.38 (95-96)	.90 (98-99)
10	Himadri Cement Ltd.	21.15 (2000-01)	.97 (94-95)	1.33 (93-94)	.10 (2000-01)	15.00 (93-94)	.97 (94-95)
11	Kakatiya Cements Sugar &. Industries	1.50 (93-94)	.66 (92-93)	1.40 (99-2000)	.51 (94-95)	1.68 (93-94)	.36 (94-95)
12	Panyam Cement & Minerals Industries	1.49 (97-98)	.90 (95-96)	1.24 (94-95)	.73 (99-2000)	1.53 (97-98)	.68 (2000-01)
13	Kanoria Industries Ltd.	1.72 (94-95)	.74 (92-93)	1.42 (94-95)	.55 (99-2000)	2.45 (94-95)	.68 (92.93)
14	Chettinad Cement Corporation Ltd.	1.14 (99-2000)	.78 (2000-01)	1.19 (94-95)	.67 (2000-01)	1.22 (97-98)	.52 (2000-01)
15	Priyadarsani Cement Ltd.	1.33 (2001-02)	.74 (98-99)	1.15 (94-95)	.82 (98-99)	1.36 (2001-02)	.61 (98-99)
16	Sagar Cement Ltd.	1.39 (95-96)	.79 (99-2000)	1.22 (2000-01)	.77 (92-93)	1.96 (95-96)	.50 (92-93)
17	Decan Cement Ltd.	1.60 (94-95)	.61 (92-93)	1.47 (93-94)	.58 (92-93)	1.89 (93-94)	.35 (92-93)
18	Gujarat Ambuja Cement Ltd.	29.54 (2000-01)	.59 (92-93)	1.37 (99-2000)	.50 (92-93)	32.30 (2000-01)	.29 (92-93)
19	Ambuja Cement Eastern Ltd.	1.48 (99-2000)	.69 (97-98)	1.39 (99-2000)	.78 (97-98)	2.05 (99-2000)	.53 (97-98)
20	NCL Industries Ltd.	1.97 (96-97)	.74 (97-98)	1.59 (96-97)	.67 (97-98)	3.13 (96-97)	.49 (97-98)

Based on the model adopted by Santanu Kr. Ghosh and Shanti Gopal Maji, the relevant data of the three-sized sample target textile firms are collected, processed and indices relating to Performance Index (PI), Utilisation Index (UI) and Efficiency Index (EI) are presented in table V.2 to V.4

Table V.2

Comparison of Working Capital Efficiency in terms of Performance Indices across Textile Firm Groups by Size Classes

Financial Year	Small Sized Firms	Medium Sized Firms	Large Sized Firms	All Firms
1999-00	1.0858	1.2765	1.1577	1.1809
2000-01	1.0499	1.1915	1.0265	1.0940
2001-02	1.1639	1.0974	1.2477	1.1728
2002-03	1.1467	0.9486	1.4507	1.2189
2003-04	1.0321	0.7189	1.0151	0.9265
2004-05	1.2441	0.9495	1.3205	1.1676
2005-06	1.3985	1.3583	1.5227	1.4691
2006-07	1.0804	1.0559	1.4981	1.3270
2007-08	1.4679	1.2665	1.2354	1.2428
Minimum	1.0321 (2003-04)	0.7189 (2003-04)	1.0151 (2003-04)	0.9265 (2003-04)
Maximum	1.4679 (2007-08)	1.3583 (2005-06)	1.5227 (2005-06)	1.4691 (2005-06)
Mean	1.1855	1.0959	1.2749	1.1999
SD	0.1555	0.2020	0.1902	0.1495
LGR	0.0364* 2.21	0.0013 0.05	0.0358 1.59	0.0248 1.35

Source: Computed from Financial Statements of Firms

Figures in parenthesis are years. Figures in Square brackets are t-values

*significant @10% level.

The observation of the table shows that the Performance 1ndex of all the firms is low at 0.9265 for the year 2003-04, and is high at 1.4691 for the year 2005-06. Further, it is observed that the Performance 1ndex for all the years is greater than one except for 2003-04 which clearly indicates that the utilization of Working Capital by all the firms is by and large efficient.

The above table shows that the Performance Index of small and large sized firms are more than one in all the years of study, indicating that the sales effected was more than the amount of Working Capital used.

In the case of small-sized firms the low level of sales was 1.032 in the year 2003- 04 and the highest level of sales was in the year 2007 – 08 and the index was 1.468. The average level of index was 1.186 and the Standard Deviation, 0.16 It shows that the variations in the Working Capital to make out a higher sales was less. Also it shows that the LGR of the index was growing on an average at the rate of 0.036 and this growth was also significant at 10 per cent level.

The analysis pertaining to large-sized firms shows that Performance Index in all the 10 years of study was more than 1. The index was ranging between 1.015 in the year 2003 -04 (minimum) and 1.523 in the year 2005-06 (maximum). On an average the P1 was 1.275.

The standard deviation being low (0.190) is an indication that variations in the index is very low. It further indicates that there is a consistency in the usage of different components of Working Capital to make out sales. The index was growing (LGR) on an average at the rate of 0.036.

In the same way, the Performance 1ndex of medium-sized firms were analyzed. It revealed that except for the years 2002 – 2003, 2003- 2004 and 2004-2005 the PI was more than 1 indicating that the sales made out from different components of Working Capital was more. The Performance 1ndex ranged between 0.719 (minimum) in the year 2003 - 2004 and 1.358 in the year 2005 - 2006. The 10 years average of the PI was 1.096. The standard deviation remaining at a minimum of 0.202 shows that there is consistency in the use of Current Assets to effect the sales and thus giving a positive index.

UTILISATION INDEX

Table V.3

Comparison of Working Capital Efficiency in terms of Utilization Indices across Textile Firm Groups by Size Classes

Financial Year	Small-Sized firms	Medium-Sized Firms	Large-Sized Firms	All Firms
1999-00	0.9412	1.0553	0.8717	0.9421
2000-01	1.0117	0.9783	1.0518	1.0198
2001-02	0.9183	0.8957	0.9187	0.9154
2002-03	1.0073	0.8930	0.9992	0.9810
2003-04	0.9680	1.1846	1.2298	1.1867
2004-05	1.0066	1.0730	1.0202	1.0543
2005-06	1.0906	1.0261	1.0837	1.0742
2006-07	1.0093	0.9954	0.8831	0.9297
2007-08	1.1573	1.0198	0.9785	1.0106
Minimum	0.9183 (2001-02)	0.8930 (2002-03)	0.8717 (1999-2000)	0.9154 (2001-02)
Maximum	1.1573 (2007-08)	1.1846 (2003-04)	1.2298 (2003-04)	1.1867 (2003-04)
Mean	1.0123	1.0135	1.0041	1.0126
SD	0.0734	0.0900	0.1118	0.0853
LGR	0.0200** 2.97	0.0058 0.48	0.0045 0.30	0.0066 0.57

Source: Computed from Financial Statements

Figures in parenthesis are years. Figures Square brackets are t-values

**significant @ 5% level.

It is observed from the above Table that the Utilisation Index of all the three categories of firms shows a positive index during 2000-01, 2003-04, 2004-05, 2005-06 and 2007-08 which, indicates the efficient utilization of Working Capital . On the other hand, during other years of the study there was a negative index indicating inefficient use of Working Capital. However, the average of the Utilisation Index (1.0126) over the 10 years under study across firms was positive. The standard deviation (0.0853) is also minimal revealing a consistency in the Working Capital Management. When compared with the Performance Index, the management of Current Assets in giving Utilisation Index was not attractive.

While analyzing the small-sized firms the Utilisation Index was greater than one except for three years (1999 - 2000, 2001-2002 and 2002 – 2003).

The index was ranging between a minimum of 0.918 in the year 2001-2002 and a maximum of 1.157 in the year 2007 – 2008. The average of the Utilisation Index for the period under study was 1.012. The standard deviation measuring the variations in the use of Current Assets to make out the sales remaining at (0.073), show that there has been consistency in the management of the Working Capital . Further, the positive LGR (0.02) per annum being significant at 5 per cent level reveals the efficiency in the utilization of Current Assets.

In the case of medium-sized firms except in four years (2000 - 2001, 2001-2002, 2002 - 2003 and 2006 - 2007) in all other years the Utilisation Index was greater than 1. The index was ranging between 0.893 in the year 2002 - 2003 and 1.185 in the year 2003 - 2004. On an average the Utilisation Index was at 1.014, because of the lower indexes in the four years, the standard deviation was 0.090. It further reveals that the variation in the construction of Utilisation Index is 9 per cent.

As in the case of small and medium-sized firms the Utilisation Index constructed for measuring the efficiency of Working Capital Management of large-sized sample firms show that the indexes have been more than one in the 5 out of 10 years. In the year 1999 -2000, 2001 -2002, 2002 - 2003, 2006 - 2007 and 2007 – 2008, it has been less than 1 i.e 0.872, 0.919, 0.999, 0.883, 0.979 respectively. The index ranged between a minimum of 0.872 in the year 1999- 2000 and a maximum of 1.229 in the year 2003 - 2004. The 10 years average of Utilisation Index was more than one (1.0041). The standard deviation remains at 11 out of 100, the variations in the usage of Current Assets for creation of sales is consistent. The LGR of the index also shows a small growth per year (0.005).

The Efficiency Index being the product of the Performance Index and Utilisation Index, it is constructed by multiplying the Performance Index with Utilisation Index. The processed data is presented in Table V.4

Table V.4

Comparison of Working Capital Efficiency Indices across Textile Firm Groups by Size Classes

Financial Year	Small-Sized firms	Medium-Sized Firms	Large-Sized Firms	All Firms
1999-00	1.0219	1.3471	1.0091	1.1125
2000-01	1.0622	1.1656	1.0797	1.1157
2001-02	1.0688	0.9829	1.1463	1.0736
2002-03	1.1550	0.8471	1.4495	1.1957
2003-04	0.9991	0.8516	1.2483	0.0995
2004-05	1.2523	1.0188	1.3272	1.2309
2005-06	1.5251	1.3938	1.6502	1.5780
2006-07	1.0905	1.0510	1.3229	1.2337
2007-08	1.6988	1.2916	1.2089	1.2559
Minimum	0.9991 (2003-04)	0.8471 (2002-03)	1.0091 (1999-2000)	1.0736 (2001-02)
Maximum	1.6988 (2007-08)	1.3938 (2005-06)	1.6502 (2005-06)	1.5780 (2005-06)
Mean	1.2082	1.1055	1.2736	1.2106
SD	0.2447	0.2051	0.1966	0.1533
LGR	0.0634** 2.66	0.0074 0.25	0.0406 1.81	0.0329* 1.92

Source: Computed from Financial Statements

Figures in parenthesis are years. Figures in Square brackets are t-values

*significant @10% level; **significant 5% level.

The efficiency indices eliciting the overall Working Capital Management for textile firms belonging to small, medium, large and all firms are shown in Table V.4.

The efficiency indices of all firms were greater than one during the period under study except for the year 2003-04. It indicates the efficient utilization of Working Capital by all firms in the generation of sales. The Efficiency Index ranges from 1.0736 during 2001-02 and 1.5780 during 2005-06. The average Efficiency Index for the period under study is 1.2106. The standard deviation is 0.1533. It shows clearly that all textile firms were efficient in adopting an overall sound Working Capital Management policy.

Similarly, the Efficiency Index I for small-sized firms is greater than one during the period of study except for 2003-04, having minimum and maximum Efficiency Index as 0.9991 in 2003-04 and 1.6988 in 2007-08 respectively. The mean and standard deviation accounted for 1.2082 and 0.2447. The LGR is 2.66 which is significant at 5 per cent level. It indicates that the small size firms have utilized the Working Capital effectively during the period under study.

The analysis of Efficiency Index of medium-sized firms during the period under study shows that the Efficiency Index is less than one during three years, viz., 2001-02, 2002-03 and 2003-04. For other years of study the Efficiency Index shows that indices are greater than one. The minimum and maximum Efficiency Index range from 0.8471 during 2002-03 and 1.3938 during 2005-06 respectively. The results show that the mean and standard deviation of Working Capital Management Efficiency indices of the medium size firms are 1.1055 and 0.2051 respectively with LGR at 0.25. This implies that the Working Capital is not effectively utilized in the generation of sales.

While analyzing the Efficiency Index of Large-sized firms, it is found that the Efficiency Index for all the years under study are greater than one indicating efficient utilization of Current Assets in the generation of sales revenue. The minimum and maximum Efficiency Index ranges from 1.0091 during 1999-2000 to 1.6502 during 2005-06. The mean and standard deviation of the Efficiency Index are 1.2736 and 0.1966 respectively. The LGR is 1.81. These observations indicate that the Working Capital is adequately utilized by the large size firms in enhancing the turnover during the period of study.

Table V.5

Working Capital Efficiency Indices for SMALL Size Textile Firms

Sl	Company Name	Performance Index		Utilization Index		Efficiency Index	
		Min	Max	Min	Max	Min	Max
1	Banswara Syntex Ltd.	0.9317 (2000-01)	2.0921 (2007-08)	0.7770 (2006-07)	1.3278 (2005-06)	0.8957 (2006-07)	2.0139 (2007-08)
2	Garware-Wall Ropes Ltd.	0.9981 (2003-04)	1.5863 (2004-05)	0.8989 (2007-08)	1.0925 (2002-03)	1.0220 (1999-00)	1.4631 (2004-05)
3	Ginni Filaments Ltd.	0.8708 (2006-07)	2.2973 (2002-03)	0.6693 (2007-08)	1.4264 (2000-01)	0.8636 (1999-00)	2.2840 (2000-01)
4	Indian Acrylics Ltd.	0.4254 (2000-01)	4.9242 (2005-06)	0.6416 (2005-06)	1.2760 (2006-07)	0.3364 (2000-01)	3.1594 (2005-06)
5	Indo Count Inds. Ltd.	0.9011 (1999-00)	3.9826 (2006-07)	0.4465 (2005-06)	2.1746 (2004-05)	0.8300 (2005-06)	3.7316 (2006-07)
6	Malwa Cotton Spg. Mills Ltd.	0.8996 (2006-07)	1.7266 (1999-00)	0.8902 (2003-04)	1.0664 (2002-03)	0.8510 (2003-04)	1.5873 (1999-00)
7	Maral Overseas Ltd.	0.8590 (2005-06)	1.7369 (2000-01)	0.7702 (2004-05)	1.4282 (2003-04)	0.8135 (2007-08)	1.8573 (2000-01)
8	Modern Syntex (India) Ltd.	0.5563 (2006-07)	1.2378 (2004-05)	0.7303 (2006-07)	1.6873 (2005-06)	0.4062 (2006-07)	1.7227 (2004-05)
9	Modipon Ltd.	0.6531 (2007-08)	1.2576 (2002-03)	0.9299 (2002-03)	1.0966 (2004-05)	0.6337 (2007-08)	1.2004 (2005-06)
10	National Textile Corpn. (A.P)	0.5861 (2003-04)	3.3272 (2005-06)	0.2277 (2005-06)	1.3707 (1999-00)	0.4491 (2000-01)	1.4881 (2006-07)
11	Pratibha Syntex Ltd.	0.6764 (2004-05)	8.3912 (1999-00)	0.7966 (2004-05)	1.5480 (2003-04)	0.5388 (2004-05)	6.9925 (1999-00)
12	Rajapalayam Mills Ltd.	1.0566 (2006-07)	2.6286 (2004-05)	0.7558 (2004-05)	1.3560 (2006-07)	0.8832 (1999-00)	1.9866 (2004-05)
13	Shri Lakshmi Cotsyn Ltd.	1.1746 (2003-04)	4.2196 (2007-08)	0.8473 (2004-05)	1.0639 (2001-02)	1.0857 (2003-04)	4.3060 (2005-06)
14	Siyaram Silk Mills Ltd.	0.8532 (1999-00)	1.6245 (2007-08)	0.7773 (2002-03)	1.1467 (2000-01)	0.9004 (2002-03)	1.6943 (2007-08)
15	Spentex Industries Ltd.	0.6422 (2004-05)	7.6322 (2007-08)	0.4364 (2005-06)	1.6207 (2004-05)	0.4461 (2005-06)	7.6612 (2006-07)
16	Suryalakshmi Cotton Mills Ltd.	0.7896 (2003-04)	2.9577 (2007-08)	0.4893 (2007-08)	1.3406 (2000-01)	0.7786 (2003-04)	1.9804 (2005-06)

Figures in parenthesis are years

The minimum and maximum values of Performance Index calculated for 16 small-sized firms are depicted in table V.5. It reveals that the minimum value of Performance Index ranges from 0.4254 (Indian Acrylics Ltd.) to 1.1746 (Shri Lakshmi Cotsyn Ltd.). Likewise, the Utilisation Index ranges from 0.2277 (National Textile Corpn. (A.P) to 0.9299 (Modipon Ltd) and the Efficiency Index of the same firms ranges from 0.3364 (Indian Acrylics Ltd) to 1.0857 (Shri Lakshmi Cotsyn Ltd.)

Similarly, the maximum value of Performance Index ranges from 1.2576 (Modipon Ltd.) to 8.3912 (Pratibha Syntex Ltd.). The Utilisation Index of the same level firms ranges from 1.0639 (Shri Lakshmi Cotsyn Ltd.) to 2.1746 (Indo Count Inds. Ltd) and the value of Efficiency Index ranges from 1.2004 (Modipon Ltd.) to 7.6612 (Spentex Industries Ltd.

Table V.6

Working Capital Efficiency Indices for Medium-Size Textile Firms

Sl	Company Name	Performance Index		Utilization Index		Efficiency Index	
		Min	Max	Min	Max	Min	Max
1	Alps Industries Ltd.	0.8877 (2003-04)	13.1130 (2001-02)	0.5017 (2007-08)	1.0684 (2000-01)	0.8849 (2003-04)	12.6844 (2001-02)
2	Ashima Ltd.	0.5908 (2004-05)	2.7592 (2003-04)	0.7071 (2004-05)	1.7969 (2007-08)	0.4178 (2004-05)	3.6379 (2003-04)
3	D C M Ltd.	0.4023 (2006-07)	2.7251 (2005-06)	0.4616 (1999-00)	2.4252 (2005-06)	0.1887 (2006-07)	6.6089 (2005-06)
4	Eastern Silk Inds. Ltd.	1.0197 (2002-03)	4.4783 (2001-02)	0.8307 (2000-01)	1.2429 (2002-03)	1.0016 (2000-01)	5.3320 (2001-02)
5	Eskay K'N'It (India) Ltd.	0.3838 (2003-04)	1.9508 (1999-00)	0.7777 (2005-06)	1.2758 (2007-08)	0.2991 (2003-04)	1.9563 (2007-08)
6	Futura Polyesters Ltd.	0.2896 (1999-00)	6.2783 (2005-06)	0.3343 (1999-00)	2.1685 (2004-05)	0.0968 (1999-00)	6.5939 (2005-06)
7	Himatsingka Seide Ltd.	0.9252 (1999-00)	3.8843 (2002-03)	0.5486 (2007-08)	1.4234 (2001-02)	0.8856 (2007-08)	3.0504 (2002-03)
8	J C T Ltd.	0.3263 (2003-04)	1.5991 (2001-02)	0.3909 (2003-04)	2.4270 (2002-03)	0.1275 (2003-04)	2.1823 (2002-03)
9	K S L Realty & Infrastructure Ltd.	0.2531 (2003-04)	14.6347 (1999-00)	0.2901 (2003-04)	2.8779 (2005-06)	0.0734 (2003-04)	25.2897 (1999-00)
10	Krishna Lifestyle Technologies Ltd.	0.1537 (2003-04)	5.5302 (1999-00)	0.2942 (2003-04)	1.2282 (2007-08)	0.0452 (2003-04)	3.5659 (1999-00)
11	Loyal Textile Mills Ltd.	1.0037 (2000-01)	1.5060 (2006-07)	0.8599 (2000-01)	1.1924 (2006-07)	0.8631 (2000-01)	1.7958 (2006-07)
12	Mafatlal Industries Ltd.	0.3310 (2004-05)	3.3361 (2005-06)	0.4538 (2004-05)	1.3367 (1999-00)	0.1502 (2004-05)	3.3814 (2005-06)
13	N R C Ltd.	0.8884 (2000-01)	1.4250 (2006-07)	0.7814 (2000-01)	1.3710 (2003-04)	0.6941 (2000-01)	1.4344 (2006-07)
14	Nahar Exports Ltd.	0.8419 (2001-02)	3.6494 (2000-01)	0.6843 (2004-05)	1.4057 (2000-01)	0.8683 (2001-02)	5.1299 (2000-01)
15	Parasrampuria Synthetics Ltd.	0.3259 (2002-03)	16.7669 (1999-00)	0.5728 (2005-06)	1.8572 (2004-05)	0.3198 (2003-04)	20.6388 (1999-00)
16	Recron Synthetics Ltd [Merged]	0.7046 (2004-05)	3.8452 (2000-01)	0.7572 (2006-07)	1.7290 (2003-04)	0.5719 (1999-00)	5.6542 (2000-01)
17	Sangam (India) Ltd.	0.6417 (1999-00)	2.0643 (2007-08)	0.7500 (1999-00)	1.1633 (2003-04)	0.4813 (1999-00)	1.9256 (2000-01)
18	Sanghi Polyesters Ltd.	0.6985 (2007-08)	3.5483 (2005-06)	0.9204 (2001-02)	1.4012 (1999-00)	0.6655 (2007-08)	3.9506 (2005-06)
19	Super Spinning Mills Ltd.	1.0482 (1999-00)	2.0447 (2002-03)	0.7126 (2005-06)	1.1989 (2000-01)	0.7845 (2004-05)	2.1824 (2002-03)
20	Uniworth Ltd.	0.4618 (2005-06)	2.0243 (2002-03)	0.1844 (2005-06)	1.5275 (2003-04)	0.0852 (2005-06)	2.1514 (1999-00)
21	Vardhman Polytex Ltd.	0.5898 (2004-05)	4.0516 (2006-07)	0.7473 (2004-05)	1.1975 (2000-01)	0.4407 (2004-05)	4.7854 (2006-07)

Figures in parenthesis are years

The minimum and maximum values of Performance Index calculated for 21 medium sized firms are depicted in table V.6. It reveals that the minimum value of Performance Index ranges from 0.1537 (Krishna Lifestyle Technologies Ltd.) to 1.0482 (Super Spinning Mills Ltd.). Likewise, the Utilisation Index ranges from 0.1844 (Uniworth Ltd) to 0.9204 (Sanghi Polyesters Ltd.) and the Efficiency Index of the same firms ranges from 0.0452 (Krishna Lifestyle Technologies Ltd.) to 1.0016 (Eastern Silk Inds. Ltd)

Similarly, the maximum value of Performance Index ranges from 1.4250 (N R C Ltd.) to 16.7669 (Parasrampuria Synthetics Ltd). The Utilisation Index of the same group of firms varies from 1.1633 (Sangam (India) Ltd.) to 2.8779 (K S L Realty & Infrastructure Ltd.) and the value of Efficiency Index ranges from 1.4344 (N R C Ltd) to 25.2879 (K S L Realty & Infrastructure Ltd.}

Table V.7

Working Capital Efficiency Indices for LARGE Size Textile Firms

Sl	Company Name	Performance Index		Utilization Index		Efficiency Index	
		Min	Max	Min	Max	Min	Max
1	Abhishek Industries Ltd.	0.6708 (2004-05)	4.5533 (2001-02)	0.6780 (2004-05)	1.3874 (2006-07)	0.4548 (2004-05)	4.5484 (2001-02)
2	Alok Industries Ltd.	1.5050 (2002-03)	2.9092 (2005-06)	0.7150 (1999-00)	1.1324 (2002-03)	1.4122 (2004-05)	2.7223 (2005-06)
3	Arvind Mills Ltd.	0.5277 (2003-04)	2.2939 (2002-03)	0.4411 (2003-04)	2.2420 (2004-05)	0.2328 (2003-04)	4.7395 (2004-05)
4	Century Enka Ltd.	0.7905 (2002-03)	5.3876 (2005-06)	0.7782 (2004-05)	1.4865 (1999-00)	0.8741 (2002-03)	5.6089 (2005-06)
5	Forbes Gokak Ltd.	0.9522 (2000-01)	1.5813 (2007-08)	0.6918 (2001-02)	1.2034 (2005-06)	0.8339 (2001-02)	1.7532 (2005-06)
6	Garden Silk Mills Ltd.	0.7220 (2000-01)	1.8489 (1999-00)	0.6818 (2005-06)	1.9895 (1999-00)	0.5467 (2000-01)	3.6784 (1999-00)
7	Indo Rama Synthetics (India) Ltd.	0.6705 (2006-07)	4.4548 (2004-05)	0.6407 (2004-05)	1.6104 (2007-08)	0.9384 (2006-07)	2.8543 (2004-05)
8	J B F Industries Ltd.	0.8729 (2003-04)	5.3724 (2004-05)	0.2607 (2007-08)	1.5870 (2005-06)	0.9354 (2006-07)	6.2411 (2004-05)
9	Nahar Spinning Mills Ltd.	0.8136 (2001-02)	1.8827 (2004-05)	0.7239 (2004-05)	1.3370 (2001-02)	0.7111 (2005-06)	1.7248 (2003-04)
10	Prag Bosimi Synthetics Ltd.	0.1116 (2001-02)	8.3331 (2004-05)	0.1678 (2001-02)	4.7470 (2004-05)	0.0187 (2001-02)	39.5573 (2004-05)
11	R S W M Ltd.	0.8841 (2003-04)	3.4089 (2006-07)	0.8481 (2006-07)	1.1911 (2005-06)	0.9110 (2003-04)	2.8913 (2006-07)
12	Raymond Ltd.	0.6866 (2003-04)	2.2841 (2002-03)	0.6706 (2003-04)	1.1418 (1999-00)	0.4604 (2003-04)	1.5692 (2002-03)
13	S Kumars Nationwide Ltd.	0.5077 (2006-07)	3.2854 (2007-08)	0.5205 (2006-07)	2.2113 (2007-08)	0.2643 (2006-07)	7.2649 (2007-08)
14	S R F Ltd.	0.8475 (2002-03)	1.5311 (2005-06)	0.9134 (2003-04)	1.4943 (2002-03)	0.8125 (2003-04)	1.6451 (2004-05)
15	Vardhman Textiles Ltd.	0.9943 (2002-03)	2.1372 (2006-07)	0.7589 (2007-08)	1.2277 (2006-07)	0.9780 (2002-03)	2.6239 (2006-07)
16	Welspun India Ltd.	0.7976 (1999-00)	4.7978 (2007-08)	0.6844 (2003-04)	1.8075 (1999-00)	0.7560 (2003-04)	5.2545 (2001-02)

Figures in parenthesis are years

The minimum and maximum values of Performance Index calculated for 16 large-sized firms are depicted in table V.7. It reveals that the minimum value of Performance Index ranges from 0.1116 (Prag Bosimi Synthetics Ltd.) to 1.5050 (Alok Industries Ltd.). Likewise, the Utilisation Index ranges from 0.1678 (Prag Bosimi Synthetics Ltd.) to 0.9134 (S.R.F. Ltd.) and the Efficiency Index of the same firms ranges from 0.0187 (Prag Bosimi Synthetics Ltd.) to 1.412 (Alok Industries Ltd.).

Similarly, the maximum value of Performance Index ranges from 1.5311 (S.R.F. Ltd.) to 8.3331 (Prag Bosimi Synthetics Ltd.). The Utilisation Index of the same group of firms varies from 1.1324 (Alok Industries Ltd.) to 4.7470 (Prag Bosimi Synthetics Ltd.) and the value of Effciency Index ranges from 1.562 (Raymond Ltd) to 39.5573 (Prag Bosimi Synthetics Ltd.)

V.3 Level of Improvement in Performance Index to Reach the Targeted Textile Industry Average

For the purpose of evaluating the performance of the textile firms across the three sizes a comparison has been made between the growth in improvement in the Performance Index to reach the target industry average has been adopted from the table V.8 to V.10. (P1, UI, and El). The processed data is presented in table V.8

Table V.8

Regression Results for Performance Index

Si. No.	Textile Industry by Size Classes	Constant	Beta	R^2	F Value
1.	Small-Sized Firms	-0.0338 -(0.73)	1.1196*** (3.68)	0.6933	13.56***
2.	Medium-Sized Firms	-0.0184 -(0.91)	0.9675*** (3.29)	0.6439	10.85**
3.	Large-Sized Firms	-0.0606 -(0.92)	1.0292*** (3.67)	0.6916	1345***
4	All Firms	-0.0174 -(0.48)	0.8953*** (4.41)	0.4689	19.43***

*significant @10% level; **significant @ 5% level; ***significant @1% level;
Figures in parenthesis are t-values

As the Performance Index was constructed by multiplying the sales with Current Assets divided by the number of years, the level of improvement in Performance Index to reach the target of industry average, a regression was run between the number of years and the Performance Index. When the usage of equation was tested with R it was found that in the small firms, it was 0.693 and medium-sized firms 0.644 and large-sized firms it was 0.692, i. e. for all the firms the equation was fitting well (being above 64 per cent). When the accuracy of the equation was tested with F value, for small-sized firms it was significant at 1 per cent level and large-sized firms also it was significant at one per cent level but for the medium-sized firms it was significant at a 5 per cent level. This shows that the tool is capable of measuring the level of the improvement in the PI to reach the target.

The analysis shows that the constant factor Current Assets (CAs) for creating sales was negative for all the three-sized firms. It may be indicative of usage of the excessive Current Assets or permanent part of the Working Capital available in the sample textile firms.

The bata / variable factor (sales / production) as revealed by the Performance Index have been growing on an average at a rate of 1.119 per annum and this is significant at 1 per cent level.

In the same way the speed of improvement in the Performance Index to reach the target level industry average in the medium sized firms is that it is growing on an average at a rate of 0.968. This growth is significant at 5 per cent level.

In the case of large-sized firms the speed of improvement in the Performance Index to reach the target level of industry average was on an average at a rate pf 1.029 per annum.

The coefficient of below one has indicated that all sample textile firms, particularly medium-sized firms need to further improve their efficiency in managing the Working Capital. On the other hand, the degree of efficiency in managing various components of Working Capital is well above average efficiency of all firms under this study.

On the whole, in spite of the positive growth in Performance Index, the level of the same to give match to the industry average was less. This may be because the constant factors are declining, indicating that the permanent part of the Working Capital may be more than the varying part of the Working Capital .

V.4 Level of Improvement in Utilization Index to Reach the Average Textile Industry Level

Table V.9
Regression Results for Utilization Index

Si. No.	Textile Industry by Size Classes	Constant	Beta	R^2	F Value
1.	Small-Sized Firms	-0.0160 -(0.21)	0.7643*** (1.91)	0.3788	3.66
2.	Medium-Sized Firms	-0.0002 -(0.01)	0.8917*** (2.16)	0.4383	4.68*
3.	Large-Sized Firms	-0.0155 -(0.20)	0.7416 *** (1.79)	0.3477	3.20
4	All Firms	-0.0051 -(0.27)	0.0280*** (4.78)	0.4689	19.43***

*significant @10% level; **significant level; ***significant @1% level; Figures in parenthesis are t-values

As the Utilization Index was constructed by dividing the Current Assets by sales i. e. A_t-i/At and for the purpose of measuring the speed of growth in the Utilization Index to reach target level of industry average, a regression is run between the number of the years taken for the study and index worked out by using the above formula.

When the growth in Utilization Index was analyzed with the constant factor also shows that all the three categories of firms are having minus values (-0.016, - 0.000, - 0.016) respectively. But beta value reflecting sales is indicates a growth on an average at the rate of 0.764, 0.892 and 0.742 respectively per annum. The growth in the level of improvement in the UI of the medium-sized firms alone were significant at 10 per cent.

The peculiar feature of decline in constant factor Current Assets (CAs) and increasing sales, may be due to the hidden level of the permanent part of the Working Capital or a conservative policy followed in financing Current Assets.

V.5 Level of Improvement in Efficiency Index to Reach the Target Textile Industry Average

Efficiency index being the product of the Performance Index and Utilization Index (for the purpose of measuring) the overall efficiency in the management of Working Capital of the textile firms across sizes the level of growth in the Efficiency Index was compared with the level in the growth of average sales of the firms have been analyzed by using a regression equation between time and growth Efficiency Index. The processed data is presented in Table V.10

Table V.10

Regression Results for Efficiency Index

Si. No.	Textile Industry by Size Classes	Constant	Beta	R^2	F Value
1.	Small-Sized Firms	-0.0033 -(0.04)	0.8876*** (2.13)	0.4316	4.56*
2.	Medium-Sized Firms	-0.0059 -(0.13)	1.1637** (2.59)	0.5282	6.72**
3.	Large-Sized Firms	-0.0046 -(0.06)	0.6172 (1.40)	0.2450	1.95
4	All Firms	-0.0268 -(0.69)	0.8468*** (4.33)	0.4603	18.76***

*significant @10% level; **significant @ 5% level; ***significant @1% level;
Figures in parenthesis are t-values

The suitability of this regression equation is tested with R. It gave values like 0.432, 0.528 and 0.245, indicating that it was fit only in the case of medium-sized firms (50 per cent). In other cases its expanding capacity is less than 50 (per cent). When it was tested with F Value it was significant at 5 per cent level in case of medium-sized firms and 10 per cent in the case of small-sized firms. When the level in growth is measured with the help of Beta value, it was found that the Efficiency Index was growing an on average at the rate of 0.888 and was significant at 1 per cent level. In case of medium-sized firms the growth was on an average at the rate of 1.164. It was significant at 5 pet cent levels. In the case of growth in the Efficiency Index of large-sized firms, it was 0.617 per annum. When the growth in Efficiency Index was compared, it was found that the growth in Efficiency Index of medium-sized firms alone was greater than the growth in the other firms.

V.5 CONCLUSIONS

Efficiency in utilization of Working Capital can be examined through three different indices, viz., Performance Index (PI), Utilization Index (UI) and Efficiency Index (EI). The efficiency of the firm in utilization of Working Capital in the generation of sales turnover is captured by constructing an overall efficiency index which is the product of sales index and the working capital index.

- The LGR of Performance Index for small-sized firms is significant at 10 per cent level but insignificant for medium and large-sized firms. This shows that there has been a significant improvement in efficiency of small-sized textile firms in managing various components of the Working Capital during the period.

- The LGR values of Utilization Index indicate that the small-sized firms have significantly improved variability in utilizing the Current Assets as a whole for generating sales, whereas it remains constant throughout the study period in respect of medium and large-sized as well as all firms.

- The LGR values of Efficiency Index have evidenced that small firms as well as all sample firms under textile industry have shown significant improvement towards adopting the sound Working Capital Management policy during the study period.

- On the whole, in spite of the positive growth in Performance Index, the level of the same to match the average of all firms was found to be less, because the constant factors are declining, indicating that the permanent part of the Working Capital may be more than the varying part of the Working Capital.

- The growth in the level of improvement in the Utilization Index of the medium-sized firms alone was significant at 10 per cent level.

- When the growth in Efficiency Index was compared, it was found that the growth in Efficiency Index of medium-sized firms alone was greater than the growth in case of small and large-sized firms.

CHAPTER – VI

IMPACT OF DIFFERENT SIZES OF FIRMS AND THEIR WORKING CAPITAL MANAGEMENT EFFICIENCY ON PROFITABILITY:

AN EMPIRICAL ANALYSIS

CHAPTER VI

IMPACT OF DIFFERENT SIZES OF FIRMS AND THEIR WORKING CAPITAL MANAGEMENT EFFICIENCY ON PROFITABILITY: AN EMPIRICAL ANALYSIS

In this chapter, an attempt is made to examine the relationship between the profitability of firm and the size of working capital utilized for different groups of firms. The relationship is established with the help of ordinary least squares regression (OLS) model. With cross-sectional annual data, separate regression equations are worked out for small, medium and large-sized firms.

VI.1 Variables and Models

In order to estimate the impact of the size of working capital on the firm level profitability, the following dependant and independent variables are estimated and used. The dependent variables relate to different measures of profitability. The independent variables relate to different components of working capital and proxies for efficient use of resources.

The dependent variables are

Y_1 – Gross Profit Margin (GPM)

Y_2 – Operating Profit Margin (OPM)

Y_3 – Returns on assets (ROA)

The independent variables are

X_1 – Size of the firm (measured in terms of logarithm scales) - LNSALES

X_2 – the degree of financial leverage measured as a ratio to total debt to total assets (known as the Gearing ratio) - GEAR

X_3 - the degree of active utilization of current assets (measured in terms of

Current Assets to Turnover Ratio) – CATURN

X_4 - the size of Current Assets (measured in terms of proportion of Current Assets to total assets) CA_TA

X_5 - the size of Current Liabilities (measured in terms of proportion of Current Liabilities to total assets) CL_TA

X_6 - the inventory period (measured in terms of number of days of inventory carried by the firm) INVDYS

X_7 - the collection period (measured in terms of the number of days of average receivables) – ARDYS

X_8 - average payment period (measured in terms of accounts payable days)

APDYS

X_9 - Cash Conversion cycle (measured in terms of the length of operating cycle in terms of number of days) C.C.C

Models estimated

Step-wise multiple regression models are estimated for each of the dependent variable. The models are as follows:

GPM = f (LNSALES, GEAR, CATUN, CA_TA, CL_TA, INDYS, AR DYS, AP DYS, CCC

OPM = f (LNSALES, GEAR, CATUN, CA_TA, CL_TA, Inventory days, AR days, AP days, CCC

ROA = f (LNSALES, GEAR, CATUN, CA_TA, CL_TA, Inventory days, AR days, AP days, CCC

Where

GPM = Gross Profit Margin

OPM = Operating Profit Margin

ROA = Return on Assets

LNSALES = Logarithm of Sales

GEAR = Total debt to total assets

CATUN = Current assets turnover

CA_TA = Current assets to total assets

CL_TA = Current liabilities to total assets

INDYS = Inventory days

ARDYS = Accounts Receivables days

APDYS = Accounts Payable days

CCC = Cash Conversion Cycle

VI. 2 Apriori Relationship

The study has tried to establish and explore the following apriorit relationship between dependant profitability variable and different independent working capital variables.

Gross Profit Margin (GPM) is worked out as a ratio of gross profit to sales. It indicates the profitability of the firm after meeting all the direct expenses in the production process. This dependent variable tries to capture the value addition made by the firm during the study period.

Operating Profit Margin (OPM) is estimated as a ratio of operating profit to sales. It captures the profitability of the firm after meeting the direct costs and overheads. This measure is relatively comparable across firms as it does not take the non-operating income and expenses.

Return on Assets (ROA) is the ratio of net profit to total assets used by the firm. This is the proper measure along with Return on Investment (ROI) used to estimate the profitability of a firm.

The independent variable which is likely to have an impact on the profitability of the firm can be classified into two categories. The size of the firm (LNSALES) and debt equity composition (GEAR) are used as control variables as they are likely to have the major effect on the profitability of the firm. The additional role played by

working capital can be captured effectively only when the major role played by the above said variables is aggregated. Therefore the list of independent variables can be classified as control variables and working capital proxies. The expected relationship by both these independent variables is as follows.

The size of the firm (LNSALES) is measured in terms of annual turnover. The logarithm of sales is considered to proxy the size of the firm. As the size of the firm increases, it is generally believed that the profitability of the firm rises. However the increased size of operations result in efficient utilization of all resources including working capital resources. Thus, the sign expected between this independent variable and any dependent variable is 'positive' sign.

Leverage ratio (GEAR) is measured as a ratio between total debts to total assets. Firms used leverage to magnify the profitability with use of cheaper sources of finance. In such a case, the sign expected for this variable is 'positive'. However, the debt acts as a burden to the firm due to fixed interest charges and legal payments from the firms operating profits. In such a case, this variable is likely to exhibit a 'negative' sign.

Current Assets Turnover is the ratio of rotation of total Current Assets in business operations. It indicates the efficiency of the firm in utilization of investments made in Current Assets. Better utilization of Current Assets may likely to increase the profitability via margin released with every cycle made by the Current Assets during a year. The increased number of cycles, is thus found to contribute to the profitability of the firm. Hence this variable is expected to possess a 'positive' sign.

The current assets to total assets gives the size of working capital used by a firm. Efficient utilization of Current Assets is naturally expected to yield better profits. The Current Assets provide the necessary investment made by the firm in financing its operating cycle. The size of Current Assets and the rate of their utilization together influence the profitability of a firm. Therefore, the present study estimates a 'positive' sign for this variable.

The Current Liabilities to total assets indicate the proportion of Current Liabilities used to finance total assets. The Current Liabilities include the use of short term bank loans, over drafts, trade credit in financing working capital requirement of

the firm. As the size of Current Liabilities increases the servicing costs (interest payment etc) also will increase. Therefore, this variable is expected to possess a 'negative' sign.

Inventory days is the ratio which measures the number of days the inventory is held by the firm. The higher the number of days, the longer the inventory is idle. In such a Current Assets, the carrying costs are likely to increase and to that extent the firm's profitability declines. Therefore, this variable is expected to possess a 'negative' sign.

An accounts receivable day is the ratio which measures the number of days credit is given to the customers. The higher credit days given to the customer indicates liberal credit policy. This liberal credit policy facilitates in the increased turnover. Hence the firm's profitability is likely to increase. This variable is expected to give a 'positive' sign.

Account payable days is the ratio which measures the number of days used by short term funds for financing working capital requirements. The delay in repayment of short term obligations is likely to increase the interest burden which consequently affects the profitability. Hence this variable is expected to possess a 'negative' sign.

Cash Conversion Cycle measures the number of days the Current Assets is blocked in the operation cycle. The longer the cash conversion cycle, the larger the funds blocked in working capital. It is likely to affect the profitability. Therefore, it is expected to possess a 'negative' sign.

VI.3 Empirical Results based on Regression Analysis

The empirical result are; (a) impact of working capital on gross profit margin (GPM) (b) impact of working capital on operating margin (OPM) and (c) impact of working capital on Return of Assets (ROA)

Further, the stepwise regression results are presented separately for all firms, small size, medium and large sized firms respectively. The overall observations made are based upon the regression model fitted with all firms with size dummies. The difference if any between small, medium and large are presented separately.

Table VI.1

Regression of Gross Profit Margin (GPM) on Working Capital Variables for ALL Textile Firms

Explanatory Variables	Regression results				
	1	2	3	4	5
Constant	-0.7548***	-0.8168***	0.1516*	-0.5096***	0.5489***
	-(7.80)	-(7.55)	(1.89)	-(5.15)	(8.57)
LNSALES	0.1066***	0.1112***	0.0008	0.0776***	-0.0367***
	(7.27)	(7.37)	(0.07)	(5.32)	-(4.11)
GEAR	-0.0614	-0.0639	-0.1245***	-0.1072*	-0.0532*
	-(1.04)	-(1.09)	-(2.95)	-(1.89)	-(1.66)
CATURN	0.0549***	0.0614***	-0.0164	0.0349**	-0.0512***
	(3.85)	(4.06)	-(1.54)	(2.51)	-(6.17)
CA_TA	0.3356***	0.3173***	0.1837***	0.3366***	0.0963**
	(3.85)	(3.60)	(2.93)	(4.04)	(2.02)
CLTA	-0.0541	-0.0423	0.0526	0.0154	-0.0703
	-(0.63)	-(0.49)	(0.85)	(0.19)	-(1.51)
INVDYS		0.00031 (1.28)			
ARDYS			-0.00051*** -(22.34)		
APDYS				-0.00037*** -(7.06)	
CCC					-0.00098*** -(35.47)
R^2	0.1789	0.1815	0.5799	0.2504	0.7589
Adjusted R^2	0.1711	0.1721	0.5750	0.2418	0.7562
F Value	22.84***	19.33***	120.30***	29.12***	274.40***
DF	5..524	6..523	6..523	6..523	6..523

Source: Compute table

*Significant @10% level; **Significant @5% level; ***Significant @1% level; Figures in parenthesis are t-values

VI.4 Effect of Working Capital of All Firms on GPM

Regression Results

The regression analysis has been extensively used for analyzing the impact of working capital variables on profitability with respect to different sizes of firms. For this purpose, the sample firms are classified into three categories viz., small, medium and large sizes based on their total assets.

With regard to all textile firms, it can be inferred from Table VI.1 that control variables explain just 17.89 per cent of the variation in Gross Profit Margin whereas with inclusion of days in inventory, the explained variation in Gross Profit Margin increased to 18.15 per cent. But the increase in the coefficient of determination, due to change in days in inventory, is not significant as beta coefficient for the above explanatory variable is insignificant (β = 0.00031, t = 1.28, p > 0.10). From the comparison of adjusted R^2 values between the first and the second model, the result is quite apparent. But the scenario is different in respect of the third, fourth and fifth regression models with Accounts Receivable Days, Accounts Payable Days and Cash Conversion Cycle respectively. The coefficient of determination is 0.5799 with Accounts Receivable Days , 0.2504 with Accounts Payable days and 0.7589 with Cash Conversion Cycle.

Moreover, the beta coefficients, -0.00051 (t = -22.34, p < 0.01), -0.00037 (t = -7.06, p < 0.01) and -0.00098 (t = -35.47, p < 0.01) respectively for Accounts Receivable Days, Accounts Payable Days and Cash Conversion Cycle are significant. This shows that the trend in Gross Profit Margin has been significant and positive against decline in days in accounts receivable, days in accounts payable and Cash conversion cycle. Quantitatively, the Gross Profit Margin has increased by 0.51 per cent, 0.37 per cent and 0.98 per cent respectively for one-day decline in collection of receivables, accounts payable and Cash conversion cycle. Hence, it is summed up from the analysis that profitability measured by Gross Profit Margin is significantly and inversely related with working capital proxies, days in accounts receivable, days in accounts payable and cash conversion cycle.

Table VI.2

Regression of Operating Profit Margin (OPM) on Working Capital Variables for ALL Textile Firms

Explanatory Variables	Regression results				
	1	2	3	4	5
Constant	-0.6469***	-0.6492***	0.0909	-0.4085***	0.3604***
	-(8.06)	-(7.22)	(1.34)	-(5.07)	(5.90)
LNSALES	0.0856***	0.0858***	-0.0005	0.0575***	-0.0250***
	(7.05)	(6.84)	-(0.05)	(4.84)	-(2.94)
GEAR	0.0015	0.0014	-0.0498	-0.0430	0.0079
	(0.03)	(0.03)	-(1.40)	-(0.93)	(0.26)
CATURN	0.0444***	0.0447***	-0.0136	0.0250**	-0.0375***
	(3.76)	(3.55)	-(1.51)	(2.21)	-(4.74)
CA_TA	0.3465***	0.3458***	0.2228***	0.3474***	0.1616***
	(4.79)	(4.72)	(4.20)	(5.12)	(3.55)
CLTA	-0.0875	-0.0870	r0.0006	-0.0199	-0.1000**
	-(1.23)	-(1.21)	-(0.01)	-(0.30)	-(2.25)
INVDYS		0.00001 (0.06)			
ARDYS			-0.00041*** -(21.53)		
APDYS				-0.00036*** -(8.43)	
CCC					-0.00076*** -(28.75)
R^2	0.1671	0.1671	0.5584	0.2666	0.6771
Adjusted R^2	0.1591	0.1575	0.5533	0.2582	0.6734
F Value	21.02***	17.48***	110.22***	31.69***	182.82***
DF	5..524	6..523	6..523	6..523	6..523

Source: Computed from All Textile firms statistics

*Significant @10% level; **Significant @5% level; ***Significant @1% level; Figures in parenthesis are t-values.

VI.5 Effect of Working Capital of All Firms on Operating Profit Margin (OPM)

As far as all textile firms are concerned, it is apparent from Table VI.2 that increase in volume of sales, current assets relative to sales and increased portion of current assets in total assets have significant positive impact on Operating Profit Margin according to the first model. Moreover, independent variables in the first model together explain 15.91 per cent of the variation in Operative Profit Margin. It is worth mentioning that the coefficient of determination has come down to 15.75 per cent with inclusion of days in inventory, whose beta coefficient is insignificant with positive sign.

From the negative beta coefficients of Accounts Receivable days (β = -0.00041, t = -21.53, p < 0.01), Accounts Payable Days (β = -0.00036, t = -8.43, p < 0.01) and Cash Conversion Cycle (β = -0.00076, t = -28.75, p < 0.01), which the are significant at 1 per cent level, it is clear that the Operating Profit Margin has gone up significantly with the decline in days in accounts receivable, days in accounts payable and Cash Conversion Cycle . In absolute terms, an increase in Operating Profit Margin is 0.41 per cent, 0.36 per cent and 0.76 per cent, respectively for one-day decline in collection of cash from debtors, payment to creditors and cash conversion cycle. Therefore, it is concluded that Operating Profit Margin is significantly and inversely affected by decline in days in accounts receivable, days in accounts payable and cash conversion cycle of textile firms.

Table VI.3

Regression of Return on Assets (ROA) on Working Capital Variables for ALL Textile Firms

Explanatory Variables	Regression results				
	1	2	3	4	5
Constant	0.0371	0.0462	0.0788*	0.0679*	0.0665
	(0.99)	(1.10)	(1.82)	(1.71)	(1.46)
LNSALES	-0.0085	-0.0092	-0.0134**	-0.0121**	-0.0117*
	-(1.50)	-(1.57)	-(2.16)	-(2.06)	■(1-85)
GEAR	0.0268	0.0271	0.0239	0.0210	0.0269
	(1.18)	(1.19)	(1.05)	(0.92)	(1.18)
CATURN	0.0170***	0.0160***	0.0137**	0.0145**	0.0146**
	(3.08)	(2.74)	(2.38)	(2.58)	(2.47)
CATA	0.1248***	0.1275***	0.1178***	0.1249***	0.1194***
		(3.74)	(3.49)	(3.73)	(3.51)
	(3.71)				
CLTA	-0.1426***	. -0.1443***	-0.1377***	-0.1339***	-0.1430***
	-(4.30)	-(4.32)	-(4.15)	-(4.02)	-(4.31)
INVDYS		-0.00005 - (0.48)			
ARDYS			-0.00002* - (1.91)		
APDYS				-0.00005** - (2.20)	
CCC					-0.00002 - (1.12)
R^2	0.1292	0.1295	0.1352	0.1371	0.1312
Adjusted R^2	0.1208	0.1196	0.1253	0.1272	0.1213
F Value	15.54***	12.97***	13.63***	13.85***	13.17***
DF	5..524	6..523	6..523	6..523	6..523

Source: Computed Table

*Significant @10% level; **Significant @5% level; ***Significant @1% level; Figures in parenthesis are t-values

VI.6 Effect of Working Capital of All Firms on Return on Assets(ROA)

For all textile firms, results of regression analysis for Return on Assets shown in Table VI.3 reveals that it is fit for all five models is highly significant with 1 per cent level and there has been a remarkable improvement in coefficient of determination with inclusion of days in accounts receivable (R^2 = 0.1352; Adjusted R^2 = 0.1253) and days in accounts payable (R^2 = 0.1371; Adjusted R^2 = 0.1272). An observation of the adjusted R^2 value of the first model shows that 12.08 per cent of the variation in Return on Assets is explained by only control variables. The adjusted R^2 value of the second model further shows that the explanatory power of model has declined with inclusion of days in inventory, in turn revealing that Return on Assets is independent of the days in inventory of textile firms.

On the other hand, the explanatory power of the third and fourth models with days in accounts receivable and days in accounts payable is higher than that of the first model. Moreover, the beta coefficient of days in accounts receivable (β = -0.00002, t = -1.91, p < 0.10) in the third model and days in accounts payable (β = -0.00005, t = -2.20, p < 0.05) in the fourth model, which are significant and (-), have clearly revealed that that ROA of all textile firms is significantly influenced by these two working capital variables. So, it is found that there has been a significant negative impact of days in accounts payables and days in account receivable on Return on Assets of all textile firms in India.

On the other hand, the explanatory power of the third and fourth models with days in accounts receivable and days in accounts payable is higher than that of the first model. Moreover, beta coefficient of days in accounts receivable (β = -0.00002, t = -1.91, p < 0.10) in third model and days in accounts payable (β = -0.00005, t = -2.20, p < 0.05) in the fourth model, which are significant negative, have clearly revealed that that Return on Assets of all textile firms is significantly influenced by these two working capital variables. So, it is found that there has been a significant negative impact of days in accounts receivable and days in account receivable on Return on Assets of all textile firms in India.

Table VI.4

Summary of Regression Results of Gross Profit Margin(GPM), Operating Profit Margin(OPM) and Return on Assets (ROA) in Working Capital variables (All Textile Firms in India)

Variables	GPM	OPM	ROA
Control variables			
(a)LASALES(size)	+ve ***	+ve ***	-ve **
(b)GEAR(FL)	-ve *	+ve	+ve
WORKING CAPITAL Variables (proxies)			
(1) CATURN	+ve ***	+ve ***	+ve **
(2) CA_TA	+ve***	+ve ***	+ve ***
(3) CL_TA	-ve	-ve	-ve ***
(4) INVDYS	+ve	+ve	-ve
(5) ARDYS	-ve ***	-ve ***	-ve *
(6) APDYS	-ve***	-ve ***	-ve **
(7) CCC	-ve ***	-ve ***	-ve

Source: Regression results tabulated from Tables 6.1 – 6.3

*Significant @10% level; **Significant @5% level; ***Significant @1% level.

Table VI.5

Regression of Gross Profit Margin(GPM) on Working Capital Variables for SMALL-SIZED Textile Firms

Explanatory Variables	Regression results				
	1	2	3	4	5
Constant	0.3932***	0.0504	0.4565***	0.4210***	0.6505***
	(5.94)	(0.60)	(9.10)	(6.18)	(10.65)
LNSALES	-0.0277***	-0.0063	-0.0339***	-0.0359***	-0.0545***
	-(2.76)	-(0.64)	-(4.47)	-(3.20)	-(6.27)
GEAR	-0.0253	-0.0152	-0.0449*	-0.0220	-0.0437*
	-(0.80)	-(0.53)	-(1.88)	-(0.70)	-(1.69)
CATURN	-0.0187**	0.0140	-0.0319***	-0.0175**	-0.0447***
	-(2.54)	(1.60)	-(5.63)	-(2.38)	-(6.72)
CATA	-0.1678***	-0.1103**	-0.0386	-0.1902***	-0.1054**
	-(3.37)	-(2.38)	-(0.98)	-(3.69)	-(2.56)
CLTA	-0.0773*	-0.0811*	-0.0469	-0.0772*	-0.0471
	-(1.67)	-(1.93)	-(1.34)	-(1.67)	-(1.24)
INVDYS		0.00128***			
		(5.83)			
ARDYS			-0.00065*** -		
			(10.91)		
APDYS				0.00044	
				(1.61)	
CCC					-0.00060*** -
					(8.94)
R^2	0.6044	0.6764	0.7775	0.6110	0.7401
Adjusted R^2	0.5916	0.6637	0.7688	0.5957	0.7299
F Value	47.06***	53.30***	89.10***	40.05***	72.61***
DF	5..154	6..153	6..153	6..153	6..153

Source: Computed table from small-sized textile firms' statistics

*Significant @10% level; **Significant @5% level; ***Significant @1% level;

Figures in parenthesis are t-values

VI.7 Small Sized Firms

Effect of Working Capital of Small Sized Firms on GPM

Table 6.5 presents the results of five regression models for Gross Profit Margin of Small size textile firms. Among the five, the first model was run with only control variables. In the subsequent models, each working capital variable has been added to identify the unique contribution of these variables on GPM. It can be observed from the table that all the five models have fitted highly significant at 1% level. It is also obvious from the adjusted R^2 values that the impact of working capital management efficiency improves the explanatory power of regression models for Gross Profit Margin.

In the first model, from the observation of the adjusted R^2, it is found that 59.16 per cent of the variation in Gross Profit Margin alone is explained by control variables. With inclusion of days in inventory, the explanatory power increases to 66.37 per cent. Similarly, explanatory power of the model for Gross Profit Margin increases to 76.88 per cent with days in accounts receivables, 59.57 per cent with days in accounts payable and 72.99 per cent with cash conversion cycle. Gross Profit Margin is explained more by significant decrease in days in accounts receivable (β = -0.00065, t = -10.91, $p < 0.01$) followed by cash conversion cycle (β = -0.00060, t = -8.94, $p < 0.01$). Next to the above two working capital variables, days in inventory has significant positive influence on Gross Profit Margin (β = 0.00128, t = 5.83, $p < 0.01$). It can be inferred from the beta coefficients that a one day increase in turning inventory into sales has increased the Gross Profit Margin by 1.28 per cent whereas a one-day decline in accounts receivable days and in Cash conversion cycle has increased the Gross Profit Margin by 0.65 per cent and 0.60 per cent respectively. On the whole, it is found from the analysis that days in inventory has significant positive impact while days in accounts receivable and cash conversion cycle have negative significant effect on the Gross Profit Margin of small size textile firms in India.

Table VI.6

Regression of Operative Profit Margin (OPM) on Working Capital Variables for SMALL-SIZED Textile Firms

Explanatory Variables	Regression results				
	1	2	3	4	5
Constant	0.3197***	0.3759**	0.2775**	0.2868**	0.1072
	(2.92)	(2.45)	(2.61)	(2.54)	(0.90)
LNSALES	-0.0418**	-0.0453**	-0.0377**	-0.0322*	-0.0196
	-(2.52)	-(2.53)	-(2.34)	-(1.73)	-(1.16)
GEAR	0.1005*	0.0989*	0.1136**	0.0966*	0.1157**
	(1.92)	(1.88)	(2.24)	(1.85)	(2.30)
CATURN	-0.0219*	-0.0272*	-0.0131	-0.0232*	-0.0004
	-(1.80)	-(1.71)	-(1.09)	-(1.91)	-(0.03)
CATA	0.0527	0.0432	-0.0335	0.0791	0.0011
	(0.64)	(0.51)	-(0.40)	(0.93)	(0.01)
CLTA	-0.2109***	-0.2103***	. -0.2312***	-0.2111***	-0.2359***
	-(2.75)	-(2.74)	-(3.11)	-(2.76)	-(3.20)
INVDYS		-0.00021 - (0.52)			
ARDYS			0.00043*** (3.43)		
APDYS				-0.00052 - (1.15)	
CCC					0.00050*** (3.79)
R^2	0.1845	0.1860	0.2427	0.1914	0.2544
Adjusted R^2	0.1580	0.1540	0.2130	0.1597	0.2252
F Value	6.97***	5.53***	8.17***	6.04***	8.70
DF	5..154	6..153	6..153	6..153	6..153

Source: Computed from small -sized textile firms' statistics

*Significant @10% level; **Significant @5% level; ***Significant @1% level; Figures in parenthesis are t-values

VI.8 Effect of Working Capital of Small Sized Firms on OPM

The impact of working capital management efficiency on OPM is evaluated here. Each working capital variable has been included in the base regression with control variables to ascertain its unique impact on OPM.

Table 6.6 represents the results of five regression models for Operating Profit Margin of small size textile firms. It is inferred that four models are significantly fitted with 1 per cent level. It is also obvious from the adjusted R^2 values that the use of working capital management ratios such as days in accounts receivable and Cash conversion cycle improve the explanatory power of the regression models for Operating Profit Margin.

From the observation of the adjusted R^2 of the first model, it is clear that 18.45 per cent of the variation in Operating Profit Margin is explained by control variables only. From the adjusted R^2 values of the second, third, fourth and fifth models, it is found that the explanatory power increases to 18.60 per cent, 24.27 per cent, 19.14 per cent and 25.44 per cent respectively with inclusion of days in inventory, days in accounts receivables, days in accounts payable and cash conversion cycle.

However, the days in inventory fails to have significant impact on Operating Profit Margin of small-sized textile firms. This is evident from beta coefficients of Inventory Days, which is insignificant with negative sign. The scenario is the same in the case of days in accounts payable also. But from the beta coefficient of days in accounts receivable (β = 0.00043, t = 3.43, $p < 0.01$) in third model, and cash conversion cycle (β = 0.00050, t = 3.79, $p < 0.01$) in the fifth model, which are significant and positive, it is found that the Operating Profit Margin of small size firms is pushed up with increase in days in inventory as well as increase in cash conversion cycle. Overall, it is found that there is positive impact of days in accounts receivable and cash conversion cycle on Operating Profit Margin M of small size textile firms, however, the impact is not significant.

Table VI.7

Regression of (Return on Assets) ROA on Working Capital Variables for SMALL-SIZED Textile Firms

Explanatory Variables	Regression results				
	1	2	3	4	5
Constant	0.0212	0.0772	-0.0017	0.0033	-0.0891
	(0.14)	(0.36)	-(0.01)	(0.02)	-(0.51)
LNSALES	-0.0208	-0.0243	-0.0186	-0.0156	-0.0094
	-(0.89)	-(0.96)	-(0.79)	-(0.59)	-(0.37)
GEAR	0.1853**	0.1837**	0.1924**	0.1832**	0.1932**
	(2.50)	(2.47)	(2.59)	(2.46)	(2.61)
CATURN	0.0083	0.0030	0.0131	0.0076	0.0194
	(0.48)	(0.13)	(0.74)	(0.44)	(1.02)
CATA	0.2481**	0.2387**	0.2014	0.2624**	0.2213*
	(2.12)	(1.99)	(1.65)	(2.16)	(1.87)
CLTA	-0.3768***	-0.3761***	-0.3877***	-0.3769***	-0.3897***
	-(3.47)	-(3.45)	-(3.56)	-(3.46)	-(3.58)
INVDYS		-0.00021 -(0.37)			
ARDYS			0.00023 (1.27)		
APDYS				-0.00028 -(0.44)	
CCC					0.00026 (1.33)
R^2	0.1658	0.1666	0.1745	0.1749	0.1754
Adjusted R^2	0.1388	0.1339	0.1421	0.1427	0.1431
F Value	6.12***	5.10***	5 39***	5.40***	5.42***
DF	5..154	6..153	6..153	6..153	6..153

Source: Computed table from small-sized textile firms' statistics

*Significant @10% level; **Significant @5% level; ***Significant @1% level; Figures in parenthesis are t-values

VI.9 Effect of Working Capital Management of Small Size Firms on Return on Assets (ROA)

The effect of days in inventory, days in accounts receivable, days in accounts payable and cash conversion cycle on return on assets (ROA) is ascertained using multiple regression technique. The results of the analysis are presented in Table 6.7.

An observation of Table 6.7 shows that the fittest of all the five models are highly significant with 1 per cent level with coefficient of determination (R^2 values) varying between 0.1658 and 0.1754. It shows that the Return on Assets is negatively influenced by aggressive financing policy (β = -0.3768, t = -3.47, p < 0.01) and positively by increase in debt fund relative to total assets (Gearing ratio) (β = 0.1853, t = 2.50, p < 0.05) of small size textile firms. An increase in the share of current assets in total assets (β = 0.2484, t = 2.12, p < 0.05) has also significant direct impact on ROA. Though, the explanatory power of regression models from two to five is significant, the beta coefficient of working capital variable in each model is not statistically significant. Hence, it is found that there is no impact of working capital on ROA of small-sized textile firms.

Table VI.8

Summary of Regression Results of Gross Profit Margin(GPM), Operating Profit Margin(OPM) and Return on Assets (ROA) in Working Capital variables (Small-Sized Textile Firms in India)

Variables	GPM	OPM	ROA
Control variables			
(a)LASALES(size)	-ve ***	-ve **	-ve
(b)GEAR(FL)	-ve *	+ve **	+ve **
WORKING CAPITAL Variables (proxies)			
(1)CATURN	-ve **	-ve *	+ve
(2)CA_TA	-ve ***	+ve	+ve **
(3)CL_TA	-ve *	-ve ***	-ve ***
(4)INVDYS	+ve ***	-ve	-ve
(5)ARDYS	-ve ***	+ve ***	+ve
(6)APDYS	+ve	-ve	-ve
(7)CCC	-ve ***	+ve ***	+ve

Source: Regression Results tables from 6.5 to 6.7

*Significant @10% level; **Significant @5% level; ***Significant @1% level;

Table VI.9

Regression of Gross Profit Margin (GPM) on Working Capital Variables for MEDIUM-SIZED Textile Firms

Explanatory Variables	Regression results				
	1	2	3	4	5
Constant	0.5091***	0.5979***	0.5410***	0.5283***	0.6423***
	(5.92)	(5.93)	(6.05)	(6.00)	(6.25)
LNSALES	-0.0501***	-0.0587***	-0.0572***	-0.0549***	-0.0680***
	-(3.56)	-(3.93)	-(3.79)	-(3.70)	-(4.27)
GEAR	-0.1755***	-0.1922***	-0.1657***	-0.1673***	-0.1826***
	-(3.69)	-(3.97)	-(3.44)	-(3.46)	-(3.87)
CATURN	0.0020	-0.0039	0.0002	0.0010	-0.0067
	(0.17)	-(0.31)	(0.02)	(0.08)	-(0.54)
CATA	-0.0983	-0.0960	-0.0803	-0.0854	-0.0721
	-(1.61)	-(1.58)	-(1.28)	-(1.37)	-(1.17)
CLTA	-0.1801***	-0.1918***	-0.1681***	-0.1699***	-0.1822***
	-(3.61)	-(3.82)	-(3.31)	-(3.34)	-(3.69)
INVDYS		-0.00021* -			
		(1.67)			
ARDYS			-0.00003		
			-(1.29)		
APDYS				-0.00003	
				-(1.02)	
CCC					-0.00016**
					-(2.31)
R^2	0.2773	0.2871	0.2832	0.2810	0.2959
Adjusted R^2	0.2596	0.2661	0.2620	0.2898	0.2750
F Value	15.66***	13.63***	13.37***	13.22***	14.22***
DF	5..204	6..203	6..203	6..203	6..203

Source: Computed table from medium sized firms' statistics

*Significant @10% level; **Significant @5% level; ***Significant @1% level; Figures in parenthesis are t-values.

VI.10 Medium-Sized Firms:

Effect of Working Capital of Medium-Sized Firms on GPM

It can be seen from Table 6.9, the fittest of the all five models for Gross Profit Margin of medium size textile firms are significant at 1 per cent level. From the adjusted R^2 values, it is found that 27.73 per cent of the variation in Gross Profit Margin is explained by volume of sales and the extent of aggressive financing policy (control variables). The explained variance in Gross Profit Margin is 28.71 per cent, 28.32 per cent, 28.10 per cent and 29.59 per cent with the inclusion of days in inventory (Model 2 - Adjusted R^2 = 0.2661), days in accounts receivable (Model 3 - Adjusted R^2 = 0.2620), days in accounts payable (Model 4 - Adjusted R^2 = 0.2898) and cash conversion cycle (Model 5 - Adjusted R^2 = 0.2750) respectively. Difference in the explained variance in Gross Profit Margin due to accounts payable is higher than that of the other working capital variables.

However, the observation of beta coefficients of days in accounts receivable and days in accounts payable, shows that they are negative but insignificant. It is clear that the change in coefficient of determination is due to the fact that the above two working capital variables are not statistically significant. On the other hand, gross profit margin of medium-sized textile companies has increased by 0.21 per cent with one-day decline in turning inventory into sales (β = -0.00021, t = -1.67, $p < 0.10$) and 0.16 per cent relative to decline of a day in cash conversion cycle (β = -0.00016, t = -2.31, $p < 0.05$) significantly. Hence, it is concluded that the profitability of medium-sized textile firms in terms of Gross profit margin is not influenced by the Working Capital Management variables.

Table VI.10

Regression of Operating Profit Margin (OPM) on Working Capital Variables for MEDIUM-SIZED Textile firms

Explanatory Variables	Regression results				
	1	2	3	4	5
Constant	0.4217***	0.5126***	0.4891***	0.4707***	0.5750***
	(4.51)	(4.67)	(5.09)	(4.98)	(5.15)
LNSALES	-0.0353**	-0.0441***	-0.0503***	-0.0476***	-0.0559***
	-(2.31)	-(2.72)	-(3.10)	-(2.99)	-(3.23)
GEAR	=0.1855***	-0.2026***	-0.1648***	-0.1644***	-0.1936***
	-(3.58)	-(3.84)	-(3.19)	-(3.17)	-(3.78)
CATURN	-0.0010	-0.0071	-0.0049	-0.0036	-0.0111
	-(0.08)	-(0.52)	-(0.37)	-(0.28)	-(0.82)
CATA	-0.0686	-0.0663	-0.0307	-0.0359	-0.0385
	-(1.03)	-(1.00)	-(0.46)	-(0.54)	-(0.58)
CLTA	-0.1601***	-0.1720***	-0.1346**	-0.1340**	-0.1625***
	-(2.95)	-(3.15)	-(2.47)	-(2.45)	-(3.03)
INVDYS		-0.00022 -(1.57)			
ARDYS			-0.00006** -(2.54)		
APDYS				-0.00007** -(2.43)	
CCC					-0.00019** -(2.45)
R^2	0.2211	0.2304	0.2450	0.2430	0.2435
Adjusted R^2	0.2020	0.2077	0.2227	0.2207	0.2211
F Value	11.58***	10.13***	10.98***	10.86***	10.89***
DF	5..204	6..203	6..203	6..203	6..203

Source: Computed table from medium-sized textile firms statistics

*Significant @10% level; **Significant @5% level; ***Significant @1% level; Figures in parenthesis are t-values

VI.11 Effect of Working Capital of Medium-Sized Firms on OPM

Perusal of Table 6.10 shows that all the five models fit significantly for operating profit margin of medium size textile firms, but there is much variation in explained variance across models. It is observed that the volume of sales and aggressive financing policy of medium-sized textile firms determines 22.11 per cent of the variation in operating profit margin. At the same time, there is an increase in explanatory power of the second, third, fourth and fifth model respectively with inventory days, days in accounts receivable, days in accounts payable and cash conversion cycle.

However, beta coefficient of days in inventory is insignificant, in turn indicating that increase in explanatory power of the second model has not been significant under the study. The, beta coefficients of days in accounts receivable (β = -0.00006, t = -2.54, $p < 0.05$), days in accounts payable (β = -0.00007, t = -2.43, $p < 0.05$) and cash conversions cycle (β = -0.00019, t = -2.45, $p < 0.05$) are significant with (-) sign. From the beta coefficients as well as from the comparison of adjusted R^2 values, it is inferred that the explained variance in operating profit margin is 2.54 per cent with days in account receivable, 2.43 per cent with days in accounts payable and 2.45 per cent with cash conversion cycle. Therefore, it is concluded that profitability measured as operating profit margin significantly increases with the decline in number of days taken for cash conversions cycle in the case of medium-sized textile firms.

Table VI.11

Regression of Return on Assets (ROA) on Working Capital Variables for MEDIUM-SIZED Textile Firms

Explanatory Variables	Regression Equation				
	1	2	3	4	5
Constant	0.2336***	0.2807***	0.2726***	0.2576***	0.3547***
	(4.80)	(4.91)	(5.47)	(5.22)	(6.23)
LNSALES	-0.0287***	-0.0333***	-0.0375***	-0.0348***	-0.0450***
	-(3.61)	-(3.94)	-(4.45)	-(4.18)	-(5.10)
GEAR	-0.0989***	-0.1078***	-0.0869***	=0.0886***	-0.1054***
	-(3.67)	-(3.93)	-(3.24)	-(3.27)	-(4.03)
CATURN	0.0175**	0.0144**	0.0153**	0.0162**	0.0095
	(2.56)	(2.03)	(2.26)	(2.39)	(1.38)
CA TA	0.0336	0.0348	0.0556	0.0497	0.0575*
	(0.97)	(1.01)	(1.60)	(1.42)	(1.69)
CLTA	-0.0836***	-0.0898***	-0.0688**	-0.0708**	-0.0855***
	-(2.96)	-(3.16)	-(2.43)	-(2.48)	-(3.12)
INVDYS		-0.00011 -(1.56)			
ARDYS			-0.00004*** -(2.83)		
APDYS				-0.00003** -(2.28)	
CCC					-0.00015*** -(3.80)
R^2	0.2719	0.2805	0.2996	0.2901	0.3201
Adjusted R^2	0.2540	0.2893	0.2789	0.2691	0.3001
F Value	15.23***	13.19***	1447***	13.83***	15.93***
DF	5..204	6..203	6..203	6..203	6..203

Source: Computed from all medium-sized firms' statistics

*Significant @10% level; **Significant @5% level; ***Significant @1% level; Figures in parenthesis are t-values

VI.12 Effect of Working Capital of Medium-Sized Firms on ROA

Table 6.11 shows that all the five models fit significantly for Return on Assets of medium-sized textile firms. The percentages of variation determined in Return on Assets by the independent set of the first, second, third, fourth and fifth models respectively are, 27.19 per cent, 28.05 per cent, 29.96 per cent, 29.01 per cent and 32.01 per cent. Between the first and second model, there is no much difference in the explained variance. Moreover, the beta coefficient of working capital proxy, days in inventory is insignificant. This, in turn, reveals that the Return on Assets is unaffected by the change in inventory cycle.

However, the beta coefficients of days in accounts receivable (β = -0.00004, t = -2.83, $p < 0.01$), days in accounts payable (β = -0.00003, t = -2.28, $p < 0.05$) and cash conversions cycle (β = -0.00015, t = -3.80, $p < 0.01$) are negative and significant at the required hypothetical level. From the significant beta coefficients as well as from the comparison of adjusted R^2 values, it is found that the explained variation in Return on Assets due to days in account receivable, days in accounts payable and cash conversion cycle is remarkable. So, on the whole, from the above results, it is concluded that there has been a significant inverse relationship between ROA and working capital of medium-sized textile firms.

Table VI.12

Summary of Regression Results of Gross Profit Margin(GPM), Operating Profit Margin(OPM) and Return on Assets (ROA) in Working Capital variables (Medium-Sized Textile Firms in India)

Variables	GPM	OPM	ROA
Control variables			
(a)LASALES(size)	-ve ***	-ve ***	-ve ***
(b)GEAR(FL)	-ve ***	-ve ***	-ve ***
WORKING CAPITAL Variables (Proxies)			
(1)CATURN	+ve	-ve	+ve **
(2)CA_TA	-ve	-ve	+ve *
(3)CL_TA	-ve ***	-ve ***	-ve ***
(4)INVDYS	-ve *	-ve	-ve
(5)ARDYS	-ve	-ve **	-ve ***
(6)APDYS	-ve	-ve **	-ve **
(7)CCC	-ve **	-ve **	-ve ***

Source: Regression Results tables from 6.9 to 6.11

*Significant @10% level; **Significant @5% level; ***Significant @1% level;

Table VI.13

Regression of Gross Profit Margin (GPM) on Working Capital Variables for LARGE-SIZED Textile Firms

Explanatory Variables	Regression results				
	1	2	3	4	5
Constant	-1.8646***	-1.7066***	0.3688***	0.1021	0.3799***
	-(6.73)	-(6.06)	(2.62)	(0.54)	(2.74)
LNSALES	0.2710***	0.2603***	-0.0126	0.0003	-0.0012
	(7.27)	(7.02)	-(0.68)	(0.01)	-(0.06)
GEAR	-0.1782	-0.0097	0.0110	0.2076	0.0114
	-(0.71)	-(0.04)	(0.11)	(1.47)	(0.11)
CATURN	0.0329	0.0006	-0.0484***	-0.0360	-0.0640***
	(0.84)	(0.01)	-(2.92)	-(1.62)	-(3.91)
C A T A	0.3223	0.5302*	-0.0267	0.2626*	0.0014
	(1.14)	(1.81)	-(0.23)	(1.66)	(0.01)
C L T A	1.1822**.	1.1471**	0.3086	0.5462*	0.26.80
	(2.38)	(2.34)	(1.48)	(1.95)	(1.31)
INVDYS		-0.00200**			
		-(2.29)			
ARDYS			-0.00081*** -		
			(27.27)		
APDYS				-0.00280***	
				-(18.43)	
CCC					-0.00106***
					-(27.88)
R^2	0.4129	0.4324	0.8998	0.8176	0.9034
Adjusted R^2	0.3938	0.4101	0.8959	0.8105	0.8996
F Value	21.66***	19.42***	229.09***	114.31***	238.53***
DF	5..154	6..153	6..153	6..153	6..153

Source: Computed table from all large-sized textiles firms' statistics

*Significant @10% level; **Significant @5% level; ***Significant @1% level;

Figures in parenthesis are t-values

VI.13 Large-Sized Firms

Effect of Working Capital of Large-Sized textile Firms on GPM

Regarding large size textile firms, observation of Table 6.13 shows that increase in volume of sales as well as aggressive financial policy has increased the Gross Profit Margin according to first model, which fits significantly at 1 per cent level with R^2 and adjusted R^2 values of 0.4129 and 0.3938 respectively. From the second, third, fourth and fifth models, which are also fitted highly significantly, it is clear that 43.24 per cent, 89.98 per cent, 81.76 per cent and 90.34 per cent of the variation in Gross Profit Margin is determined by an independent set with inclusion of days in inventory, days in accounts receivable, days in accounts payable and cash conversion cycle respectively. Therefore, it is worthwhile to note that more than 40 per cent of variation in Gross Profit Margin is determined by Accounts Receivable Days, Accounts Payable Days and Cash Conversion cycle alone.

Further, the beta coefficients of Inventory Days (β = -0.00200, t = -2.29, $p < 0.05$), ARDYS (β = -0.00081, t = -27.27, $p < 0.01$), APDYS (β = -0.00280, t = -18.43, $p < 0.01$) and Cash Conversion Cycle (β = -0.00106, t = -27.88, $p < 0.01$) are significant with a negative sign, revealing an increase in Gross Profit Margin of large size textile firms corresponding to a decrease in various working capital variables. More elaborately, it is inferred that the Gross Profit Margin gets increased by 2.0 per cent, 0.81 per cent, 2.80 per cent and 1.06 per cent with a one unit decrease in days in inventory, days in accounts receivable, days in accounts payable and the cash conversion cycle respectively in the case of large textile firms in India. Therefore, it is found that though the R^2 value is not significant, the impact of Working Capital Management on Gross Profit Margin of large-sized textile firms is significant with respect to Inventory days, Accounts Receivable Days ,and Accounts Payable Days and Cash Conversion Cycle.

Table VI.14

Regression of Operating Profit Margin (OPM) on Working Capital Variables for LARGE-SIZED Textile Firms

Explanatory Variables	Regression results				
	1	2	3	4	5
Constant	-1.4486***	-1.2524***	0.3237***	0.1998**	0.3225***
	-(6.92)	-(6.06)	(4.25)	(2.00)	(4.15)
LNSALES	0.2243***	0.2109***	-0.0008	-0.0026	0.0095
	(7.95)	(7.75)	-(0.08)	-(0.19)	(0.94)
GEAR	-0.1946	0.0148	-0.0444	0.1288*	-0.0450
	-(1.03)	(0.08)	-(0.79)	(1.72)	-(0.79)
CATURN	0.0220	-0.0182	-0.0426***	-0.0358***	-0.0545***
	(0.74)	-(0.60)	-(4.75)	-(3.02)	-(5.92)
CATA	0.2190	0.4774**	-0.0579	0.1690**	-0.0342
	(1.02)	(2.22)	-(0.91)	(2.01)	-(0.53)
CLTA	0.7021*	0.6584*	0.0088	0.1689	-0.0194
	(1.87)	(1.83)	(0.08)	(1.14)	-(0.17)
INVDYS		-0.00248*** -(3.88)			
ARDYS			-0.00065*** -(40.03)		
APDYS				-0.00235*** -(29.04)	
CCC					-0.00084*** -(39.15)
R^2	0.4508	0.5001	0.9521	0.9157	0.9502
Adjusted R^2	0.4330	0.4805	0.9502	0.9124	0.9482
F Value	25.29***	25.51***	507.22***	276.95***	486.22***
DF	5..154	6..153	6..153	6..153	6..153

Source: Computed table from all large-sized textiles firms' statistics

*Significant @10% level; **Significant @5% level; ***Significant @1% level; Figures in parenthesis are t-values

VI.14 Effect of Working Capital of Large-Sized Firms on OPM

Table 6.14 shows that increase in volume of sales (β = 0.2243, t = 7.95, p < 0.01) with more aggressive financial policy (β = 0.7021, t = 1.87, p < 0.10) has increased the Operating Profit Margin of large-sized textile firms. The inference is based on the first model in which 43.30 per cent of the variation in the Operating Profit Margin is explained by the independent set (adjusting for degree of freedom).

According to the second, third, fourth and fifth models, which are also fitted significantly at higher level, the variation in Operating Profit Margin increases by 4.75 per cent, 51.72 per cent, 47.94 per cent and 51.51 per cent due to the significant decline in days in turning inventory into sales (β = -0.00248, t = -3.88, p < 0.01), days in accounts receivable (β = -0.00065, t = -40.03, p < 0.01), days in accounts payable (β = -0.00235, t = -29.04, p < 0.01) and cash conversion cycle (β = -0.00084, t = -39.15, p < 0.01). So, it is found from the results that profitability in terms of Operating Profit Margin is significantly and inversely affected by the decline in days in accounts receivable, days in accounts payable and Current Assets conversion cycle in the cash of large-sized textile firms.

Table VI.15

Egression of Return on Assets (ROA) on Working Capital Variables for LARGE-SIZED Textile Companies

Explanatory Variables	Regression results				
	1	2	3	4	5
Constant	-0.0053	0.0163	-0.0007	0.0171	-0.0008
	-(0.18)	(0.56)	-(0.02)	(0.49)	-(0.02)
LNSALES	0.0048	0.0034	0.0042	0.0017	0.0043
	(1.25)	(0.88)	(0.90)	(0.37)	(0.93)
GEAR	-0.0298	-0.0067	-0.0294	-0.0254	-0.0294
	-(1.15)	-(0.25)	-(1.13)	-(0.97)	-(1.13)
CATURN	0.0134***	0.0089**	0.0132***	0.0126***	0.0132***
	(3.27)	(2.11)	(3.16)	(3.04)	(3.14)
CATA	0.0954***	0.1239***	0.0947***	0.0947***	0.0948***
	(3.24)	(4.11)	(3.19)	(3.22)	(3.20)
CLTA	0.0014	-0.0034	-0.0004	-0.0058	-0.0004
	(0.03)	-(0.07)	-(0.01)	-(0.11)	-(0.01)
INVDYS		-0.00027*** -(3.06)			
ARDYS			0.00000 -(0.22)		
APDYS				-0.00003 -(1.13)	
CCC					0.00000 -(0.22)
R^2	0.2320	0.2763	0.2323	0.2384	0.2323
Adjusted R^2	0.2071	0.2480	0.2022	0.2085	0.2022
F Value	9.31***	9.74***	7.72***	7.98***	7***
DF	5..154	6..153	6..153	6..153	6..153

Source: Computed from all large-sized firms' statistics

*Significant @10% level; **Significant @5% level; ***Significant @1% level; Figures in parenthesis are t-values

VI.15 Effect of Working Capital of Large-Sized Firms on ROA

It can be inferred from Table 6.15 that the increase in current assets relative to total assets (β = 0.0954, t = 3.24, p < 0.01) and increase in the use of currents assets for generating sales (β = 0.0134, t = 3.27, p < 0.01) has increased the Return on Assets of large-sized textile firms according to the first model with 20.71 per cent of the variation in Return on Assets explained by the independent set (adjusting for degree of freedom).

However, from the observation of both R^2 and adjusted R^2 values of the remaining four models, it is found that only the explanatory power of first model with days in inventory in addition to control variables has increased. That is, inclusion of a day in account receivable, days in accounts payable and cash conversion cycle fails to improve the explanatory power of overall model. Moreover, beta coefficient is significant only for Inventory days with a negative sign. Particularly, the beta coefficient of Cash Conversion Cycle is almost zero. Therefore, it is found that the working capital variable does not have much impact on the Return on Assets of large-sized textile firms.

Table VI.16

Summary of Regression Results of of Gross Profit Margin(GPM), Operating Profit Margin(OPM) and Return on Assets (ROA) in Working Capital variables (Large-Sized Textile Firms in India)

Variables	GPM	OPM	ROA
Control variables			
(a)LASALES(size)	+ve ***	+ve ***	+ve
(b)GEAR(FL)	+ve	-ve	-ve
WORKING CAPITAL Variables (Proxies)			
(1)CATURN	-ve ***	-ve ***	+ve ***
(2)CA_TA	+ve *	+ve **	+ve ***
(3)CL_TA	+ve **	+ve *	-ve
(4)INVDYS	-ve **	-ve ***	-ve ***
(5)ARDYS	-ve ***	-ve ***	+ve
(6)APDYS	-ve ***	-ve ***	-ve
(7)CCC	-ve ***	-ve ***	+ve

Source: Regression Results tables from 6.13 to 6.15

*Significant @10% level; **Significant @5% level; ***Significant @1% level;

VI.16 Conclusions

The empirical results are; (a) impact of working capital on gross profit margin (GPM) (b) impact of working capital on operating margin (OPM) and (c) impact of working capital on return on assets (ROA)

ALL FIRMS

With regard to all textile firms, the trend in Gross Profit Margin has been significant and positive against decline in days in accounts receivable, days in accounts payable and cash conversion cycle. It is summed up from the analysis that the profitability measured by Gross Profit Margin is significantly and inversely related with working capital proxies, days in accounts receivable, days in accounts payable and cash conversion cycle.

An increase in Operating Profit Margin is 0.41 per cent, 0.36 per cent and 0.76 per cent respectively for one-day decline in collection of cash from debtors. Payment to creditors and cash conversion cycle indicated that Operating Profit Margin is significantly and inversely affected by decline in days in accounts receivable, days in accounts payable and cash conversion cycle of textile firms.

It is found that there has been a significant negative impact of days in accounts payables and days in account receivable on the Return on Assets of all textile firms in India.

SMALL-SIZED FIRMS

From the regression models for Gross Profit Margin of Small-sized textile firms it is found that the days in inventory has a significant positive impact while days in accounts receivable and Current Assets conversion cycle have a negative significant effect on Gross Profit Margin

Though the overall results indicated that there is a positive impact of days in accounts receivable and cash conversion cycle on the Operating Profit Margin of small-sized textile firms, the impact is not significant.

It is found from the analysis that there is no impact of working capital on Return on Assets of small-sized textile firms.

MEDIUM SIZED FIRMS

The analysis showed that profitability of medium-sized textile firms in terms of Gross profit margin is not influenced by the Working Capital Management variables.

The analysis reveals that profitability measured as operating profit margin significantly increases with the decline in number of days taken for cash conversions cycle in the case of medium-sized textile firms.

On the whole, it is concluded from the results, that there has been a significant inverse relationship between Return on Assets and working capital of medium sized textile firms.

LARGE-SIZED FIRMS

Though it is found that the R^2 value is not significant, the impact of Working Capital Management on Gross Profit Margin of large-sized textile firms is significant in respect of Inventory days, Accounts Receivable Days and Accounts Payable Days and Cash Conversion Cycle.

The results also show that profitability in terms of Operating Profit Margin is significantly and inversely affected by the decline in days in accounts receivable, days in accounts payable and cash conversion cycle in the case of large-sized textile firms.

It is ascertained from the analysis that the working capital variable does not have much impact on Return on Assets of large-sized textile firms.

CHAPTER – VII

SUMMARY AND CONCLUSION

CHAPTER VII
SUMMARY AND CONCLUSION

This chapter presents the summary and conclusions of the present study. It gives an account of the significance of Working Capital Management in Cotton Textile industry in India. The rationale of the current study, objectives, hypothesis, research methodology and brief review of earlier studies are described. The major determinants of performance of working capital and its impact on profitability across different sizes of textile firms in India are evaluated.

VII.1 Significance of Working Capital Management:

The Working Capital (WC) is regarded as the life-blood of any business as it plays a pivotal role in moving the wheels of operations. Fore Casting, procurement and optimum utilization of funds are considered as key activities for success or failure of a Firm. The significance and relevance of these activities is seriously felt by Indian entrepreneurs, of late, due to the emerging competitive environment since the economic liberalizations. As there is no readymade single solution for the management of working capital in a firm, responsibility of fund management has drawn greater attention for smooth functioning of an enterprise. Therefore, the present study is intended to examine whether there exists any relationship between efficient management of working capital funds and firm level profitability in select Cotton Textile units in India.

Efficient management of working capital is essential in maintaining liquidity, solvency and profitability of a business organization, irrespective of its size and nature of operations. The management of working capital draws the close attention of finance managers as it involves frequent and dynamic decision-making to determine “the size of” current assets required for uninterrupted flow of activities of a business.

Sufficient doses of working capital is required to facilitate the procurement of inputs, to hire manpower, create value addition through transformation of inputs into output, carrying inputs and outputs for a better market time. Further, a series of market facilitating infrastructure such as warehouse, cold storage, transport, packaging and extension of credit time to customers are to be financed before the product realizes the investment made in it.

While the length of operating cycle, availability of credit lines, lead-time in supply chain, market compulsions for extension of customer credit determine the quantum of working capital required for financing each operating cycle. An estimation and provision of such funds draws greater significance.

VII.2 Review of earlier studies:

A quick review of studies on the subject of management of WORKING CAPITAL shows that optimum levels of inventory, control over receivables are found to influence the profitability (Sinha, Sinha and Singh, 1987; Jain, 1993; Pradeep Singh, 2008). A few others report the role of working capital on size of liquidity and profitability of a firm. (Sharma, 1988; Siddarth and Das, 1994; Prasad, 2001; Deloof, 2003).

Specific studies conducted by different researchers, however, showed the relationship between management of Working Capital and firm level profitability across different industries. For example Barida (2004) on steel industry, Chander, Subash and Rajan Kumar (2004) on small textile firms, Santanu Kr. Gosh and Santi Gopal Maji (2004) on cement, Chundawat and Bhnwat (2000) on IDBI, Johinder Singh Dulta (2000) on horticulture industry, Siddarth (1994) on pharmaceuticals, and Singh on Luping Laboratories conducted their studies.

Although all the above studies tried to explore the relationship between the size of working capital and its impact on profitability, no serious attempt was made by them to workout on the degree of efficient utilization of different components of working capital. No study tried to estimate any index of Performance in utilization of funds. No logical statistical relationships have been estimated to establish the clear role played by the different components of Working Capital on profitability.

Therefore, the present study has addressed on issues not only relating to textile firms subsequent to liberalization measures, but also tried to establish the degree of efficiency exhibited by finance managers on the use of different components of Working Capital. Further, with a clear logical relationships an attempt has been made to link Working Capital on profitability across different categories of firms.

VII.3 objectives of the study

The primary objective of the study is to evaluate the impact of efficient utilization of working capital on profitability in select Textile units in India. Specifically, the study intends

- to evaluate the size of working capital utilized by sample units in correspondence to the level of operations, turnover and total capital employed;
- to explore relative proportions of different components of current assets, viz., cash, receivables and inventories maintained by the sample units;
- to construct an overall performance Index to measure the degree of efficient utilization of short term resources by the sample units; and
- to identify the role of working capital on firm level profitability across various sizes of sample units.

VII.4 Hypothesis

Against the above stated objectives of the study, the following Hypothesis is intended to test:

H1: As the firm size increases, the size of Working Capital required to meet the increased level of operations proportionately increases.

H2: A relative proportion of different components of Working Capital (Cash, receivables and inventory) is likely to be constant irrespective of size of a firm.

H3: The overall index constructed to check the efficiency in utilization of short-term resources is likely to be the same for all firms.

H4: The profitability of a firm may not always dependent either on size or on efficient utilization of Working Capital .

VII.5 Methodology and Sample

In order to test the above stated hypothesis and to address primary and secondary objectives of the study, the present study has chosen a cross section of cotton textile firms in India. The Indian Textile Industry has a long history of stability and growth. The demographic characteristics of the Indian sub-continent, export demand for India's cotton fabric has made the textile industry ever rich and solvent with a sizable hinterland for cotton cultivation. The textile industry facilitated large number of small, medium and large enterprises to co-exist. Competition from man-made fabrics, inefficient internal management and lowering margins has made this glorious industry to exhibit the partial sickness present in it, as well. These characteristics of textile industries have been drawing the attention of researchers and policy makers to document and facilitate ways and means for the better management practices and the survival of this industry.

While concentrating on the organized sector of textile manufacturing industry, the present study has drawn a sample of 53 firms, whose securities are regularly traded in Indian stock markets. Further ready availability of the financial information at least for the past 10 years (without any changes in accounting and other practices), also contributed to the final selection of sample.

These firms are classified into three major categories of small, medium and large based on their asset size. The number of sample units selected for the purpose of study are 16, 21 and 16 respectively.

VII.6 Period of study and source of Data

The present study draws the sample from the list of textile firms whose securities are regularly traded. They are mostly in the organized sector. The financial information required for the present study is drawn from the secondary source. 'Prowess', corporate database developed by CMIE (Centre for Monitoring Indian Economy) has been used as a principle source. The period of the study is 10 years starting from 1997-98 to 2007-08.

VII.7 Data Analysis

In order to analyze the efficiency of Working Capital in the select textile units different statistical techniques are used. These include descriptive statistics and different measures of variance. The linear trend in growth of Working Capital is computed by compound growth rate; And simple regression, multiple regression techniques are used to establish relationships. The analysis is carried out in three sections.

The first part of analysis focussed on measuring components of Working Capital .

The second part of analysis focussed on examining the efficiency of Working Capital Management through different indices, viz., a) Performance Index (PI), b) Utilization Index (UI) and c) Efficiency Index (EI).

The third part of analysis focussed on examining the impact of Working Capital on the firm's profitability.

VII.8 Limitations of the Study

- The study period is limited to ten years only (from 1997-98 to 2007-08). Therefore, a detailed trend analysis covering a lengthy period has not been carried out.
- The study is based on secondary data collected from CMIE 'Prowess' (package). Therefore, the quality of study depends purely upon the accuracy, reliability and quality of secondary data source.
- The study is limited to 53 companies of textile industry that too from the companies listed in Bombay Stock Exchange (BSE). Therefore, the results cannot be generalized in a strict sense.

VII.9 The Indian Textile Industry – A Profile

The textile industry has a significant presence in the economic life of the country. It plays a pivotal role through its contribution to industrial output, employment generation and export earnings of the country. Textile industry -

Contributes towards 14% of the industrial production,

Contributes 4% to the G.D.P,

Contributes 17% to the country's exports and

Contributes to the employment of 35 million people (both sexes)

VII. 10 The Structure of India's textile industry

The Indian textile industry is extremely varied with major sectors such as,

The Hand Spun and Hand Woven sector

The Capital Incentive, sophisticated Mill sector

The decentralized Power looms / Hosiery and knitting sector

The major sub-sectors that comprise the textile sector include:

The organized cotton / Fibre Textile Mill Industry

The man-made fibre / yarn industry

The wool and woolen textile industry

The Sericulture and Silk Textiles Industry

The Handlooms, handicrafts, the jute and jute textile industry.

VII.11 Major Observations

Growing Fixed Assets

- It is observed that over the period of study the investments made in fixed assets of small and medium size firms shows a constant trend averaging at Rs.2171.42, and Rs.4048.60 respectively. On the other hand, the investment in fixed assets in the case of large size firms indicates an upward trend from from Rs.6158.90 crore in 1998-99 to Rs.13775.49 crore in 2007-08.

Satisfactory Gross Profits

- Regarding Gross Profit of small size firms, the results show that it is negative for National Textile Corporation and positive for other firms over the period of time ranging at a maximum level of Rs.577.19 crore at the end of the period and a minimum of Rs.398.46 crore in 2000-01.
- During the period, the total GP of all medium size firms has stood at a maximum of Rs.671.51 crore in 2000-01 and a minimum of Rs.172.68 crore in 2003-04 with an overall average of Rs.598.33 crore.
- The Gross Profit of large size textile firms on an average seems to be negative for Prag Bosimi Synthetics (Rs.-4.36 crore) while it is positive among the remaining firms over the study period ranging from Rs.40.23 crore to Rs.324.22 crore

Varying Profit after Tax

- The profit after tax (PAT) is negative for National Textile Corporation, and positive for other firms of small size groups. During the study period, the total PAT of all small firms stood at a maximum of Rs.445.69 crore in 2005-06 and a minimum of Rs.82.09 crore in 2007-08.
- During 1998-99 to 2007-08, the total PAT of all medium size textile firms is more in 1999-2000 (Rs.810.71 crore) and it has been much less and negative in 2002-03 (Rs.-241.69 crore).

- During the period under study, the total PAT of all large size textile firms has gone up with ups and downs from Rs.907.55 crore (1998-99) to Rs.1599.02 crore (2007-08).

Large Interest Obligation

- The maximum and minimum of total interest paid by small size firms is Rs.390.84 crore in 2002-03 and Rs.188.75 crore in 1998-99.

- The total interest liability of medium size firms is touched at a maximum of Rs.670.22 crore in 2001-02 and a minimum of Rs.432.78 crore in 1998-99.

- The total interest on borrowings for all selected large size textile firms has reached the peak at Rs.1142.10 crore in 2002-03 from Rs.589.65 crore in 1998-99. But it has gone down to Rs.642.92 crore in 2003-04 and reached Rs.532.36 crore in 2007-08 averaging at Rs.666.40 crore over the period.

Share Holders' Equity is wipped out in Loss Making firms

- Out of the 16 small size firms, (other than NTC and Modern System), the Share Holders Equity (SHE) varies from Rs.29.16 core to Rs.123.89 crore during the study period whereas the total shareholders' equity of small size firms ranges from Rs.-250.71 crore to Rs.910.87 crore for the same period.

- The average positive Share Holders Equity (SHE) among the 18 out of 21 medium size textile firms ranges from Rs.54.17 crore and Rs.591.54 crore. But the total shareholders' equity capital for all 21 firms ranges between Rs.1444.83 crore and Rs.3870.82 crore, and is found to have declined from 1998-99 to 2007-08.

- The Total Shareholders' Equity capital for all large size textile firms has been in the uptrend and increased from Rs.4949.31 crore in 1998-99 to Rs.9012.03 crore in 2007-08, averaging at Rs.6238.59 crore.

Debt usage is Maximum in Textile Industires

- The total debt for all small size firms stood as high as Rs.3535.60 crore at the end of the study period as against its lowest level of Rs.1593.99 crore in the base year.

- The total debt for all medium size firms which is Rs.3417.74 crore in 1998-99, has kept increasing up to 2002-03 before it started declining in 2003-04 and 2004-05. From 2005-06 onwards, it has once again, shown an upward trend until 2007-08.

- The Total debt for large size textile firms has gone up from Rs.5377.63 crore in 1998-99 to Rs.12738.46 crore in 2007-08.

The Size of current assets is on higher side

- The Current assets of all small size firms were at its maximum in 2007-08 (Rs.2803.28 crore) and minimum in 1998-99 (Rs.1322.88 crore) and averages at Rs.1791.49 crore.

- The Current assets of all medium size firms is at its maximum at Rs.5931.51 crore in 2007-08 and minimum at Rs.4283.02 crore in 1998-99 and the average amounts to Rs.5098.07 crore.

- For large size textile firms, the total current assets has shown a positive trend and moved up to Rs.12259.53 crore in 2007-08 from Rs.5526.24 crore in 1998-99.

Trade credit facility

- The total current liability for small size firms ranges from Rs.556.64 crore in 1998-99 to Rs.1449.29 crore in 2007-08.

- The total current liability for medium size firms, which varies from Rs.934.45 crore in 1998-99 to Rs.2976.07 crore in 2007-08 has exhibited an upward trend from 1998-99 to 2007-08.

- The total current liability (vide appendix table 24) for large size firms ranges from Rs.1262.44 crore to Rs.2361.98 crore during 1998-99 to 2007-08 respectively. This, in turn has shown an upward trend in CL with ups and downs from the beginning to end years.

Tight liquidity in all firms

- The total cash and bank balances of all small size firms have been more at Rs.305.43 crore in 2007-08 and less at Rs.94.26 crore in 2001-02.

- The total Cash and bank balances of all medium size firms have reached Rs.818.99 crore in 2007-08 from Rs.408.73 crore in 1998-99. Further, the average Cash balance is below Rs.5 crore in 6 out of the 21 firms during the study period.

- The total Cash and bank balances of all large size textile firms have increased from Rs.905.18 crore in 1998-99 to Rs.1935.41 crore in 2007-08, exhibiting a positive but fluctuating trend. The overall average Cash and bank balances amount to Rs.1100.38 crore during the period of study.

Inventory flow is systematic

- The total inventory, i.e., the inventory of all small size firms has stood at its maximum level in 2007-08 (Rs.1021.79 crore) and minimum in 1998-99 (Rs.598.99 crore) and the average is at Rs.741.43 crore.

- The total inventory of all medium size textile firms has reached Rs.1696.89 crore in 2007-08 from Rs.1184.31 crore in 1998-99, the average being Rs.1451.15 crore.

- The value of inventory ranges from Rs.1491.51 crore in 1998-99 to Rs.3517.26 crore in 2007-08 and has shown a continuous increase during the period of study. The overall mean inventory amounts to Rs.2326.22 crore during the years from 1998-99 to 2007-08.

Collection is lagging

- On an average, the accounts receivable is found to be maximum at Rs.109.87 crore and minimum at Rs.13.82 crore during the study period.

- The total accounts receivable for all medium size textile firms has increased from Rs.2299.72 crore in 1998-99 to Rs.2789.89 crore in 2007-08 with an overall mean value of Rs.2588.97 crore.

- The total accounts receivables of all large size textile firms have exhibited a positive trend and has reached Rs.5353.45 crore in 2007-08 from Rs.2786.68 crore in 1998-99. The overall mean is at Rs.3440.44 crore during the period of study.

Growing turnover

- It is apparent that the total sales is found to have increased continuously from Rs.2532.02 crore in 1998-99 to Rs.4906.51 crore in 2007-08 for small size textile firms.

- Regarding turnover in medium size textile firms (vide appendix table 24), it is found that there has been an upward trend in total sales but with a crisscross movements from Rs.5191.00 crore in 1998-99 to Rs.6803.17 crore in 2007-08.

- Regarding the turnover for large size textile firms, it is elicited that there has been an upward trend with triggering movement in total sales as it increased from Rs.6570.32 crore in 1998-99 to Rs.16831.35 crore in 2007-08. For all large size firms, the mean turnover is Rs.10681.32 crore during the years under study.

VII.12 Conclusions

SMALL SIZED FIRMS:

- The Average Sales turnover and Current Assets balances of Small-sized firms were Rs. 3600 crores and Rs 1800 crores respectively. Current Liabilities are financing the Current Assets to the extent of Rs 950 crores amounting to 50 per cent of sales and 26 per cent of sales.

- The investment made in Current Assets have made two operating cycles per year.

- The components of current Assets, (Inventories, Account Receivables and cash balance) play equal roles in generating sales turnover.

- The inventories, Account Receivables and Cash balance work out to 21 per cent, 24 per cent and 4 per cent of the total sales, respectively.

- The Working Capital turnover ratio is just 2 times in a year indicating that the degree of efficiency of Working Capital utilization in generating sales as very low.

- This may be due to either locking up of capital in inventories or in Account Receivables.

MEDIUM SIZED FIRMS:

- The investment made in Current Assets accounted for one and half operating cycles per year.

- The components of Current Assets, report slightly a different role in generating sales when compared to small sized sample firm

- Operating cycle is found to be 4 times in a year with a conversion cycle of 3 months.

- Though the degree of efficiency of Working Capital utilization in generating sales seems to have improved when compared to small sized sample firms, the turnover ratio remains low, at 3 times in a year. The causes attributed to the small-sized firms hold good for the medium sized firms too.

LARGE-SIZED FIRMS:

- The investment made in Current Assets has been approximately one and half operating cycle per year.
- The components of Current Assets play almost equal roles in generating sales.
- Operating cycle is found to be 4 times in a year with a conversion cycle of 2.4 months.
- The degree of efficiency of Working Capital utilization in generating sales seems to be low for large-sized firms as well.
- This may be due to the blocking up of capital in the form of inventories and Account Recivables for inefficient use of Working Capital in sample textile firms.

EFFICIENCY INDICES:

The efficiency of the firm in utilization of Working Capital in generation of sales turnover is ascertained with the help of Performance Index (PI), Utilization Index (UI) and Efficiency Index (EI).

- The LGR of Performance Index for small size firms is significant at 10 per cent level but insignificant for medium and large-sized firms. This shows that there has been a significant improvement in efficiency of small size textile firms.
- The LGR values of Utilization Index indicate that the small size firms have significantly improved in generating sales and it remains constant throughout the study period in respect of medium and large-size as well as all firms**.**

- The LGR values of Efficiency Index show evidence that the small firms as well as all sample firms under textile industry have shown significant improvement towards adopting of a sound Working Capital Management policy during the study period.

- On the whole, in spite of the positive growth in P1, the speed of the same to match the industry average was found to be was less-may be because the constant factors are declining, indicating that the permanent part of the Working Capital may be more than the varying part of the Working Capital .

- The growth in the speed of improvement in the UI of the medium-sized firms alone were significant at 10 per cent.

- When the growth in El was compared with the growth in the industry average, it was found that the growth in El of medium-sized firms alone was greater than the small and large-sized firms.

- The analysis shows that profitability measured by Gross Profit Margin is significantly and inversely related with working capital proxies, days in accounts receivable, days in accounts payable and Cash conversion cycle.

- It is concluded from the analysis that the Operation Profit Margin is significantly and inversely affected by the decline in days in accounts receivable, days in accounts payable and Cash conversion cycle of textile firms.

- It is found that there has been a significant negative impact of days in accounts payables and days in account receivable on Return on Asserts of (all) textile firms in India.

- Similarly, it is found that there has been a significant negative impact of days in accounts receivable and days in account receivable on Return on Asserts of (all) textile firms in India.

- On the whole, it is found from the analysis that days in inventory has significant positive impact while days in accounts receivable and Cash conversion cycle have negative significant effect on Gross Profit Margin of small size-textile firms in India.

- Overall, it is found that there is positive impact of days in accounts receivable and Cash conversion cycle on Operating Profit Margin of small size textile firms, though, the impact is not significant.

- It is also found that there is no impact of working capital on Return on Assets of small size textile firms.

- It is concluded that profitability of medium size textile firms in terms of Gross profit margin is not influenced by the Working Capital Management variables.

- It is again concluded that profitability measured as operating profit margin significantly increases with decline in the number of days taken for Cash conversions cycle in the case of medium-size textile firms.

- From the analysis, it is concluded that there has been a significant inverse relationship between Return on Assets and working capital of medium size textile firms.

- It is noted that more than 40 per cent of variation in Gross Profit Margin is determined by Account Receivable Days, Account Payable Days and Cash Conversion Cycle.

- It is found from the analysis of the data that profitability in terms of Operation Profit Margin is significantly and affected by the decline in days in accounts receivable, days in accounts payable and Cash conversion cycle in the Case of large-size textile firms.

- It is found that working capital variables do not have much impact on Return on Assets of large-size textile firms.

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APPENDIX

Table 1: Fixed Assets (FA) of SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	39.79	43.48	43.67	46.65	68.05	73.39	80.77	110.80	131.97	170.38	80.90	43.94
Garware-Wall Ropes Ltd.	92.53	86.01	82.96	80.50	81.30	80.07	78.57	77.48	79.88	86.73	82.60	4.59
Ginni Filaments Ltd.	73.19	139.62	154.16	153.68	153.01	148.27	137.05	125.06	149.14	178.40	141.16	27.62
Indian Acrylics Ltd.	196.92	188.10	199.31	175.85	168.82	166.50	168.95	156.64	169.85	193.91	178.49	14.87
Indo Count Inds. Ltd.	76.62	95.98	108.46	111.57	113.50	116.83	109.21	101.59	97.19	194.44	112.54	31.05
Malwa Cotton Spg. Mills	98.48	122.29	141.07	141.50	138.31	131.60	122.41	110.03	98.56	90.13	119.44	19.14
Maral Overseas Ltd.	95.54	133.53	176.24	181.17	181.52	176.03	165.62	152.46	143.30	183.23	158.86	28.25
Modern Syntex (I) Ltd.	598.36	710.94	720.61	700.64	583.26	566.37	513.75	445.57	449.87	253.70	554.31	145.78
Modipon Ltd.	198.35	188.98	178.91	168.47	160.16	147.01	141.08	129.30	116.30	105.32	153.39	31.04
National Textile Corpn.	32.36	27.59	23.43	19.47	14.77	13.31	11.31	9.80	8.79	7.87	16.87	8.49
Pratibha Syntex Ltd.	7.91	20.80	101.14	116.71	164.54	219.32	208.61	206.11	197.42	199.05	144.16	79.09
Rajapalayam Mills Ltd.	57.69	58.58	65.82	73.19	85.63	93.90	91.91	100.67	133.57	210.21	97.12	45.82
Shri Lakshmi Cotsyn Ltd.	9.31	14.30	23.50	30.83	31.06	31.64	31.56	31.44	48.42	230.70	48.28	64.98
Siyaram Silk Mills Ltd.	45.30	66.56	65.73	78.62	87.90	94.05	93.69	103.76	123.12	126.11	88.48	25.53
Spentex Industries Ltd.	51.17	49.68	54.31	50.96	47.34	43.98	40.96	37.34	63.42	138.53	57.77	29.29
Suryalakshmi Cotton Mills	62.26	139.50	150.06	143.36	147.83	141.36	140.34	140.04	108.45	197.46	137.07	34.04
Sum	1735.78	2085.94	2289.38	2273.17	2227.00	2243.63	2135.79	2038.09	2119.25	2566.17	2171.42	212.72
Average	108.49	130.37	143.09	142.07	139.19	140.23	133.49	127.38	132.45	160.39	135.71	13.30

Table 2: Gross Profit (GP) of SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	30.57	20.34	22.63	27.42	35.19	30.96	40.88	44.57	18.24	54.05	32.49	11.39
Garware-Wall Ropes Ltd.	35.27	28.56	36.07	34.07	38.30	40.44	38.67	46.57	46.01	68.82	41.28	11.07
Ginni Filaments Ltd.	25.92	19.14	19.89	29.24	23.30	29.75	26.66	25.72	24.68	29.78	25.41	3.79
Indian Acrylics Ltd.	32.88	42.10	12.60	37.87	-11.23	20.17	18.99	41.58	33.77	-5.09	22.36	18.96
Indo Count Inds. Ltd.	12.16	20.58	27.60	27.15	28.63	26.27	27.97	21.21	17.36	21.86	23.08	5.43
Malwa Cotton Spg. Mills	56.01	54.96	42.99	62.97	30.07	41.46	49.38	32.49	43.30	47.13	46.08	10.30
Maral Overseas Ltd.	36.04	39.58	53.31	65.95	46.04	38.18	30.67	16.33	27.14	20.08	37.33	15.07
Modern Syntex (I) Ltd.	54.27	58.11	-2.24	-0.90	5.09	1.59	10.08	18.57	6.77	-4.42	14.69	22.88
Modipon Ltd.	62.05	56.16	66.23	62.19	70.36	53.86	80.95	102.13	89.68	81.60	72.52	15.64
National Textile Corpn.	-20.71	-13.15	-30.81	-32.89	-18.75	-31.39	-30.90	-32.13	-52.65	-55.90	-31.93	13.58
Pratibha Syntex Ltd.	7.56	9.63	21.25	29.50	28.09	33.96	23.25	38.12	43.44	53.10	28.79	14.24
Rajapalayam Mills Ltd.	17.34	15.81	14.44	19.09	18.38	20.56	21.31	14.98	21.66	22.11	18.57	2.85
Shri Lakshmi Cotsyn Ltd.	5.94	6.05	6.71	6.82	15.84	10.76	13.12	12.20	18.32	28.46	12.42	7.10
Siyaram Silk Mills Ltd.	64.64	67.08	80.32	86.75	55.92	92.68	97.20	83.56	90.21	124.99	84.34	19.55
Spentex Industries Ltd.	15.38	15.60	11.79	11.01	9.09	3.95	5.39	-0.80	33.07	38.51	14.30	12.47
Suryalakshmi Cotton Mills	16.94	16.18	15.68	35.04	36.59	27.46	42.03	50.57	49.38	52.11	34.20	14.52
Sum	452.26	456.73	398.46	501.28	410.91	440.66	495.65	515.67	510.38	577.19	475.92	54.21
Average	28.27	28.55	24.90	31.33	25.68	27.54	30.98	32.23	31.90	36.07	29.74	3.39

Table 3: Profit After Tax Before Interest (PATBI) of SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	11.94	11.71	11.14	13.77	16.14	15.59	17.43	19.21	14.20	22.75	15.39	3.67
Garware-Wall Ropes Ltd.	13.06	11.24	14.66	15.78	15.42	13.91	12.85	13.96	18.46	22.12	15.15	3.13
Ginni Filaments Ltd.	13.98	16.03	11.91	17.45	19.13	10.46	13.21	14.52	10.58	15.54	14.28	2.86
Indian Acrylics Ltd.	36.61	32.82	14.64	28.56	-17.21	2.78	25.10	25.02	53.79	8.08	21.02	19.86
Indo Count Inds. Ltd.	10.22	13.89	18.96	17.24	17.18	16.13	15.20	15.04	9.67	10.49	14.40	3.27
Malwa Cotton Spg. Mills	35.79	41.09	30.83	34.34	10.00	10.98	24.52	16.32	29.01	32.20	26.51	10.74
Maral Overseas Ltd.	26.86	29.05	35.96	39.36	26.80	15.05	14.42	-12.69	9.71	11.09	19.56	15.32
Modern Syntex (I) Ltd.	52.32	27.64	-24.56	-13.17	-79.15	-22.32	-40.46	215.88	47.00	-144.23	1.90	95.60
Modipon Ltd.	27.66	12.23	6.29	11.41	17.86	-2.49	17.38	20.26	24.78	-7.00	12.84	11.24
National Textile Corpn.	-28.73	-28.03	-32.20	-37.83	-29.17	83.59	-81.68	26.81	97.90	-21.09	-5.04	56.85
Pratibha Syntex Ltd.	5.59	7.16	15.70	23.81	25.13	13.62	12.93	20.84	21.18	15.28	16.12	6.64
Rajapalayam Mills Ltd.	14.17	13.07	12.42	15.53	16.73	16.94	17.87	16.46	13.60	17.13	15.39	1.93
Shri Lakshmi Cotsyn Ltd.	3.82	4.30	4.92	7.40	10.84	9.84	13.65	14.60	18.02	24.36	11.18	6.63
Siyaram Silk Mills Ltd.	15.17	13.04	20.56	20.06	22.31	15.57	11.77	10.48	14.79	20.31	16.41	4.13
Spentex Industries Ltd.	8.24	6.82	2.50	4.58	3.62	-0.58	-4.78	-0.15	17.83	16.95	5.50	7.31
Suryalakshmi Cotton Mills	13.20	16.17	11.10	19.33	19.93	12.22	26.35	29.13	27.98	38.11	21.35	8.81
Sum	259.90	228.23	154.83	217.62	95.56	211.29	95.76	445.69	428.50	82.09	221.95	129.23
Average	16.24	14.26	9.68	13.60	5.97	13.21	5.99	27.86	26.78	5.13	13.87	8.08

Table 4: Interest (INT) of SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	11.42	10.45	11.03	11.89	12.68	12.77	12.83	10.61	10.43	13.49	11.76	1.13
Garware-Wall Ropes Ltd.	11.16	8.25	7.90	7.90	6.71	4.69	4.48	4.19	5.20	7.26	6.77	2.18
Ginni Filaments Ltd.	8.52	6.46	14.12	13.85	16.61	12.86	9.73	8.82	8.51	9.86	10.93	3.22
Indian Acrylics Ltd.	24.44	23.22	24.41	28.09	29.32	25.97	20.81	19.82	18.59	19.10	23.38	3.76
Indo Count Inds. Ltd.	4.44	6.06	9.60	9.70	9.27	10.47	15.06	8.95	5.31	4.26	8.31	3.34
Malwa Cotton Spg. Mills	23.32	24.99	27.68	29.06	31.51	29.77	27.77	27.27	21.45	20.32	26.31	3.68
Maral Overseas Ltd.	11.69	10.02	13.06	15.64	15.76	13.83	11.31	10.50	8.62	10.60	12.10	2.40
Modern Syntex (I) Ltd.	11.67	28.80	61.77	74.32	119.49	109.72	162.89	77.69	25.80	24.08	69.62	49.40
Modipon Ltd.	25.46	25.44	28.73	26.66	27.83	26.76	16.22	16.09	13.68	15.27	22.21	6.05
National Textile Corpn.	21.95	25.18	33.98	42.01	63.38	46.51	57.46	68.74	75.95	82.90	51.81	21.20
Pratibha Syntex Ltd.	1.23	2.02	8.45	12.63	13.23	25.88	19.11	19.82	15.02	16.21	13.36	7.77
Rajapalayam Mills Ltd.	7.47	5.62	6.20	5.84	5.40	8.05	8.62	6.75	5.35	6.21	6.55	1.14
Shri Lakshmi Cotsyn Ltd.	1.01	1.41	1.66	3.42	6.48	5.47	8.27	8.40	7.74	8.52	5.24	3.10
Siyaram Silk Mills Ltd.	9.19	6.68	7.84	5.09	7.07	7.46	3.95	3.13	6.35	4.12	6.09	1.95
Spentex Industries Ltd.	6.13	5.96	5.37	6.16	6.26	5.53	6.39	1.69	7.48	6.90	5.79	1.56
Suryalakshmi Cotton Mills	9.65	13.84	17.93	20.41	19.84	15.81	14.69	12.38	9.70	8.35	14.26	4.29
Sum	188.75	204.40	279.73	312.67	390.84	361.55	399.59	304.85	245.18	257.45	294.50	73.47
Average	11.80	12.78	17.48	19.54	24.43	22.60	24.97	19.05	15.32	16.09	18.41	4.59

Table 5: Equity Capital of SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	28.59	29.58	29.26	30.84	34.30	32.12	36.11	43.68	46.67	60.75	37.19	10.31
Garware-Wall Ropes Ltd.	117.46	116.58	119.02	122.41	123.63	116.83	120.31	125.20	133.82	143.67	123.89	8.66
Ginni Filaments Ltd.	50.81	76.42	74.21	77.81	80.33	75.05	66.62	69.53	68.78	129.39	76.90	20.24
Indian Acrylics Ltd.	62.25	72.40	67.63	68.09	26.56	13.37	18.58	29.58	66.48	55.46	48.04	23.21
Indo Count Inds. Ltd.	31.71	37.58	51.20	56.91	62.28	65.82	65.04	71.12	75.23	94.66	61.16	18.25
Malwa Cotton Spg. Mills	86.29	100.52	108.00	112.25	90.74	59.30	49.20	38.25	48.62	60.50	75.37	27.22
Maral Overseas Ltd.	73.87	88.63	113.44	130.61	135.59	103.23	106.26	83.07	80.10	86.72	100.15	21.36
Modern Syntex (I) Ltd.	372.22	370.96	283.61	194.52	-16.15	-132.50	-351.60	-241.84	-192.26	-360.59	-7.36	290.75
Modipon Ltd.	140.88	126.92	103.97	88.21	77.74	47.98	48.64	51.73	64.04	40.93	79.10	35.18
National Textile Corpn.	-267.86	-321.07	-391.33	-471.17	-649.29	-612.06	-751.19	-793.12	-771.18	-875.17	-590.34	214.75
Pratibha Syntex Ltd.	12.44	28.18	44.83	54.98	77.01	83.75	72.82	83.41	89.57	91.64	63.86	27.53
Rajapalayam Mills Ltd.	31.02	37.56	42.86	57.74	67.63	68.68	75.34	88.19	91.35	98.26	65.86	23.35
Shri Lakshmi Cotsyn Ltd.	15.63	19.42	23.79	27.78	32.14	36.51	44.67	50.85	60.59	124.16	43.55	31.66
Siyaram Silk Mills Ltd.	41.15	45.82	56.71	69.69	88.36	91.67	96.95	101.48	107.08	119.70	81.86	26.99
Spentex Industries Ltd.	20.63	21.49	18.62	17.04	14.40	8.29	-2.88	8.80	51.70	133.51	29.16	39.27
Suryalakshmi Cotton Mills	49.64	59.58	52.35	50.87	50.57	44.93	54.42	68.24	62.14	128.22	62.10	24.22
Sum	866.73	910.57	798.17	688.58	295.84	102.97	-250.71	-121.83	82.73	131.81	350.49	429.89
Average	54.17	56.91	49.89	43.04	18.49	6.44	-15.67	-7.61	5.17	8.24	21.91	26.87

Table 6: Debt in SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	52.04	59.66	60.11	68.18	91.32	96.98	104.56	116.68	152.08	192.01	99.36	44.83
Garware-Wall Ropes Ltd.	50.34	45.97	48.68	46.17	47.93	36.07	48.63	51.33	69.51	85.65	53.03	14.12
Ginni Filaments Ltd.	44.15	118.67	135.04	126.76	132.74	125.85	124.37	131.98	132.55	142.36	121.45	27.93
Indian Acrylics Ltd.	173.49	154.04	153.16	139.72	176.34	143.40	170.21	188.07	176.22	168.26	164.29	15.84
Indo Count Inds. Ltd.	67.70	74.55	95.54	89.15	77.20	90.29	66.40	75.98	61.98	153.92	85.27	26.52
Malwa Cotton Spg. Mills	134.44	176.16	194.20	188.82	185.84	185.76	192.49	192.01	201.86	202.65	185.42	19.53
Maral Overseas Ltd.	69.49	97.51	134.59	115.80	148.11	113.87	133.25	140.34	151.72	208.39	131.31	36.89
Modern Syntex (I) Ltd.	383.15	489.22	579.28	632.42	613.02	554.18	552.97	523.24	472.61	439.68	523.98	78.38
Modipon Ltd.	139.94	139.17	146.24	157.30	170.14	165.57	163.29	166.07	145.81	160.70	155.42	11.58
National Textile Corpn.	224.85	250.08	281.70	315.69	387.42	398.83	479.91	549.58	626.28	704.43	421.88	164.07
Pratibha Syntex Ltd.	14.49	17.03	88.86	93.83	133.33	185.96	183.17	177.59	184.49	190.01	126.88	69.77
Rajapalayam Mills Ltd.	53.22	55.08	63.74	71.97	87.04	101.78	110.61	137.95	118.36	198.97	99.87	44.92
Shri Lakshmi Cotsyn Ltd.	6.18	12.14	23.38	28.99	38.39	43.10	52.89	59.95	89.39	226.66	58.11	64.03
Siyaram Silk Mills Ltd.	87.19	105.83	95.85	93.80	123.11	134.41	119.86	118.01	109.59	117.24	110.49	14.83
Spentex Industries Ltd.	43.36	44.26	46.21	43.24	42.76	39.86	37.89	26.55	79.22	170.47	57.38	41.91
Suryalakshmi Cotton Mills	49.96	122.27	149.15	153.56	153.06	154.48	153.57	141.14	90.70	174.20	134.21	37.30
Sum	1593.99	1961.64	2295.73	2365.40	2607.75	2570.39	2694.07	2796.47	2862.37	3535.60	2528.34	527.93
Average	99.62	122.60	143.48	147.84	162.98	160.65	168.38	174.78	178.90	220.98	158.02	33.00

Table 7: Current Assets (CA) of SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	72.76	71.91	70.66	74.92	78.52	80.19	88.88	86.95	114.87	151.06	89.07	25.39
Garware-Wall Ropes Ltd.	92.24	95.90	101.32	110.95	113.71	109.12	131.54	143.55	178.36	230.95	130.76	43.70
Ginni Filaments Ltd.	44.34	62.75	68.47	65.31	77.28	73.46	79.14	117.10	85.60	132.50	80.60	26.10
Indian Acrylics Ltd.	90.47	96.48	74.41	106.91	87.35	80.50	84.27	173.46	150.50	142.90	108.73	34.35
Indo Count Inds. Ltd.	47.86	33.07	46.26	44.83	37.99	49.57	30.58	59.13	72.61	122.09	54.40	26.77
Malwa Cotton Spg. Mills	159.62	201.88	214.21	218.04	215.50	230.26	238.25	231.31	235.40	261.51	220.60	26.99
Maral Overseas Ltd.	56.47	77.17	102.24	102.04	130.20	90.17	123.28	111.50	119.92	141.78	105.48	25.71
Modern Syntex (I) Ltd.	226.46	238.53	228.97	241.48	196.78	197.82	187.18	120.97	101.36	91.61	183.12	57.54
Modipon Ltd.	167.15	178.25	175.19	197.35	220.95	210.70	211.12	235.83	292.49	267.94	215.70	40.61
National Textile Corpn.	116.24	74.25	80.17	56.09	57.20	43.26	45.81	185.59	278.30	297.27	123.42	96.48
Pratibha Syntex Ltd.	24.39	30.08	48.54	48.67	59.66	74.30	69.32	89.08	109.89	132.53	68.65	34.26
Rajapalayam Mills Ltd.	34.80	43.73	59.58	62.31	73.73	86.24	105.38	136.87	117.47	148.78	86.89	39.02
Shri Lakshmi Cotsyn Ltd.	12.98	17.40	24.22	28.46	40.13	49.06	68.48	87.56	112.39	144.29	58.50	44.06
Siyaram Silk Mills Ltd.	113.27	127.39	114.75	118.09	154.06	163.67	158.59	149.02	146.91	189.56	143.53	24.84
Spentex Industries Ltd.	17.70	17.17	11.63	12.17	15.12	9.67	5.21	10.06	99.26	203.93	40.19	63.79
Suryalakshmi Cotton Mills	46.13	63.99	68.07	82.26	77.10	74.47	86.49	101.63	74.05	144.58	81.88	26.40
Sum	1322.88	1429.95	1488.69	1569.88	1635.28	1622.46	1713.52	2039.61	2289.38	2803.28	1791.49	457.45
Average	82.68	89.37	93.04	98.12	102.21	101.40	107.10	127.48	143.09	175.21	111.97	28.59

Table 8: Current Liability of SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	33.32	26.87	24.93	21.83	19.92	17.99	18.06	22.26	30.79	44.48	26.05	8.27
Garware-Wall Ropes Ltd.	17.88	18.49	14.08	19.75	19.66	18.08	20.32	22.47	31.96	65.61	24.83	15.06
Ginni Filaments Ltd.	21.38	7.71	13.71	14.10	17.21	18.94	9.37	18.38	7.80	10.36	13.90	4.96
Indian Acrylics Ltd.	52.67	59.01	52.98	71.84	49.50	87.94	61.16	109.72	71.11	107.54	72.35	22.28
Indo Count Inds. Ltd.	23.48	15.44	6.21	4.69	6.71	5.27	8.85	12.76	30.98	64.87	17.93	18.61
Malwa Cotton Spg. Mills	35.41	45.43	43.45	46.97	67.77	70.09	68.33	79.29	61.50	62.44	58.07	14.28
Maral Overseas Ltd.	8.34	9.38	13.95	17.10	15.35	15.67	21.42	22.80	15.67	17.06	15.67	4.52
Modern Syntex (I) Ltd.	37.32	74.29	71.69	100.18	168.17	327.51	497.07	265.97	251.36	247.99	204.16	142.73
Modipon Ltd.	87.03	101.31	103.62	105.73	126.88	137.84	130.31	133.51	188.43	171.26	128.59	31.86
National Textile Corpn.	177.60	156.33	194.02	208.81	305.04	237.49	302.98	406.55	404.59	451.40	284.48	106.42
Pratibha Syntex Ltd.	5.37	8.27	14.79	15.90	13.40	25.36	20.15	31.94	31.06	31.66	19.79	9.82
Rajapalayam Mills Ltd.	9.52	9.49	19.60	6.49	7.06	6.48	6.35	5.76	30.44	43.35	14.45	12.86
Shri Lakshmi Cotsyn Ltd.	0.71	0.52	0.70	2.63	0.73	1.13	2.48	8.20	9.80	21.79	4.87	6.81
Siyaram Silk Mills Ltd.	27.00	38.13	25.53	29.41	25.17	21.70	22.01	21.04	36.09	54.89	30.10	10.48
Spentex Industries Ltd.	6.81	2.80	2.35	3.77	5.95	6.65	11.95	12.42	32.60	35.69	12.10	12.13
Suryalakshmi Cotton Mills	12.80	27.42	22.90	27.11	25.91	25.29	18.48	25.49	16.45	18.90	22.08	5.08
Sum	556.64	600.89	624.51	696.31	874.43	1023.43	1219.29	1198.56	1250.63	1449.29	949.40	321.80
Average	34.79	37.56	39.03	43.52	54.65	63.96	76.21	74.91	78.16	90.58	59.34	20.11

Table 9: Cash and Bank Balance of SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	3.99	4.27	4.00	3.33	2.73	3.97	2.30	3.68	2.99	6.20	3.75	1.07
Garware-Wall Ropes Ltd.	6.68	7.54	6.62	6.69	5.76	7.41	15.45	6.55	5.14	6.59	7.44	2.90
Ginni Filaments Ltd.	11.43	11.29	11.16	2.57	12.34	10.68	10.44	11.77	14.24	19.31	11.52	4.10
Indian Acrylics Ltd.	11.96	12.57	4.57	2.60	3.49	8.84	9.89	87.51	38.16	18.72	19.83	25.92
Indo Count Inds. Ltd.	5.23	2.27	4.00	6.31	2.14	4.70	1.41	5.71	9.26	31.23	7.23	8.75
Malwa Cotton Spg. Mills	5.86	6.86	7.44	7.84	7.39	5.37	8.32	9.59	7.59	8.97	7.52	1.29
Maral Overseas Ltd.	3.52	3.08	3.88	2.58	3.25	4.10	2.86	4.51	3.27	3.21	3.43	0.59
Modern Syntex (I) Ltd.	59.00	24.01	16.55	14.10	12.32	14.35	14.78	11.53	11.21	15.10	19.30	14.41
Modipon Ltd.	16.67	16.79	15.14	12.29	19.54	25.60	26.37	41.37	42.19	33.30	24.93	10.85
National Textile Corpn.	3.72	5.47	3.96	3.54	3.89	2.66	4.18	5.90	7.65	4.39	4.54	1.43
Pratibha Syntex Ltd.	1.30	1.21	2.89	7.49	4.94	2.63	3.55	4.45	9.95	7.03	4.54	2.85
Rajapalayam Mills Ltd.	4.64	4.43	11.85	17.74	23.63	5.60	42.24	45.71	45.65	51.00	25.25	19.06
Shri Lakshmi Cotsyn Ltd.	0.05	0.25	0.05	0.03	0.12	0.08	0.09	0.60	0.29	2.14	0.37	0.65
Siyaram Silk Mills Ltd.	2.60	0.43	0.82	1.00	0.88	1.13	1.38	2.06	0.93	1.19	1.24	0.64
Spentex Industries Ltd.	0.94	4.37	0.68	2.96	0.88	0.47	0.30	0.04	7.62	94.53	11.28	29.35
Suryalakshmi Cotton Mills	5.05	4.06	2.54	3.19	2.80	1.06	2.37	5.89	12.26	2.52	4.17	3.17
Sum	142.64	108.90	96.15	94.26	106.10	98.65	145.93	246.87	218.40	305.43	156.33	74.65
Average	8.92	6.81	6.01	5.89	6.63	6.17	9.12	15.43	13.65	19.09	9.77	4.67

Table 10: Inventory in SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	35.08	38.01	35.07	39.47	41.31	42.82	45.43	42.90	62.71	77.30	46.01	13.52
Garware-Wall Ropes Ltd.	29.95	30.19	32.01	38.03	41.92	42.50	48.45	51.82	70.36	74.35	45.96	15.75
Ginni Filaments Ltd.	15.52	30.67	40.24	32.96	45.32	44.29	48.40	78.56	45.74	78.25	46.00	19.65
Indian Acrylics Ltd.	44.51	38.51	48.41	59.44	40.25	38.92	34.92	48.41	72.68	79.42	50.55	15.20
Indo Count Inds. Ltd.	22.20	19.84	29.55	27.29	24.99	35.38	17.04	31.35	38.95	35.10	28.17	7.21
Malwa Cotton Spg. Mills	93.21	89.19	99.07	96.56	83.86	78.20	73.67	74.53	76.85	91.91	85.71	9.49
Maral Overseas Ltd.	35.97	52.89	70.60	62.41	91.19	49.96	71.16	72.57	66.44	92.04	66.52	17.46
Modern Syntex (I) Ltd.	60.62	86.69	83.25	92.39	47.50	41.79	33.97	32.67	33.03	27.01	53.89	25.07
Modipon Ltd.	75.21	78.47	76.46	90.49	96.24	81.91	70.05	63.15	110.08	94.63	83.67	14.07
National Textile Corpn.	77.47	40.14	51.86	34.34	35.25	25.82	23.00	23.32	18.42	16.66	34.63	18.53
Pratibha Syntex Ltd.	15.57	14.05	15.90	17.98	24.74	32.11	36.42	43.28	47.11	66.23	31.34	17.14
Rajapalayam Mills Ltd.	22.28	30.07	35.33	30.64	38.46	25.76	33.27	51.54	30.83	52.55	35.07	10.02
Shri Lakshmi Cotsyn Ltd.	6.27	8.05	13.26	15.27	19.20	24.32	30.07	39.32	54.01	63.67	27.34	19.49
Siyaram Silk Mills Ltd.	27.42	43.28	31.27	42.11	62.13	68.53	61.05	63.37	64.16	73.29	53.66	16.22
Spentex Industries Ltd.	10.30	8.83	6.97	5.95	10.30	5.39	2.97	6.01	30.02	53.49	14.02	15.79
Suryalakshmi Cotton Mills	27.41	42.49	38.67	43.32	36.73	37.73	47.23	47.40	22.02	45.89	38.89	8.47
Sum	598.99	651.37	707.92	728.65	739.39	675.43	677.10	770.20	843.41	1021.79	741.43	119.26
Average	37.44	40.71	44.25	45.54	46.21	42.21	42.32	48.14	52.71	63.86	46.34	7.45

Table 11: Accounts Receivable of SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	33.69	29.63	31.59	32.03	34.39	33.40	41.15	40.37	49.17	64.83	39.03	10.80
Garware-Wall Ropes Ltd.	43.37	45.86	50.33	53.84	55.59	51.20	54.98	71.06	87.47	133.67	64.74	27.51
Ginni Filaments Ltd.	16.63	20.04	16.32	19.48	18.87	17.74	19.55	26.02	24.87	34.19	21.37	5.52
Indian Acrylics Ltd.	34.00	45.40	21.43	44.87	43.61	32.74	39.46	37.54	39.66	44.19	38.29	7.41
Indo Count Inds. Ltd.	20.22	10.95	12.70	11.22	10.85	9.44	12.07	22.06	24.72	56.10	19.03	14.11
Malwa Cotton Spg. Mills	54.67	87.60	85.99	91.97	101.66	116.25	125.82	130.69	141.38	150.85	108.69	29.60
Maral Overseas Ltd.	16.98	21.20	27.76	37.05	34.96	35.51	43.93	30.32	47.42	44.77	33.99	10.07
Modern Syntex (I) Ltd.	106.69	127.66	129.01	134.89	136.96	141.68	138.43	76.77	57.12	49.50	109.87	35.60
Modipon Ltd.	72.14	77.57	78.10	84.54	99.97	102.08	113.25	130.83	149.49	146.96	105.49	28.83
National Textile Corpn.	35.05	28.64	24.34	18.21	18.06	14.78	18.63	156.37	252.23	276.22	84.25	103.95
Pratibha Syntex Ltd.	7.50	13.70	28.62	22.92	27.57	36.44	28.24	40.24	51.72	57.84	31.48	15.65
Rajapalayam Mills Ltd.	7.64	8.99	12.17	13.70	11.42	22.74	29.72	39.47	40.85	45.16	23.19	14.51
Shri Lakshmi Cotsyn Ltd.	6.66	9.10	10.91	13.16	20.81	24.66	38.32	47.62	58.09	78.48	30.78	24.16
Siyaram Silk Mills Ltd.	82.59	83.68	82.66	74.98	91.05	94.01	96.00	83.59	81.82	115.08	88.55	11.27
Spentex Industries Ltd.	6.46	3.97	3.96	3.22	3.91	3.78	1.90	3.98	55.81	51.19	13.82	20.97
Suryalakshmi Cotton Mills	13.67	17.44	26.86	35.75	37.57	34.19	37.90	49.23	40.17	92.08	38.49	21.63
Sum	557.96	631.43	642.75	691.83	747.25	770.64	839.35	986.16	1201.99	1441.11	851.05	280.84
Average	34.87	39.46	40.17	43.24	46.70	48.17	52.46	61.64	75.12	90.07	53.19	17.55

Table 12: Sales of SMALL Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Banswara Syntex Ltd.	169.83	187.00	177.54	192.71	213.14	212.54	230.76	299.76	307.70	389.52	238.05	71.42
Garware-Wall Ropes Ltd.	114.80	115.64	125.37	139.46	156.15	153.80	171.00	186.01	224.48	261.28	164.80	47.92
Ginni Filaments Ltd.	93.53	90.95	141.56	152.70	172.27	167.09	174.33	198.07	184.08	190.70	156.53	37.77
Indian Acrylics Ltd.	182.25	226.66	138.24	252.11	231.21	215.01	194.95	257.46	285.03	264.09	224.70	43.87
Indo Count Inds. Ltd.	46.95	66.59	96.17	107.83	122.81	132.79	178.14	153.79	176.95	215.47	129.75	52.71
Malwa Cotton Spg. Mills	288.80	335.79	322.83	340.80	359.21	341.67	333.55	336.10	342.23	357.42	335.84	19.72
Maral Overseas Ltd.	142.38	157.83	223.60	255.75	254.50	251.72	265.06	237.64	248.16	244.06	228.07	42.74
Modern Syntex (I) Ltd.	385.98	518.79	451.36	535.97	532.99	535.57	705.28	769.09	470.59	490.26	539.59	115.09
Modipon Ltd.	311.19	314.33	327.90	345.78	360.01	343.71	377.66	406.80	486.38	432.31	370.61	56.32
National Textile Corpn.	223.91	196.04	139.67	117.06	135.08	106.29	101.58	93.72	126.07	125.26	136.47	41.86
Pratibha Syntex Ltd.	44.38	45.61	109.40	134.10	137.92	265.89	197.61	273.17	320.45	353.88	188.24	111.04
Rajapalayam Mills Ltd.	101.23	100.76	113.87	115.29	124.69	128.21	118.40	128.26	149.27	159.73	123.97	18.91
Shri Lakshmi Cotsyn Ltd.	38.56	49.59	65.91	82.40	117.85	133.17	157.50	210.84	283.65	362.36	150.18	106.55
Siyaram Silk Mills Ltd.	229.39	278.03	287.18	314.90	319.31	311.89	320.10	299.46	333.35	448.62	314.22	55.73
Spentex Industries Ltd.	52.76	53.39	53.35	57.99	52.07	49.37	43.11	36.33	391.31	373.91	116.36	140.52
Suryalakshmi Cotton Mills	106.08	113.62	162.03	195.82	214.15	203.97	230.52	286.22	248.77	237.64	199.88	57.85
Sum	2532.02	2850.62	2935.98	3340.67	3503.36	3552.69	3799.55	4172.72	4578.47	4906.51	3617.26	763.84
Average	158.25	178.16	183.50	208.79	218.96	222.04	237.47	260.80	286.15	306.66	226.08	47.74

Table 13: Fixed Assets (FA) of MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	41.84	49.88	51.29	51.67	57.03	72.72	72.14	75.38	121.50	222.56	81.60	54.44
Ashima Ltd.	178.07	213.10	276.89	299.80	364.26	363.69	327.17	295.52	252.17	308.52	287.92	60.37
D C M Ltd.	121.49	125.00	120.23	123.26	109.31	33.38	30.64	41.61	38.55	48.83	79.23	43.29
Eastern Silk Inds. Ltd.	7.15	6.27	6.11	6.69	16.20	17.09	18.68	54.85	165.39	151.79	45.02	61.65
Eskay K'N'It (India) Ltd.	71.89	108.40	125.65	131.08	116.38	94.25	109.60	98.83	97.27	144.81	109.82	20.90
Futura Polyesters Ltd.	113.44	109.30	102.25	97.77	114.87	111.18	239.43	229.60	215.28	208.74	154.19	60.20
Himatsingka Seide Ltd.	75.38	112.97	114.30	112.62	116.08	127.37	119.25	108.47	108.50	114.04	110.90	13.62
J C T Ltd.	849.71	855.50	831.25	564.11	243.74	204.15	193.52	180.69	166.45	289.21	437.83	303.43
K S L Realty & Infra. Ltd.	9.78	19.60	24.36	21.78	19.15	18.03	40.98	67.20	100.49	307.89	62.93	90.51
Krishna Lifestyle Tech Ltd	169.27	220.76	265.06	267.01	260.35	245.47	235.50	219.21	206.23	192.30	228.12	32.71
Loyal Textile Mills Ltd.	49.68	61.98	71.21	65.87	71.34	69.74	90.69	113.53	182.14	242.94	101.91	62.47
Mafatlal Industries Ltd.	214.00	229.23	249.84	242.69	198.80	115.09	100.95	86.98	55.18	46.74	153.95	80.56
N R C Ltd.	193.82	190.30	187.27	185.08	218.98	210.52	199.05	189.53	263.95	360.78	219.93	54.84
Nahar Exports Ltd.	74.66	125.29	192.79	200.08	186.34	166.46	162.45	167.72	155.96	188.40	162.02	37.64
Parasrampuria Synthetics	198.16	261.00	344.39	444.38	579.63	564.02	545.69	413.66	389.50	371.70	411.21	127.09
Recron Synthetics Ltd.	251.52	387.00	399.47	391.37	379.03	371.96	357.74	324.04	303.02	285.65	345.08	50.98
Sangam (India) Ltd.	43.34	44.32	73.17	75.23	85.37	89.81	125.16	173.65	185.73	333.53	122.93	88.60
Sanghi Polyesters Ltd.	490.66	520.04	529.63	573.28	541.96	512.59	486.01	465.09	453.99	432.19	500.54	43.18
Super Spinning Mills Ltd.	57.69	75.78	77.61	82.73	97.16	103.03	105.17	114.98	133.27	156.12	100.35	29.25
Uniworth Ltd.	253.19	296.11	313.68	326.23	143.17	236.70	228.65	115.16	105.71	95.00	211.36	89.53
Vardhman Polytex Ltd.	71.36	95.61	101.45	127.92	155.92	140.94	51.52	110.93	164.80	197.16	121.76	44.47
Sum	3536.10	4107.44	4457.90	4390.65	4075.07	3868.19	3839.99	3646.63	3865.08	4698.90	4048.60	372.02
Average	168.39	195.59	212.28	209.08	194.05	184.20	182.86	173.65	184.05	223.76	192.79	17.72

Table 14: Gross Profit (GP) of MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	9.46	11.68	16.32	26.31	22.14	18.72	19.31	22.69	30.10	44.60	22.13	10.05
Ashima Ltd.	39.02	10.67	23.76	39.36	42.20	83.91	6.07	4.17	15.43	35.03	29.96	23.84
D C M Ltd.	116.96	3.44	7.82	24.75	7.70	1.06	11.73	123.62	13.82	12.89	32.38	46.81
Eastern Silk Inds. Ltd.	21.14	15.61	38.62	7.49	41.33	32.36	32.64	52.08	71.91	79.34	39.25	23.17
Eskay K'N'It (India) Ltd.	37.62	70.03	63.30	74.74	50.35	-137.06	30.37	53.26	13.45	14.19	27.03	61.53
Futura Polyesters Ltd.	6.45	2.02	28.58	26.26	39.21	38.69	36.96	30.08	46.97	40.49	29.57	14.75
Himatsingka Seide Ltd.	28.84	29.52	36.59	50.31	50.57	48.04	50.94	56.76	58.39	56.77	46.67	11.07
J C T Ltd.	17.72	80.09	34.08	81.07	90.46	3.49	44.59	29.38	43.91	15.20	44.00	30.38
K S L Realty & Infra. Ltd.	12.16	22.70	45.31	59.70	25.22	-0.14	2.00	7.39	16.07	50.23	24.06	20.99
Krishna Lifestyle Tech Ltd	76.90	45.40	89.43	91.82	35.11	-147.00	20.00	-2.69	-7.36	-13.20	18.84	70.18
Loyal Textile Mills Ltd.	33.72	41.79	35.05	37.15	31.69	33.96	44.07	47.81	53.39	43.55	40.22	7.07
Mafatlal Industries Ltd.	90.93	144.58	14.38	-45.47	-64.08	-26.42	-39.54	-19.98	-12.80	-23.83	1.78	65.75
N R C Ltd.	31.12	17.73	-21.26	18.71	10.57	59.39	17.62	30.17	54.91	23.05	24.20	22.69
Nahar Exports Ltd.	33.41	30.49	32.24	49.22	67.12	63.97	59.73	71.16	70.64	75.83	55.38	17.66
Parasrampuria Synthetics	17.16	58.59	79.79	44.26	-110.23	-15.84	-4.18	-10.59	-17.81	-13.20	2.80	52.70
Recron Synthetics Ltd.	32.79	23.47	40.43	46.24	8.49	7.64	14.18	33.05	10.42	-8.33	20.84	17.19
Sangam (India) Ltd.	16.45	19.13	15.22	20.70	23.08	23.06	23.97	28.87	27.73	55.10	25.33	11.34
Sanghi Polyesters Ltd.	2.37	48.98	23.66	65.34	23.95	7.29	17.28	24.16	66.38	45.44	32.49	22.76
Super Spinning Mills Ltd.	22.31	22.45	16.89	22.45	26.04	37.44	44.58	42.17	63.84	58.66	35.68	16.40
Uniworth Ltd.	28.35	67.30	20.74	2.30	22.15	16.93	-1.16	-3.15	0.90	0.58	15.49	21.49
Vardhman Polytex Ltd.	25.60	29.11	30.56	39.82	38.62	23.19	26.98	28.17	23.00	37.22	30.23	6.24
Sum	700.48	794.78	671.51	782.53	481.69	172.68	458.14	648.58	643.29	629.61	598.33	185.07
Average	33.36	37.85	31.98	37.26	22.94	8.22	21.82	30.88	30.63	29.98	28.49	8.81

Table 15: Profit After Tax Before Interest (PATBI) of MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	5.70	7.38	10.19	14.01	11.97	17.15	9.36	10.45	20.74	33.39	14.03	8.14
Ashima Ltd.	22.60	32.30	29.99	31.29	33.09	54.21	-23.63	-33.64	-11.52	-40.15	9.45	33.35
D C M Ltd.	100.77	31.94	49.07	28.04	4.09	-6.28	1.46	3.95	1.74	15.38	23.02	32.29
Eastern Silk Inds. Ltd.	10.98	13.48	13.35	19.76	21.27	19.10	19.47	25.44	40.64	56.37	23.99	14.10
Eskay K'N'It (India) Ltd.	48.39	64.85	62.40	80.65	30.58	-121.60	-0.21	6.16	8.84	17.71	19.78	56.95
Futura Polyesters Ltd.	-23.13	9.52	31.35	26.40	23.42	24.85	7.75	23.60	22.79	7.51	15.41	15.95
Himatsingka Seide Ltd.	23.37	26.18	32.49	43.27	43.18	38.42	40.28	50.65	47.73	50.20	39.58	9.56
J C T Ltd.	62.39	96.14	-50.01	1.36	-167.59	-13.85	27.68	3.11	23.17	30.97	1.34	71.62
K S L Realty & Infra. Ltd.	12.28	21.23	42.43	57.04	1.14	1.14	1.37	0.77	12.46	36.16	18.60	20.17
Krishna Lifestyle Tech Ltd	68.25	90.24	85.89	107.12	25.00	-58.15	-67.49	-27.82	-15.24	4.37	21.22	63.89
Loyal Textile Mills Ltd.	16.27	20.78	15.18	15.28	20.10	14.08	17.89	20.82	22.44	20.05	18.29	2.92
Mafatlal Industries Ltd.	93.23	164.09	43.68	-124.74	-140.39	60.39	-47.98	-14.31	19.54	-26.53	2.70	94.26
N R C Ltd.	25.73	24.88	-1.68	-10.99	-11.04	13.31	30.06	31.62	28.00	11.33	14.12	16.75
Nahar Exports Ltd.	24.40	23.93	26.69	8.30	38.93	15.94	75.49	42.23	29.69	39.61	32.52	18.49
Parasrampuria Synthetics	24.98	46.75	59.83	52.24	-198.34	-43.50	-30.21	-27.22	-33.70	-26.31	-17.55	75.09
Recron Synthetics Ltd.	17.62	-2.67	6.02	14.74	-16.41	-23.24	18.43	-10.30	-3.09	-20.48	-1.94	15.70
Sangam (India) Ltd.	10.32	12.25	10.94	17.20	20.86	13.32	14.35	20.82	22.32	33.84	17.62	7.16
Sanghi Polyesters Ltd.	43.21	6.63	33.05	43.03	4.68	5.10	16.86	22.26	31.73	22.38	22.89	14.72
Super Spinning Mills Ltd.	16.24	16.70	10.62	12.54	20.17	19.87	23.60	21.55	24.07	35.60	20.10	7.02
Uniworth Ltd.	55.45	67.92	53.65	-53.93	-41.13	-63.79	-31.36	-18.17	0.82	-3.69	-3.42	47.66
Vardhman Polytex Ltd.	26.71	36.19	25.74	30.64	34.73	18.94	27.25	13.05	12.61	17.93	24.38	8.43
Sum	685.76	810.71	590.87	413.25	-241.69	-14.59	130.42	165.02	305.78	315.64	316.12	323.89
Average	32.66	38.61	28.14	19.68	-11.51	-0.69	6.21	7.86	14.56	15.03	15.05	15.42

Table 16: Interest (INT) of MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	2.38	4.21	5.48	5.58	4.94	4.89	5.09	4.86	6.53	9.51	5.35	1.81
Ashima Ltd.	1.35	5.71	10.50	15.99	16.78	72.04	76.48	79.41	82.30	25.51	38.61	34.23
D C M Ltd.	77.09	77.60	71.00	46.32	9.44	3.96	1.95	1.93	1.63	11.36	30.23	33.76
Eastern Silk Inds. Ltd.	3.66	4.14	6.13	8.59	8.78	7.79	7.82	9.96	16.02	17.64	9.05	4.57
Eskay K'N'It (India) Ltd.	4.30	8.53	13.49	17.75	19.19	25.50	20.45	11.23	7.27	6.64	13.44	7.02
Futura Polyesters Ltd.	39.99	14.46	19.04	16.29	17.95	17.55	25.80	25.61	19.18	18.91	21.48	7.46
Himatsingka Seide Ltd.	0.82	1.54	3.52	2.58	1.01	0.33	0.17	0.13	1.33	1.89	1.33	1.10
J C T Ltd.	45.60	109.90	72.73	110.52	110.89	30.27	24.82	25.01	21.07	20.13	57.09	39.96
K S L Realty & Infra. Ltd.	1.08	0.03	0.00	0.00	0.00	0.71	0.81	0.00	1.79	4.24	0.87	1.33
Krishna Lifestyle Tech Ltd	6.05	10.24	15.69	10.75	17.59	14.30	11.42	10.20	11.05	2.33	10.96	4.44
Loyal Textile Mills Ltd.	11.03	11.58	12.47	12.53	11.86	9.97	9.71	9.07	7.87	9.04	10.51	1.61
Mafatlal Industries Ltd.	89.32	179.02	130.69	137.26	87.72	46.62	27.86	29.34	32.42	38.68	79.89	53.92
N R C Ltd.	21.60	21.88	23.77	18.76	19.87	19.55	15.46	15.05	14.34	13.89	18.42	3.52
Nahar Exports Ltd.	5.91	7.04	18.60	17.32	16.76	9.63	6.32	6.58	4.34	5.07	9.76	5.58
Parasrampuria Synthetics	16.93	28.73	34.32	42.89	120.01	79.10	128.65	160.79	198.16	237.19	104.68	76.85
Recron Synthetics Ltd.	18.65	19.60	38.71	44.51	35.91	33.85	17.35	9.53	6.04	6.18	23.03	14.17
Sangam (India) Ltd.	9.09	8.25	7.46	10.02	9.66	8.72	6.78	8.76	8.27	9.06	8.61	0.97
Sanghi Polyesters Ltd.	30.53	56.21	68.09	69.82	76.90	33.18	32.47	32.02	31.61	20.49	45.13	20.40
Super Spinning Mills Ltd.	6.57	6.63	7.45	8.33	12.36	10.98	9.61	11.12	12.84	13.22	9.91	2.55
Uniworth Ltd.	26.83	41.88	47.45	61.04	11.40	45.55	39.24	41.27	43.45	44.53	40.26	13.16
Vardhman Polytex Ltd.	14.00	11.15	13.21	13.37	14.55	14.98	9.24	3.56	5.14	9.00	10.82	4.01
Sum	432.78	628.33	619.80	670.22	623.57	489.47	477.50	495.43	532.65	524.51	549.43	79.90
Average	20.61	29.92	29.51	31.92	29.69	23.31	22.74	23.59	25.36	24.98	26.16	3.80

Table 17: Equity Capital of MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	32.86	35.31	39.31	49.08	50.71	53.96	57.26	64.52	77.58	247.13	70.77	63.43
Ashima Ltd.	153.45	211.28	224.34	234.09	245.02	226.71	126.61	14.04	-85.59	-150.56	119.94	144.19
D C M Ltd.	138.87	92.82	69.23	49.40	43.41	63.23	62.74	64.77	64.88	68.89	71.82	26.91
Eastern Silk Inds. Ltd.	42.53	49.70	54.13	61.71	70.88	78.69	87.46	101.09	207.36	233.46	98.70	66.82
Eskay K'N'It (India) Ltd.	210.43	303.46	348.77	408.24	418.24	270.88	250.22	245.15	246.72	257.79	295.99	72.19
Futura Polyesters Ltd.	64.88	59.95	130.88	141.00	146.47	166.06	100.94	137.26	146.48	138.16	123.21	35.92
Himatsingka Seide Ltd.	106.53	123.81	144.33	182.92	212.40	236.57	261.59	290.54	299.91	605.48	246.41	143.09
J C T Ltd.	748.64	730.24	601.95	472.54	146.35	156.66	158.80	136.57	138.34	143.12	343.32	264.60
K S L Realty & Infra. Ltd.	71.54	163.51	200.07	251.26	252.07	252.89	253.46	254.23	259.07	314.49	227.26	67.44
Krishna Lifestyle Tech Ltd	363.99	542.93	603.72	734.29	752.71	679.95	601.04	563.02	536.72	537.02	591.54	113.21
Loyal Textile Mills Ltd.	37.99	46.55	47.91	49.16	55.94	48.50	55.46	65.51	77.99	86.90	57.19	15.26
Mafatlal Industries Ltd.	311.80	295.74	208.16	-53.83	-264.46	-268.47	-344.31	-387.96	-400.84	-466.05	-137.02	304.07
N R C Ltd.	145.36	146.14	120.05	89.15	57.61	74.57	92.12	113.67	204.87	246.22	128.98	59.05
Nahar Exports Ltd.	133.66	145.87	210.52	206.34	222.75	199.11	262.37	292.11	311.56	340.10	232.44	68.25
Parasrampuria Synthetics	45.38	94.52	181.23	223.26	-54.87	-163.59	-322.45	-510.46	-742.32	-1039.39	-228.87	421.05
Recron Synthetics Ltd.	119.57	97.31	64.62	34.85	-17.47	-74.65	75.42	102.81	93.68	67.02	56.32	60.41
Sangam (India) Ltd.	25.34	28.56	31.09	39.16	48.20	40.51	46.01	67.57	77.93	137.32	54.17	33.65
Sanghi Polyesters Ltd.	301.97	237.16	199.98	201.56	129.34	108.24	92.63	82.87	82.99	84.88	152.16	77.82
Super Spinning Mills Ltd.	66.10	74.28	76.37	79.11	85.10	72.96	83.84	91.79	100.50	117.87	84.79	15.25
Uniworth Ltd.	186.12	198.13	198.49	83.60	31.17	-78.05	-148.57	-364.41	-407.06	-455.27	-75.59	257.78
Vardhman Polytex Ltd.	87.34	107.73	115.67	127.90	143.18	134.22	147.20	151.66	154.06	157.90	132.69	23.02
Sum	3394.35	3785.00	3870.82	3664.79	2774.75	2278.95	1999.84	1576.35	1444.83	1672.48	2646.22	971.77
Average	161.64	180.24	184.32	174.51	132.13	108.52	95.23	75.06	68.80	79.64	126.01	46.27

Table 18: Debt in MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	23.27	33.92	34.56	35.79	48.97	57.67	68.64	67.05	114.83	228.14	71.28	61.03
Ashima Ltd.	159.95	166.95	248.41	266.13	332.26	436.09	472.65	492.17	515.79	476.61	356.70	138.66
D C M Ltd.	377.23	393.12	351.07	328.96	309.91	199.62	189.17	187.93	184.80	183.33	270.51	89.00
Eastern Silk Inds. Ltd.	18.22	24.69	37.07	49.41	56.40	47.16	47.25	87.69	110.42	117.45	59.58	34.28
Eskay K'N'It (India) Ltd.	49.20	73.39	129.10	154.61	175.21	166.35	124.21	99.71	83.82	77.43	113.30	43.16
Futura Polyesters Ltd.	123.54	122.93	94.99	82.90	110.48	95.43	173.61	142.23	145.16	145.89	123.72	28.38
Himatsingka Seide Ltd.	23.22	40.86	34.91	0.92	0.00	0.00	0.00	13.77	58.50	39.75	21.19	21.42
J C T Ltd.	579.91	624.44	680.66	615.86	295.78	242.03	232.80	234.44	216.30	244.85	396.71	199.16
K S L Realty & Infra. Ltd.	0.00	0.00	0.00	0.00	5.00	5.00	0.00	0.00	19.61	263.97	29.36	82.66
Krishna Lifestyle Tech Ltd	59.65	83.21	99.50	123.80	107.72	91.66	76.04	72.70	67.69	69.14	85.11	20.29
Loyal Textile Mills Ltd.	69.93	87.74	100.67	93.51	99.65	93.82	109.57	129.97	190.69	254.09	122.96	56.59
Mafatlal Industries Ltd.	526.54	546.42	676.95	680.51	706.28	407.88	422.69	444.84	463.90	482.97	535.90	113.29
N R C Ltd.	110.17	108.10	123.67	122.37	176.36	157.54	121.27	100.92	110.55	168.32	129.93	27.18
Nahar Exports Ltd.	56.14	84.94	187.46	208.51	178.35	147.35	157.01	213.37	144.81	190.62	156.86	51.59
Parasrampuria Synthetics	214.49	241.45	309.75	418.41	601.92	601.41	608.21	599.93	596.48	596.39	478.84	165.90
Recron Synthetics Ltd.	191.31	340.84	394.62	399.92	407.99	428.43	251.56	192.46	196.08	203.52	300.67	102.52
Sangam (India) Ltd.	50.27	43.91	62.91	70.60	74.28	71.56	104.44	164.28	185.04	311.96	113.93	84.13
Sanghi Polyesters Ltd.	392.55	423.28	463.35	513.47	570.73	528.35	513.49	545.28	538.48	492.76	498.17	56.27
Super Spinning Mills Ltd.	47.53	59.81	61.66	76.01	102.73	103.16	117.08	171.21	161.59	222.53	112.33	56.84
Uniworth Ltd.	247.60	270.73	362.00	412.16	424.59	421.91	412.87	558.06	561.80	568.13	423.99	113.75
Vardhman Polytex Ltd.	97.02	110.91	104.93	128.02	153.93	130.21	43.63	99.83	160.88	193.45	122.28	41.38
Sum	3417.74	3881.64	4558.24	4781.87	4938.54	4432.63	4246.19	4617.84	4827.22	5531.30	4523.32	584.70
Average	162.75	184.84	217.06	227.71	235.17	211.08	202.20	219.90	229.87	263.40	215.40	27.84

Table 19: Current Assets (CA) of MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	23.82	29.32	33.90	44.19	61.97	64.54	71.59	78.86	96.72	285.03	78.99	76.07
Ashima Ltd.	166.50	201.73	214.38	218.01	231.85	373.15	325.60	327.34	317.66	168.47	254.47	74.40
D C M Ltd.	430.18	453.93	414.25	398.03	386.62	371.60	358.85	389.95	373.63	367.34	394.44	30.29
Eastern Silk Inds. Ltd.	72.88	90.54	124.95	152.35	150.55	166.60	192.59	200.63	267.13	332.80	175.10	78.60
Eskay K'N'It (India) Ltd.	221.07	330.97	362.70	451.39	498.26	346.03	279.35	253.30	236.46	252.82	323.24	93.65
Futura Polyesters Ltd.	150.85	146.25	191.40	186.89	177.64	163.66	147.59	169.57	176.59	188.00	169.84	17.13
Himatsingka Seide Ltd.	62.71	61.38	73.93	69.68	100.19	120.86	167.15	225.09	273.49	545.32	169.98	150.74
J C T Ltd.	725.55	790.80	689.52	845.49	405.95	364.22	366.17	362.74	367.46	272.34	519.02	216.16
K S L Realty & Infra. Ltd.	101.40	163.52	223.33	256.20	273.20	245.64	217.10	191.04	189.74	283.19	214.44	55.29
Krishna Lifestyle Tech Ltd	269.86	514.58	486.49	620.76	619.13	539.64	450.95	426.02	419.62	419.11	476.62	104.94
Loyal Textile Mills Ltd.	85.04	98.88	106.76	107.27	108.79	106.13	110.47	138.04	150.51	175.29	118.72	27.31
Mafatlal Industries Ltd.	811.74	861.74	878.32	621.81	500.47	439.99	394.40	413.73	394.89	378.17	569.53	207.03
N R C Ltd.	128.43	139.73	149.87	143.31	140.34	112.30	119.82	130.33	150.16	152.21	136.65	13.54
Nahar Exports Ltd.	132.08	151.77	247.00	259.15	246.04	231.82	307.77	392.61	350.81	389.06	270.81	89.96
Parasrampuria Synthetics	92.66	113.05	240.92	334.68	130.46	109.83	101.48	207.85	197.98	192.72	172.16	77.41
Recron Synthetics Ltd.	93.28	99.78	119.71	110.75	105.03	102.32	99.53	75.55	97.89	125.24	102.91	13.88
Sangam (India) Ltd.	40.22	35.17	32.41	49.03	51.47	45.73	58.53	90.10	113.26	174.98	69.09	45.10
Sanghi Polyesters Ltd.	221.82	147.06	141.93	153.15	166.19	164.71	164.03	186.62	188.93	164.62	169.91	23.63
Super Spinning Mills Ltd.	73.03	82.42	72.61	84.35	106.32	109.87	140.53	233.67	219.36	272.60	139.48	74.63
Uniworth Ltd.	235.43	267.82	312.83	287.45	406.30	392.78	289.08	590.43	607.77	579.99	396.99	144.90
Vardhman Polytex Ltd.	144.47	151.44	153.32	168.23	182.11	176.04	179.55	187.45	202.13	212.21	175.70	21.98
Sum	4283.02	4931.88	5270.53	5562.17	5048.88	4747.46	4542.13	5270.92	5392.19	5931.51	5098.07	492.44
Average	203.95	234.85	250.98	264.87	240.42	226.07	216.29	251.00	256.77	282.45	242.77	23.45

Table 20: Current Liability of MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	12.80	13.32	14.62	10.76	11.39	12.77	11.95	13.15	14.55	24.63	13.99	3.93
Ashima Ltd.	27.37	31.70	17.31	20.25	19.61	70.73	49.58	84.04	121.76	132.35	57.47	43.06
D C M Ltd.	40.24	103.02	125.03	152.95	154.47	137.05	132.78	168.98	158.34	161.83	133.47	38.31
Eastern Silk Inds. Ltd.	19.15	14.40	25.14	34.15	26.08	43.33	66.40	51.96	85.06	91.64	45.73	27.40
Eskay K'N'It (India) Ltd.	31.57	59.28	5.91	14.16	16.93	3.67	14.86	7.33	5.73	68.58	22.80	23.23
Futura Polyesters Ltd.	85.91	82.54	78.43	77.74	51.02	40.06	115.68	140.13	115.71	124.51	91.17	32.28
Himatsingka Seide Ltd.	3.17	2.91	2.55	3.67	4.76	5.69	6.58	7.98	6.21	10.55	5.41	2.54
J C T Ltd.	227.01	280.00	227.64	311.25	182.77	116.35	115.26	118.49	126.02	120.37	182.52	74.64
K S L Realty & Infra. Ltd.	37.74	16.23	42.44	21.49	35.31	6.27	5.03	4.31	4.72	20.89	19.44	14.75
Krishna Lifestyle Tech Ltd	13.74	105.15	37.75	23.27	19.10	15.88	11.34	11.10	23.18	8.34	26.89	28.79
Loyal Textile Mills Ltd.	26.14	21.40	24.47	27.44	21.72	20.53	24.86	35.10	36.06	43.44	28.12	7.59
Mafatlal Industries Ltd.	171.90	241.08	261.46	268.58	268.14	407.29	411.67	515.98	317.87	322.45	318.64	100.74
N R C Ltd.	44.31	53.51	69.52	84.00	83.26	63.44	67.78	71.70	60.73	69.39	66.76	12.19
Nahar Exports Ltd.	12.79	41.99	35.75	37.39	25.71	21.13	20.21	25.00	22.76	21.23	26.40	9.10
Parasrampuria Synthetics	29.66	35.81	75.24	119.87	136.30	222.22	346.46	516.14	716.49	957.68	315.59	318.18
Recron Synthetics Ltd.	43.50	55.61	64.53	70.23	95.74	121.74	130.45	104.34	108.46	137.16	93.18	32.88
Sangam (India) Ltd.	6.94	6.43	4.59	11.11	8.41	5.55	10.56	6.59	8.24	28.41	9.68	6.90
Sanghi Polyesters Ltd.	24.62	12.50	13.24	15.58	11.42	43.22	45.59	24.40	21.45	19.17	23.12	12.18
Super Spinning Mills Ltd.	16.23	22.35	10.55	11.59	13.66	13.87	17.05	55.87	58.05	44.33	26.36	18.82
Uniworth Ltd.	45.55	86.49	60.75	116.71	90.63	280.49	246.78	504.70	552.74	556.04	254.09	210.42
Vardhman Polytex Ltd.	14.11	8.78	12.60	17.29	16.65	19.49	7.98	9.36	11.53	13.08	13.09	3.85
Sum	934.45	1294.50	1209.52	1449.48	1293.08	1670.77	1858.85	2476.65	2575.66	2976.07	1773.90	682.25
Average	44.50	61.64	57.60	69.02	61.58	79.56	88.52	117.94	122.65	141.72	84.47	32.49

Table 21: Cash and Bank Balance of MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	3.09	1.38	0.38	0.56	1.63	1.13	1.27	1.80	2.11	5.77	1.91	1.56
Ashima Ltd.	35.27	20.99	19.92	23.54	25.97	18.36	19.23	21.29	18.85	12.04	21.55	6.04
D C M Ltd.	77.79	38.00	33.27	34.92	3.22	10.93	10.91	7.10	6.66	9.97	23.28	23.21
Eastern Silk Inds. Ltd.	5.16	3.19	2.07	5.09	1.14	2.67	7.99	17.81	16.42	17.16	7.87	6.68
Eskay K'N'It (India) Ltd.	35.02	66.03	15.48	13.42	22.97	15.43	17.99	16.96	15.02	14.89	23.32	16.30
Futura Polyesters Ltd.	13.64	8.25	10.21	14.54	10.26	10.74	20.92	44.98	16.48	20.81	17.08	10.74
Himatsingka Seide Ltd.	11.07	5.98	12.62	13.30	28.90	58.13	88.78	128.46	170.13	407.80	92.52	124.16
J C T Ltd.	43.42	37.64	32.50	29.46	26.37	24.43	20.31	20.00	17.58	69.08	32.08	15.35
K S L Realty & Infra. Ltd.	4.20	5.63	30.95	11.92	14.79	14.98	19.55	10.98	10.84	0.94	12.48	8.54
Krishna Lifestyle Tech Ltd	7.24	17.55	4.59	33.97	11.55	2.26	2.10	2.01	1.45	1.35	8.41	10.43
Loyal Textile Mills Ltd.	2.15	1.66	1.87	2.92	2.15	2.52	2.46	2.40	2.78	2.51	2.34	0.39
Mafatlal Industries Ltd.	49.06	43.81	47.32	62.48	45.47	8.28	4.16	39.65	34.34	31.54	36.61	18.15
N R C Ltd.	18.44	19.99	19.90	19.98	20.19	19.88	19.54	19.34	21.06	21.36	19.97	0.82
Nahar Exports Ltd.	43.86	52.49	71.45	4.72	35.54	41.88	111.25	108.38	115.25	134.09	71.89	42.85
Parasrampuria Synthetics	6.99	4.34	9.68	3.17	2.79	1.81	2.52	1.99	1.73	1.74	3.68	2.66
Recron Synthetics Ltd.	0.93	0.62	2.56	1.44	1.58	1.13	0.54	0.49	0.53	0.30	1.01	0.69
Sangam (India) Ltd.	1.32	1.50	1.53	1.45	2.87	2.92	4.61	2.23	2.24	4.59	2.53	1.23
Sanghi Polyesters Ltd.	7.83	4.96	4.70	4.04	9.00	6.17	9.17	55.63	57.28	51.58	21.04	23.42
Super Spinning Mills Ltd.	1.86	1.11	1.52	1.20	0.99	1.69	1.81	1.39	1.83	1.61	1.50	0.32
Uniworth Ltd.	10.08	12.70	11.98	11.43	10.15	5.18	4.01	3.38	3.44	3.13	7.55	4.03
Vardhman Polytex Ltd.	30.31	30.13	31.75	25.05	23.13	23.41	3.22	2.03	19.05	6.73	19.48	11.41
Sum	408.73	377.95	366.25	318.60	300.66	273.93	372.34	508.30	535.07	818.99	428.08	160.73
Average	19.46	18.00	17.44	15.17	14.32	13.04	17.73	24.20	25.48	39.00	20.38	7.65

Table 21: Inventory in MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	11.31	17.06	20.89	24.71	35.10	39.91	45.78	52.64	62.97	112.25	42.26	29.56
Ashima Ltd.	35.47	64.84	72.16	66.10	73.29	72.71	70.12	63.95	60.68	55.91	63.52	11.35
D C M Ltd.	50.79	58.42	108.70	113.47	135.08	125.75	126.21	35.38	24.80	27.87	80.65	45.06
Eastern Silk Inds. Ltd.	48.47	56.49	68.95	85.28	77.71	78.58	99.16	95.90	120.77	156.49	88.78	31.74
Eskay K'N'It (India) Ltd.	79.23	67.34	117.32	121.23	131.70	137.31	88.32	55.05	43.96	68.22	90.97	33.56
Futura Polyesters Ltd.	39.27	38.73	37.52	35.60	42.29	26.71	72.88	51.89	75.68	94.85	51.54	22.06
Himatsingka Seide Ltd.	19.25	23.68	34.26	36.19	39.90	35.22	32.88	35.88	29.39	42.48	32.91	7.08
J C T Ltd.	194.69	171.91	112.71	128.62	98.59	90.89	92.20	106.76	108.21	119.87	122.45	34.53
K S L Realty & Infra. Ltd.	2.11	26.07	32.66	55.50	10.90	14.17	34.85	17.40	28.26	66.84	28.88	19.99
Krishna Lifestyle Tech Ltd	59.45	129.51	185.15	271.41	264.84	315.38	200.97	177.98	172.76	180.98	195.84	73.77
Loyal Textile Mills Ltd.	37.40	41.25	48.29	51.11	54.41	50.13	55.82	73.49	61.63	75.11	54.86	12.35
Mafatlal Industries Ltd.	208.18	220.24	149.55	87.73	75.20	45.09	43.22	42.89	39.86	41.18	95.31	71.29
N R C Ltd.	31.40	51.99	74.07	59.80	56.84	33.54	62.08	73.13	70.71	77.77	59.13	16.30
Nahar Exports Ltd.	32.29	40.40	79.46	105.31	101.27	88.11	124.51	163.54	139.95	141.00	101.58	42.97
Parasrampuria Synthetics	48.80	62.02	103.81	105.77	23.39	24.37	25.41	26.86	25.76	26.93	47.31	32.84
Recron Synthetics Ltd.	42.67	38.03	49.66	44.33	52.24	73.84	84.16	64.97	78.14	104.79	63.28	21.66
Sangam (India) Ltd.	11.66	11.04	10.67	18.91	21.95	18.61	28.84	32.55	40.82	67.94	26.30	17.68
Sanghi Polyesters Ltd.	70.35	9.38	11.35	12.17	9.10	8.83	9.04	24.62	18.13	11.37	18.43	18.92
Super Spinning Mills Ltd.	44.04	53.77	39.27	41.57	52.48	44.71	70.48	134.17	80.37	118.70	67.96	33.65
Uniworth Ltd.	82.85	79.37	118.53	79.33	43.04	35.99	36.78	12.06	13.02	14.58	51.56	36.45
Vardhman Polytex Ltd.	34.63	61.74	60.46	59.45	77.30	74.33	56.05	84.38	76.11	91.76	67.62	16.50
Sum	1184.31	1323.28	1535.44	1603.59	1476.62	1434.18	1459.76	1425.49	1371.98	1696.89	1451.15	143.84
Average	56.40	63.01	73.12	76.36	70.32	68.29	69.51	67.88	65.33	80.80	69.10	6.85

Table 23: Accounts Receivable of MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	9.39	10.87	12.62	18.19	22.18	18.13	18.22	19.31	26.87	162.89	31.87	46.33
Ashima Ltd.	67.25	74.90	81.25	87.30	91.53	251.29	205.66	186.69	186.11	70.51	130.25	69.11
D C M Ltd.	258.77	310.51	219.92	200.93	196.01	201.30	186.65	279.76	279.54	267.84	240.12	44.04
Eastern Silk Inds. Ltd.	17.25	28.86	52.83	50.89	60.69	84.35	84.48	85.96	128.34	158.18	75.18	43.21
Eskay K'N'It (India) Ltd.	99.59	163.60	163.40	236.21	308.32	180.93	162.54	170.79	166.98	159.21	181.16	55.39
Futura Polyesters Ltd.	72.35	75.22	61.21	54.30	42.66	43.74	53.00	47.60	59.98	49.89	56.00	11.19
Himatsingka Seide Ltd.	27.30	26.72	22.05	17.19	28.39	27.51	44.65	58.81	65.12	84.05	40.18	22.15
J C T Ltd.	462.24	554.42	517.90	657.09	251.02	218.93	223.64	205.93	207.18	64.42	336.28	194.55
K S L Realty & Infra. Ltd.	94.05	110.79	120.69	127.97	172.90	191.30	149.92	139.38	127.36	183.93	141.83	32.23
Krishna Lifestyle Tech Ltd	202.16	307.52	186.75	209.89	237.25	207.70	233.58	231.73	231.11	222.48	227.02	32.65
Loyal Textile Mills Ltd.	44.91	55.35	55.97	52.61	51.08	51.70	50.41	60.37	83.88	95.53	60.18	16.31
Mafatlal Industries Ltd.	342.49	403.13	480.24	269.06	182.41	166.76	149.99	154.31	145.09	131.62	242.51	124.94
N R C Ltd.	76.97	65.77	53.92	61.57	61.35	56.92	37.74	42.40	57.93	52.62	56.72	11.20
Nahar Exports Ltd.	55.23	58.19	95.40	110.91	108.61	101.28	69.02	117.70	93.01	112.38	92.17	23.17
Parasrampuria Synthetics	36.87	46.69	126.93	225.24	103.76	83.15	73.05	73.22	64.70	58.26	89.19	54.57
Recron Synthetics Ltd.	49.68	61.13	67.49	64.98	51.21	27.35	14.83	10.09	19.22	20.15	38.61	22.46
Sangam (India) Ltd.	27.24	22.63	19.65	28.67	26.65	24.20	25.08	55.32	70.20	102.45	40.21	27.29
Sanghi Polyesters Ltd.	113.09	67.78	60.94	72.00	47.50	49.12	45.23	71.18	73.33	61.48	66.17	19.55
Super Spinning Mills Ltd.	25.78	26.07	27.75	37.12	39.89	52.27	56.69	73.63	112.49	127.62	57.93	36.26
Uniworth Ltd.	138.92	172.18	178.74	195.65	304.57	303.90	200.58	520.28	538.06	509.03	306.19	158.57
Vardhman Polytex Ltd.	78.19	57.23	58.77	83.48	81.35	77.96	101.14	79.47	79.22	95.35	79.22	13.61
Sum	2299.72	2699.56	2664.42	2861.25	2469.33	2419.79	2186.10	2683.93	2815.72	2789.89	2588.97	231.36
Average	109.51	128.55	126.88	136.25	117.59	115.23	104.10	127.81	134.08	132.85	123.28	11.02

Table 24: Sales of MEDIUM Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Alps Industries Ltd.	49.26	60.53	74.77	94.28	114.10	118.45	134.92	152.45	177.82	262.89	123.95	63.39
Ashima Ltd.	154.20	202.27	243.57	282.92	303.48	643.98	397.35	427.22	469.52	447.44	357.20	147.59
D C M Ltd.	282.83	137.75	170.87	263.35	279.79	171.79	103.38	272.45	122.47	135.29	194.00	72.40
Eastern Silk Inds. Ltd.	86.77	99.31	113.85	165.28	203.00	209.05	238.09	274.90	338.61	393.41	212.23	102.12
Eskay K'N'It (India) Ltd.	371.39	445.84	579.43	741.85	853.24	461.87	397.92	280.62	314.56	429.07	487.58	184.67
Futura Polyesters Ltd.	291.22	94.39	214.71	215.90	215.04	173.44	339.17	409.27	472.54	469.61	289.53	129.47
Himatsingka Seide Ltd.	58.85	59.67	84.79	113.75	128.44	122.67	125.79	135.45	137.82	150.75	111.80	32.66
J C T Ltd.	714.45	805.15	776.35	1203.07	1401.95	491.75	534.34	545.23	598.48	518.95	758.97	310.19
K S L Realty & Infra. Ltd.	90.44	252.03	330.76	426.96	324.69	84.69	34.41	87.14	153.61	348.84	213.36	139.38
Krishna Lifestyle Tech Ltd	386.86	475.66	535.09	651.39	689.20	176.72	168.11	130.00	130.72	160.35	350.41	224.32
Loyal Textile Mills Ltd.	166.66	178.55	165.77	163.14	174.27	177.09	201.44	233.25	303.25	311.26	207.47	56.65
Mafatlal Industries Ltd.	723.60	1026.84	623.21	410.81	433.38	383.95	156.17	166.05	141.00	146.43	421.14	296.28
N R C Ltd.	360.94	321.39	269.35	273.60	289.16	317.22	292.84	343.88	398.82	386.34	325.35	45.93
Nahar Exports Ltd.	129.89	162.91	372.69	403.30	430.69	410.25	372.70	450.90	455.75	427.71	361.68	117.14
Parasrampuria Synthetics	116.88	175.53	321.63	442.36	240.18	133.39	228.90	268.54	268.87	248.59	244.49	94.24
Recron Synthetics Ltd.	250.87	203.53	359.06	357.94	265.77	447.66	438.10	486.11	476.90	551.42	383.74	115.30
Sangam (India) Ltd.	168.56	110.55	106.92	161.46	183.45	189.61	195.61	267.03	289.24	346.28	201.87	77.00
Sanghi Polyesters Ltd.	294.37	273.46	273.61	271.73	274.73	293.16	278.87	353.25	431.23	357.96	310.24	53.47
Super Spinning Mills Ltd.	157.36	168.41	177.87	191.65	257.84	310.70	284.41	337.01	376.31	369.28	263.08	84.86
Uniworth Ltd.	187.39	272.62	254.53	189.49	167.20	246.90	163.77	61.68	46.34	49.14	163.91	85.36
Vardhman Polytex Ltd.	148.21	174.21	211.20	222.67	267.41	284.43	216.79	183.39	233.57	292.16	223.40	47.56
Sum	5191.00	5700.60	6260.03	7246.90	7497.01	5848.77	5303.08	5865.82	6337.43	6803.17	6205.38	779.69
Average	247.19	271.46	298.10	345.09	357.00	278.51	252.53	279.32	301.78	323.96	295.49	37.13

Table 25: Fixed Assets (FA) of LARGE size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	38.33	38.14	67.06	203.27	203.96	288.10	268.92	289.73	561.66	762.43	272.16	232.30
Alok Industries Ltd.	54.79	98.16	116.75	123.99	195.84	307.31	380.39	579.53	879.27	1874.24	461.03	559.31
Arvind Mills Ltd.	975.18	1666.26	2260.72	2008.95	1797.59	1735.06	1608.10	1497.11	1475.41	1379.84	1640.42	351.85
Century Enka Ltd.	190.55	684.21	661.79	620.47	580.82	552.83	545.75	570.73	699.73	719.22	582.61	151.48
Forbes Gokak Ltd.	138.27	134.09	122.14	113.04	119.42	106.22	99.67	159.29	171.67	304.25	146.81	59.78
Garden Silk Mills Ltd.	237.42	213.92	224.86	217.06	245.21	283.41	373.44	466.75	718.57	750.07	373.07	206.75
Indo Rama Synthetics	1616.21	1637.27	1622.91	1812.92	1727.25	1648.88	1450.56	1319.33	1317.68	1527.61	1568.06	163.96
J B F Industries Ltd.	212.95	229.74	279.37	292.52	326.17	323.41	323.55	336.71	331.74	518.24	317.44	82.82
Nahar Spinning Mills Ltd.	108.30	145.19	159.31	216.75	259.35	260.83	259.80	246.09	245.13	342.49	224.32	68.88
Prag Bosimi Synthetics	273.38	351.58	401.11	518.95	592.56	676.33	653.77	686.71	743.53	783.58	568.15	174.79
R S W M Ltd.	262.25	306.08	331.59	292.29	272.62	261.88	237.16	240.87	351.03	428.86	298.46	59.02
Raymond Ltd.	809.71	934.69	933.19	852.35	367.02	377.17	416.97	430.72	591.01	844.34	655.72	241.64
S Kumars Nationwide Ltd.	261.51	468.12	588.06	661.38	739.76	751.31	693.11	638.38	411.82	382.52	559.60	168.27
S R F Ltd.	581.91	626.83	576.94	531.86	611.90	582.95	545.71	568.07	826.85	1095.56	654.86	175.62
Vardhman Textiles Ltd.	258.34	259.20	299.88	317.75	392.67	383.21	465.45	435.14	821.32	1037.04	467.00	258.41
Welspun India Ltd.	139.80	256.70	335.03	409.07	212.64	196.15	207.77	211.30	827.78	1025.20	382.14	300.45
Sum	6158.90	8050.18	8980.71	9192.62	8644.78	8735.05	8530.12	8676.46	10974.20	13775.49	9171.85	1998.35
Average	384.93	503.14	561.29	574.54	540.30	545.94	533.13	542.28	685.89	860.97	573.24	124.90

Table 26: Gross Profit (GP) of LARGE size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	11.10	10.60	7.33	19.31	56.99	105.90	71.23	108.65	155.43	158.30	70.48	59.20
Alok Industries Ltd.	15.16	24.20	27.28	50.00	60.95	101.26	113.12	244.98	229.80	325.48	119.22	109.26
Arvind Mills Ltd.	211.20	135.23	88.26	91.32	143.38	149.36	397.49	240.86	338.62	386.62	218.23	118.22
Century Enka Ltd.	48.36	63.94	68.01	97.67	102.83	111.38	74.18	105.22	81.51	22.27	77.54	28.22
Forbes Gokak Ltd.	84.45	70.14	68.11	51.83	55.69	27.44	51.64	68.38	75.47	117.80	67.10	23.87
Garden Silk Mills Ltd.	44.16	75.54	64.81	61.39	61.32	78.75	95.19	75.29	81.31	122.72	76.05	21.49
Indo Rama Synthetics	157.73	170.90	151.28	222.33	251.93	307.67	233.70	289.26	276.94	364.95	242.67	69.78
J B F Industries Ltd.	19.04	27.72	31.10	10.55	17.18	38.84	41.44	79.64	75.02	61.77	40.23	24.34
Nahar Spinning Mills Ltd.	53.40	34.96	45.92	57.79	55.58	51.25	71.44	42.55	48.72	49.31	51.09	9.74
Prag Bosimi Synthetics	0.96	-1.55	2.34	0.03	-3.40	-4.42	-10.48	-9.90	-15.55	-1.65	-4.36	5.79
R S W M Ltd.	80.23	80.30	72.88	71.68	66.06	70.53	51.34	102.46	90.10	140.55	82.61	24.56
Raymond Ltd.	285.23	374.31	408.84	431.96	369.41	225.01	269.59	249.12	281.34	347.35	324.22	71.24
S Kumars Nationwide Ltd.	18.54	46.28	98.99	132.33	131.18	52.10	-0.29	-0.01	49.05	162.43	69.06	58.51
S R F Ltd.	150.77	169.43	168.83	197.09	139.39	122.89	141.83	129.42	148.72	259.55	162.79	40.35
Vardhman Textiles Ltd.	145.95	171.18	160.41	199.14	171.91	154.17	182.42	219.10	378.50	420.68	220.35	97.36
Welspun India Ltd.	29.43	42.28	40.17	60.39	112.37	90.92	79.21	105.93	134.29	159.06	85.41	43.07
Sum	1355.71	1495.46	1504.56	1754.81	1792.77	1683.05	1863.05	2050.95	2429.27	3097.19	1902.68	519.98
Average	84.73	93.47	94.04	109.68	112.05	105.19	116.44	128.18	151.83	193.57	118.92	32.50

Table 27: Profit After Tax Before Interest (PATBI) of LARGE Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	10.69	9.20	4.31	20.64	37.20	45.24	37.04	62.34	61.42	80.62	36.87	25.84
Alok Industries Ltd.	12.79	19.37	35.81	49.83	62.73	78.49	99.52	147.05	169.23	201.27	87.61	65.25
Arvind Mills Ltd.	230.27	175.38	41.38	-5.55	-57.95	65.27	234.69	182.98	204.65	219.65	129.08	108.13
Century Enka Ltd.	40.75	47.34	77.55	84.72	96.94	46.06	64.23	61.15	56.43	26.78	60.20	21.46
Forbes Gokak Ltd.	30.46	30.54	19.37	43.98	22.59	22.72	20.17	25.47	38.94	40.76	29.50	8.99
Garden Silk Mills Ltd.	36.71	45.87	27.66	-4.54	31.47	4.38	53.21	46.46	27.72	66.82	33.58	21.59
Indo Rama Synthetics	90.01	46.63	7.42	155.82	183.61	153.57	200.06	218.95	105.07	77.77	123.89	69.50
J B F Industries Ltd.	13.47	18.00	16.17	-10.64	0.21	10.18	22.39	49.46	45.35	52.90	21.75	21.23
Nahar Spinning Mills Ltd.	31.47	46.23	32.20	-63.32	42.63	36.05	150.43	35.99	25.27	36.72	37.37	50.81
Prag Bosimi Synthetics	0.69	1.63	-1.74	-3.64	-5.44	-6.01	-7.32	-3.34	9.46	8.48	-0.72	5.83
R S W M Ltd.	43.22	50.24	47.21	53.21	43.62	31.91	32.48	33.23	32.77	48.79	41.67	8.33
Raymond Ltd.	114.08	159.49	194.46	138.61	420.05	136.66	125.01	154.23	110.38	155.34	170.83	90.98
S Kumars Nationwide Ltd.	28.92	44.46	83.66	100.00	107.27	24.12	-21.88	-17.27	-200.31	144.85	29.38	97.27
S R F Ltd.	121.00	120.17	108.55	110.00	98.14	73.19	68.81	61.63	79.96	133.41	97.49	25.04
Vardhman Textiles Ltd.	79.50	95.50	94.48	101.25	102.07	64.32	78.56	99.06	176.74	234.64	112.61	52.32
Welspun India Ltd.	23.52	27.05	26.00	29.03	3.16	45.36	39.28	47.97	56.70	70.22	36.83	19.14
Sum	907.55	937.10	814.49	799.40	1188.30	831.51	1196.68	1205.36	999.78	1599.02	1047.92	251.16
Average	56.72	58.57	50.91	49.96	74.27	51.97	74.79	75.34	62.49	99.94	65.49	15.70

Table 28: Interest (INT) of LARGE Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	6.17	5.24	6.91	25.66	33.33	42.70	17.99	18.30	21.15	23.80	20.13	12.15
Alok Industries Ltd.	7.17	11.33	20.84	28.45	33.26	40.98	57.09	75.97	79.78	91.75	44.66	29.96
Arvind Mills Ltd.	102.87	74.34	91.53	265.88	441.53	45.01	105.36	86.23	77.30	92.49	138.25	122.06
Century Enka Ltd.	9.68	39.55	41.44	32.72	26.47	11.54	6.14	4.15	3.87	9.19	18.48	14.98
Forbes Gokak Ltd.	17.68	15.75	14.36	12.87	15.46	13.14	8.98	9.72	13.99	19.16	14.11	3.18
Garden Silk Mills Ltd.	32.02	28.23	19.29	15.88	11.43	9.15	14.62	11.95	18.93	44.72	20.62	11.17
Indo Rama Synthetics	88.46	133.94	166.97	163.47	164.87	112.29	61.94	46.93	34.86	25.94	99.97	55.93
J B F Industries Ltd.	5.86	9.13	13.31	18.67	21.98	21.94	17.99	22.80	16.19	10.20	15.81	5.95
Nahar Spinning Mills Ltd.	5.28	5.88	9.47	10.69	19.77	17.76	10.81	9.59	9.23	8.48	10.70	4.65
Prag Bosimi Synthetics	0.34	0.42	0.83	2.54	2.52	2.93	2.51	3.77	7.64	9.89	3.34	3.12
R S W M Ltd.	35.18	29.70	37.45	38.65	33.61	26.71	23.74	14.78	14.36	21.71	27.59	8.86
Raymond Ltd.	104.63	114.47	113.69	106.90	87.84	48.54	34.76	21.94	27.25	34.33	69.44	39.26
S Kumars Nationwide Ltd.	14.40	21.12	43.23	59.77	85.45	131.53	113.50	1.87	2.01	45.07	51.80	45.69
S R F Ltd.	106.34	116.86	95.01	83.20	62.99	45.90	36.92	20.02	19.91	28.64	61.58	36.59
Vardhman Textiles Ltd.	42.00	41.19	43.95	43.60	43.10	38.91	36.03	38.90	55.98	38.32	42.20	5.49
Welspun India Ltd.	11.57	20.01	18.04	50.24	58.49	33.89	20.51	17.94	18.12	28.67	27.75	15.44
Sum	589.65	667.16	736.32	959.19	1142.10	642.92	568.89	404.86	420.57	532.36	666.40	230.86
Average	36.85	41.70	46.02	59.95	71.38	40.18	35.56	25.30	26.29	33.27	41.65	14.43

Table 29: Equity Capital of LARGE Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	20.25	24.21	21.61	55.88	59.76	205.01	238.77	274.63	317.23	351.91	156.93	133.68
Alok Industries Ltd.	34.78	43.34	73.83	106.24	134.72	185.89	251.17	306.98	595.50	808.28	254.07	256.53
Arvind Mills Ltd.	1082.65	1155.48	1097.30	825.46	325.98	840.77	999.31	1115.77	1219.07	1479.79	1014.16	305.54
Century Enka Ltd.	296.59	423.57	457.90	496.37	550.09	471.54	511.65	549.07	581.77	460.31	479.89	81.02
Forbes Gokak Ltd.	170.86	181.55	184.48	201.76	204.77	197.02	204.71	190.41	208.18	308.76	205.25	38.30
Garden Silk Mills Ltd.	364.76	352.16	355.44	329.42	343.13	307.41	311.66	327.23	329.47	345.02	336.57	18.76
Indo Rama Synthetics	601.91	512.40	351.56	631.47	633.10	694.78	584.14	701.58	698.14	690.43	609.95	109.47
J B F Industries Ltd.	208.30	213.76	214.90	185.59	163.82	152.06	156.45	176.11	195.43	299.68	196.61	42.95
Nahar Spinning Mills Ltd.	334.22	434.06	448.07	366.38	381.86	399.38	552.60	569.69	576.29	595.10	465.77	98.45
Prag Bosimi Synthetics	66.67	67.90	65.38	63.63	55.66	50.11	36.89	29.79	35.00	35.09	50.61	15.19
R S W M Ltd.	170.33	185.40	190.10	184.59	202.46	171.67	177.69	191.00	212.84	244.04	193.01	22.19
Raymond Ltd.	734.00	767.38	831.48	850.69	916.43	937.80	996.88	1091.09	1146.46	1232.48	950.47	165.22
S Kumars Nationwide Ltd.	151.99	167.36	252.28	283.85	405.55	364.00	225.88	204.11	-51.22	46.50	205.03	137.19
S R F Ltd.	340.50	376.49	424.06	436.96	389.42	381.28	401.60	441.83	489.46	597.79	427.94	72.70
Vardhman Textiles Ltd.	291.49	333.75	372.67	401.81	465.55	423.67	469.62	516.71	816.48	997.10	508.89	224.02
Welspun India Ltd.	80.01	83.87	88.14	103.79	35.42	167.77	186.54	216.57	352.71	519.75	183.46	149.46
Sum	4949.31	5322.68	5429.20	5523.89	5267.72	5950.16	6305.56	6902.57	7722.81	9012.03	6238.59	1292.42
Average	309.33	332.67	339.33	345.24	329.23	371.89	394.10	431.41	482.68	563.25	389.91	80.78

Table 30: Debt in LARGE Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	24.71	23.69	51.36	195.36	208.74	215.01	157.17	194.07	466.39	689.50	222.60	208.58
Alok Industries Ltd.	70.47	140.59	168.32	217.42	308.46	446.93	544.17	818.56	1318.97	2145.19	617.91	657.00
Arvind Mills Ltd.	1052.73	1558.77	1936.26	1925.09	1935.70	1626.44	1340.71	1355.50	1686.81	1841.78	1625.98	301.77
Century Enka Ltd.	56.32	408.28	375.16	291.94	195.87	112.71	100.64	95.54	227.30	296.88	216.06	124.33
Forbes Gokak Ltd.	88.56	86.14	77.56	92.85	110.54	103.13	100.50	167.61	167.15	248.03	124.21	53.88
Garden Silk Mills Ltd.	144.81	104.81	116.99	98.99	95.98	140.94	171.26	321.74	591.69	639.08	242.63	207.42
Indo Rama Synthetics	1233.45	1380.51	1385.81	1331.86	1248.06	1101.20	989.49	788.56	576.54	560.94	1059.64	318.22
J B F Industries Ltd.	96.52	121.54	152.23	160.53	199.52	193.96	181.46	162.62	155.93	428.46	185.28	90.95
Nahar Spinning Mills Ltd.	138.04	82.09	94.67	128.60	220.17	152.44	192.64	207.97	198.42	333.99	174.90	73.32
Prag Bosimi Synthetics	200.91	220.61	227.11	281.21	281.13	563.35	560.39	597.06	674.97	716.02	432.28	207.16
R S W M Ltd.	233.28	283.62	297.82	234.83	218.69	204.02	209.41	224.01	388.86	444.19	273.87	82.08
Raymond Ltd.	776.08	971.72	904.71	764.30	529.49	531.96	483.70	478.35	577.63	779.13	679.71	181.35
S Kumars Nationwide Ltd.	194.19	428.58	509.21	634.15	758.12	935.04	1120.45	1115.89	1159.61	1069.28	792.45	340.06
S R F Ltd.	574.13	548.10	464.36	391.75	402.73	350.16	267.76	237.75	426.77	603.84	426.74	123.78
Vardhman Textiles Ltd.	322.30	338.34	335.98	383.55	400.63	396.75	467.12	517.32	749.30	1102.20	501.35	246.05
Welspun India Ltd.	171.13	195.72	299.60	371.28	292.20	195.48	195.23	219.95	601.05	839.95	338.16	218.21
Sum	5377.63	6893.11	7397.15	7503.71	7406.03	7269.52	7082.10	7502.50	9967.39	12738.46	7913.76	2025.87
Average	336.10	430.82	462.32	468.98	462.88	454.35	442.63	468.91	622.96	796.15	494.61	126.62

Table 31: Current Assets (CA) of LARGE Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	22.14	29.44	38.62	90.71	114.83	167.90	179.84	280.71	315.49	419.74	165.94	134.97
Alok Industries Ltd.	69.59	113.98	181.88	266.49	325.69	426.83	597.78	850.83	1367.14	1443.57	564.38	501.02
Arvind Mills Ltd.	1333.75	1241.06	1265.36	1272.82	1297.67	1108.22	1046.70	1220.44	1764.00	2294.70	1384.47	372.26
Century Enka Ltd.	255.74	242.23	240.02	237.31	221.93	175.39	238.07	248.17	288.75	249.70	239.73	28.48
Forbes Gokak Ltd.	219.32	250.22	234.82	314.74	306.79	313.97	329.75	361.78	403.54	510.07	324.50	86.44
Garden Silk Mills Ltd.	302.85	279.36	281.75	236.96	222.57	249.39	220.20	313.43	300.71	350.11	275.73	42.78
Indo Rama Synthetics	461.76	467.94	379.21	453.66	485.56	428.40	745.65	811.20	590.43	372.01	519.58	149.99
J B F Industries Ltd.	112.94	119.93	108.64	82.41	70.99	65.98	74.57	79.29	91.55	343.15	114.95	82.32
Nahar Spinning Mills Ltd.	394.64	414.82	432.16	352.88	399.42	377.88	559.54	600.23	610.30	667.40	480.93	115.36
Prag Bosimi Synthetics	48.41	51.71	38.78	34.66	33.23	35.95	40.68	34.84	71.40	70.57	46.02	14.47
R S W M Ltd.	159.92	185.39	201.70	186.56	196.91	178.13	198.63	228.42	309.93	382.00	222.76	69.39
Raymond Ltd.	919.80	1005.60	1032.96	1035.45	1345.53	1358.90	1343.87	1414.29	1390.83	1507.49	1235.47	211.53
S Kumars Nationwide Ltd.	145.16	234.84	303.20	386.66	575.05	669.85	767.87	891.97	969.82	1128.60	607.30	334.73
S R F Ltd.	452.35	429.25	438.97	492.97	333.44	333.01	347.68	392.10	454.93	475.83	415.05	59.61
Vardhman Textiles Ltd.	472.24	506.59	505.63	582.57	586.22	614.57	700.82	805.62	1121.57	1518.86	741.47	333.88
Welspun India Ltd.	155.63	88.43	118.97	150.84	195.90	221.43	236.20	298.86	330.24	525.73	232.22	128.08
Sum	5526.24	5660.79	5802.67	6177.69	6711.73	6725.80	7627.85	8832.18	10380.63	12259.53	7570.51	2256.38
Average	345.39	353.80	362.67	386.11	419.48	420.36	476.74	552.01	648.79	766.22	473.16	141.02

Table 32: Current Liability of LARGE Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	14.32	19.63	32.32	43.15	50.83	27.04	28.64	63.12	32.60	55.80	36.75	15.95
Alok Industries Ltd.	16.07	22.06	38.92	62.19	69.90	89.90	134.12	148.60	150.02	170.66	90.24	57.11
Arvind Mills Ltd.	134.85	147.79	409.51	447.28	762.24	304.42	243.45	168.84	234.53	242.90	309.58	189.98
Century Enka Ltd.	66.45	76.39	62.31	65.11	40.63	41.21	52.05	46.61	48.04	58.63	55.74	11.91
Forbes Gokak Ltd.	97.98	112.50	96.69	103.50	88.43	97.25	101.55	140.59	179.94	238.09	125.65	48.14
Garden Silk Mills Ltd.	26.63	30.34	29.48	20.76	23.24	33.35	43.32	65.11	46.28	54.26	37.28	14.48
Indo Rama Synthetics	278.93	257.12	307.29	347.52	367.81	331.35	518.59	469.64	422.53	415.89	371.67	84.21
J B F Industries Ltd.	19.31	10.96	19.42	28.98	33.91	30.89	38.72	30.49	13.22	52.90	27.88	12.66
Nahar Spinning Mills Ltd.	18.76	33.37	37.09	64.66	43.41	31.90	30.95	30.39	41.99	38.66	37.12	11.95
Prag Bosimi Synthetics	56.28	108.78	141.50	165.79	212.00	21.06	20.14	10.80	27.69	25.14	78.92	72.68
R S W M Ltd.	30.02	32.39	39.34	40.00	43.15	33.40	31.99	33.83	39.11	52.86	37.61	6.85
Raymond Ltd.	231.33	204.67	223.28	246.78	228.81	196.88	199.87	178.53	190.20	251.01	215.14	24.59
S Kumars Nationwide Ltd.	30.23	40.38	49.37	52.00	110.42	158.35	144.58	121.49	124.67	234.26	106.58	64.51
S R F Ltd.	143.71	129.04	127.05	181.30	139.14	123.46	143.55	167.10	225.74	221.00	160.11	37.86
Vardhman Textiles Ltd.	69.51	50.83	55.20	73.15	69.31	67.86	117.38	71.53	125.47	163.60	86.38	36.52
Welspun India Ltd.	28.06	44.69	36.34	29.99	40.24	35.34	41.98	41.86	136.25	86.32	52.11	33.75
Sum	1262.44	1320.94	1705.11	1972.16	2323.47	1623.66	1890.88	1788.53	2038.28	2361.98	1828.75	370.43
Average	78.90	82.56	106.57	123.26	145.22	101.48	118.18	111.78	127.39	147.62	114.30	23.15

Table 33: Cash and Bank Balance of LARGE Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	6.16	7.09	8.01	8.96	3.33	10.64	8.99	17.78	38.79	83.51	19.33	24.72
Alok Industries Ltd.	2.94	8.39	13.81	28.99	23.28	22.05	28.14	160.57	503.16	545.58	133.69	211.03
Arvind Mills Ltd.	333.60	129.50	26.77	28.48	80.41	284.08	13.47	17.26	24.64	21.36	95.96	118.42
Century Enka Ltd.	53.47	14.78	12.31	15.38	12.68	14.16	8.38	44.70	25.83	19.78	22.15	15.09
Forbes Gokak Ltd.	25.38	24.94	23.40	14.01	14.48	61.74	84.67	88.84	76.79	90.49	50.47	32.83
Garden Silk Mills Ltd.	50.61	42.94	30.30	36.22	39.27	55.02	51.26	107.64	113.89	109.10	63.63	33.02
Indo Rama Synthetics	39.69	19.99	18.70	16.21	19.96	24.01	77.70	241.53	62.45	48.24	56.85	68.19
J B F Industries Ltd.	2.20	0.93	3.22	3.01	3.02	4.02	6.08	7.50	10.01	100.84	14.08	30.60
Nahar Spinning Mills Ltd.	143.35	133.47	152.43	58.78	52.77	113.14	277.61	301.84	323.96	360.09	191.74	113.42
Prag Bosimi Synthetics	9.40	3.66	3.83	3.00	2.44	2.35	4.49	4.20	2.49	1.58	3.74	2.19
R S W M Ltd.	20.44	13.71	4.27	2.21	3.53	3.54	2.96	2.98	22.98	7.00	8.36	7.81
Raymond Ltd.	118.93	107.56	87.69	60.68	315.72	309.04	270.89	631.40	653.30	25.04	258.03	227.54
S Kumars Nationwide Ltd.	2.20	7.95	6.88	14.75	12.03	21.91	28.91	39.09	14.50	24.21	17.24	11.28
S R F Ltd.	25.90	32.71	30.08	22.22	21.48	19.31	27.41	67.33	16.53	11.87	27.48	15.34
Vardhman Textiles Ltd.	63.13	61.48	64.60	63.79	63.51	68.26	64.55	91.79	96.63	315.59	95.33	78.42
Welspun India Ltd.	7.78	7.14	17.43	28.00	9.12	6.81	16.04	70.04	89.48	171.13	42.30	53.64
Sum	905.18	616.24	503.73	404.69	677.03	1020.08	971.55	1894.49	2075.43	1935.41	1100.38	631.87
Average	56.57	38.52	31.48	25.29	42.31	63.76	60.72	118.41	129.71	120.96	68.77	39.49

Table 34: Inventory in LARGE Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	7.83	9.91	11.84	45.75	70.14	71.63	75.27	134.08	177.81	197.76	80.20	68.71
Alok Industries Ltd.	26.19	42.44	82.90	117.05	148.71	198.79	278.86	203.53	363.27	358.15	181.99	121.53
Arvind Mills Ltd.	229.36	222.50	218.92	200.38	227.99	213.08	383.38	380.38	511.15	479.26	306.64	120.15
Century Enka Ltd.	90.74	76.77	77.23	93.35	85.21	73.54	125.85	144.48	162.13	127.56	105.69	31.71
Forbes Gokak Ltd.	71.41	86.66	55.42	71.61	73.83	68.03	89.13	139.56	130.36	129.04	91.51	30.23
Garden Silk Mills Ltd.	62.55	69.13	74.61	56.32	54.29	58.80	51.23	86.44	65.85	97.07	67.63	14.73
Indo Rama Synthetics	210.86	215.99	181.10	233.03	280.57	292.73	448.46	430.26	341.20	127.25	276.15	104.84
J B F Industries Ltd.	29.06	21.44	17.18	10.91	13.11	8.10	14.61	17.16	16.44	44.66	19.27	10.63
Nahar Spinning Mills Ltd.	111.34	113.21	105.98	111.43	149.88	125.80	126.69	150.99	137.94	172.47	130.57	21.81
Prag Bosimi Synthetics	6.04	12.27	5.48	3.49	2.58	3.51	6.02	8.03	35.54	34.44	11.74	12.56
R S W M Ltd.	56.61	53.95	63.80	76.73	91.47	73.01	99.15	96.43	116.99	129.21	85.74	25.34
Raymond Ltd.	276.56	279.44	293.19	316.94	223.74	258.84	277.35	294.90	287.56	319.04	282.76	27.68
S Kumars Nationwide Ltd.	67.23	118.64	151.88	212.83	263.89	284.02	293.48	320.51	340.69	379.92	243.31	102.49
S R F Ltd.	75.97	58.86	61.53	73.92	85.81	76.41	103.96	89.49	176.27	157.31	95.95	39.79
Vardhman Textiles Ltd.	152.76	166.27	161.72	197.39	208.23	214.18	311.73	401.10	526.93	568.99	290.93	155.77
Welspun India Ltd.	17.00	15.46	29.42	34.13	22.45	21.53	35.82	60.77	129.88	195.13	56.16	59.54
Sum	1491.51	1562.94	1592.20	1855.26	2001.90	2042.00	2720.99	2958.11	3520.01	3517.26	2326.22	790.55
Average	93.22	97.68	99.51	115.95	125.12	127.63	170.06	184.88	220.00	219.83	145.39	49.41

Table 35: Accounts Receivable of LARGE Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	8.14	12.43	18.76	35.99	41.35	84.96	95.58	119.13	77.89	117.80	61.20	42.96
Alok Industries Ltd.	36.47	63.15	85.17	120.45	153.70	202.54	288.12	486.65	497.40	515.03	244.87	189.92
Arvind Mills Ltd.	654.45	772.55	927.81	803.80	725.56	490.94	518.54	680.96	1077.61	1448.40	810.06	284.65
Century Enka Ltd.	111.53	150.68	150.47	125.52	124.03	87.67	103.82	58.96	100.64	102.21	111.55	27.89
Forbes Gokak Ltd.	97.36	114.62	126.80	132.91	119.15	133.02	118.70	119.14	151.15	222.82	133.57	34.37
Garden Silk Mills Ltd.	186.03	159.86	169.68	134.14	95.11	93.39	111.51	113.15	128.77	151.74	134.34	31.78
Indo Rama Synthetics	211.21	230.46	177.91	202.92	183.50	108.16	204.22	124.14	163.88	184.49	179.09	38.30
J B F Industries Ltd.	69.34	82.35	77.12	61.42	53.03	53.39	48.17	48.48	64.52	114.41	67.22	20.29
Nahar Spinning Mills Ltd.	138.52	166.45	156.16	149.05	136.78	97.73	124.94	116.08	121.25	128.30	133.53	20.30
Prag Bosimi Synthetics	32.97	35.78	29.47	28.17	28.21	29.34	30.17	22.61	33.37	34.55	30.46	3.86
R S W M Ltd.	82.47	111.43	120.15	86.28	77.43	77.23	72.17	104.46	143.16	219.64	109.44	44.89
Raymond Ltd.	473.72	568.61	601.14	479.04	498.66	472.22	432.93	376.45	354.21	426.04	468.30	76.94
S Kumars Nationwide Ltd.	74.23	107.87	139.06	158.70	292.25	363.55	445.09	531.99	614.25	722.83	344.98	228.53
S R F Ltd.	290.93	259.37	252.44	274.07	135.52	138.44	123.48	143.74	169.15	212.34	199.95	65.07
Vardhman Textiles Ltd.	188.46	190.36	189.69	230.62	226.75	244.81	235.65	289.47	475.46	609.42	288.07	141.11
Welspun India Ltd.	130.85	65.77	72.06	86.70	161.88	163.08	161.65	144.49	108.10	143.43	123.80	37.94
Sum	2786.68	3091.74	3293.89	3109.78	3052.91	2840.47	3114.74	3479.90	4280.81	5353.45	3440.44	793.26
Average	174.17	193.23	205.87	194.36	190.81	177.53	194.67	217.49	267.55	334.59	215.03	49.58

Table 36: Sales of LARGE Size Textile Firms in the Years from 1998-99 to 2007-08

Company Name	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Mean	SD
Abhishek Industries Ltd.	60.96	71.84	75.98	178.27	293.66	470.99	342.05	514.31	801.94	873.68	368.37	295.43
Alok Industries Ltd.	167.97	196.71	278.44	355.28	491.71	630.62	793.60	1056.98	1232.19	1425.56	662.91	448.85
Arvind Mills Ltd.	872.72	907.40	932.00	1199.39	1845.71	695.31	1472.37	1387.87	1665.38	1583.33	1256.15	391.25
Century Enka Ltd.	397.79	560.09	580.15	739.99	765.25	707.78	747.62	811.36	954.12	988.61	725.28	178.68
Forbes Gokak Ltd.	359.18	380.14	380.30	352.61	340.59	286.56	312.70	412.84	454.53	583.09	386.25	83.99
Garden Silk Mills Ltd.	305.88	561.35	428.70	375.68	441.85	463.20	507.70	492.74	638.01	933.11	514.82	173.61
Indo Rama Synthetics	967.49	1270.02	1178.55	1499.54	1762.05	1721.91	1920.32	1906.21	1941.77	1970.27	1613.81	363.04
J B F Industries Ltd.	154.32	244.77	186.19	223.94	281.39	307.11	403.22	680.43	739.04	722.08	394.25	231.15
Nahar Spinning Mills Ltd.	308.36	298.59	305.13	333.12	369.59	423.28	453.70	382.46	437.95	478.83	379.10	66.75
Prag Bosimi Synthetics	24.88	31.70	30.54	4.58	4.46	2.18	1.71	30.98	108.69	195.26	43.50	61.99
R S W M Ltd.	381.34	403.99	402.31	434.57	508.44	473.96	488.17	668.69	769.53	1014.29	554.53	203.82
Raymond Ltd.	1070.76	1336.63	1393.95	1463.06	1306.09	884.58	949.87	1029.09	1153.09	1333.69	1192.08	201.15
S Kumars Nationwide Ltd.	260.88	372.91	510.74	586.79	700.70	792.19	616.33	610.89	345.74	889.69	568.69	200.26
S R F Ltd.	556.10	561.76	571.10	664.68	671.81	612.81	746.98	819.88	1056.85	1295.79	755.78	243.55
Vardhman Textiles Ltd.	537.03	572.70	612.74	715.69	708.36	717.73	832.56	1075.17	1837.66	1888.50	949.81	504.65
Welspun India Ltd.	144.66	148.57	159.63	319.36	332.49	257.23	300.70	366.00	475.74	655.57	316.00	159.56
Sum	6570.32	7919.17	8026.45	9446.55	10824.15	9447.44	10889.60	12245.90	14612.23	16831.35	10681.32	3169.51
Average	410.65	494.95	501.65	590.41	676.51	590.47	680.60	765.37	913.26	1051.96	667.58	198.09