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A STUDY ON THE RECEIVABLES MANAGEMENT IN Lucas - TVS LTD

By

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FACULTY OF MANAGEMENT SCIENCES

In partial fulfillment of the requirements
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of

MASTER OF BUSINESS ADMINISTRATION

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DEPARTMENT OF MANAGEMENT STUDIES

KUMARAGURU COLLEGE OF TECHNOLOGY

COIMBATORE

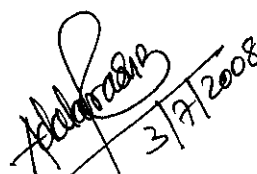## <u>BONAFIDE CERTIFICATE</u>

Certified that this project report titled **"A STUDY ON THE RECEIVABLES MANAGEMENT IN Lucas -TVS LIMITED"** is the bonafide work of **Ms. U.ASWINI (71206631006)** who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Faculty Guide   Director

Evaluated and vice-voce conducted on ....03/07/08..........................

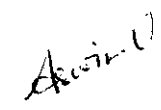Examiner I   Examiner II

DECLARATION

I, hereby declare that this project report entitled as "A Study on the Receivables Management in Lucas - TVS limited", has undertaken for academic purpose submitted to Anna University in partial fulfillment of requirement for the award of the degree of Master of Business Administration. The project report is the record of the original work done by me under the guidance of Prof. A. Senthil kumar during the academic year 2007-2008.

I, also declare hereby, that the information given in this report is correct to the best of my knowledge and belief.

Place: Coimbatore

Date:

(U.ASWINI)

Lucas-TVS

TELEPHONE : 044 - 26258211
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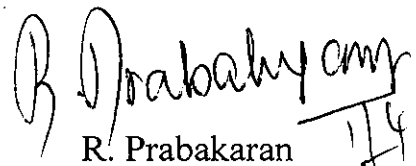-AS-TVS LTD., PADI, CHENNAI-600 050, INDIA.

CERTIFICATE

Name   : U.Aswini

Course   : MBA

College   : Kumaraguru College of Technology
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Name of the Project   : A STUDY ON RECEIVABLES MANAGEMENT IN Lucas - TV

Duration   : From 10.01.2008 TO 24.03.2008 in Finance Department.

Conduct & Character   : Good

We wish him all success in his future endeavors.

Date: 01.04.2008

R. Prabakaran
Senior Co-ordinator Cum Technical Trai

EXECUTIVE SUMMARY

This project "A study on the **Receivables Management in Lucas - TVS**" is a critical aspect of a successful management. It requires continuous decision making. Corporate managers can increase the probability of making good Receivables management decisions.

Accounts receivable is the amount that customers owe to the company. Granting credit and creating debtors amounts to the blocking of the firms funds. As substantial amounts are tied up in trade debtors, it needs careful analysis and proper management.

A collection policy should ensure prompt and regular collection. Prompt collection is needed for fast turnover of working capital, keeping collection costs and bad debts within limits and maintain collection efficiency. Regularity in collections keeps debtors alert and they tend to pay their dues promptly.

The research design adopted for the study was descriptive in nature. This descriptive research helps in anlysing the various records and so it enables to come to a conclusion. In a descriptive study the first step is to specify the objective with sufficient precision to ensure that the data collected are relevant.

The major tool used to analyze the data collected is Ratio analysis, correlation analysis and Trend analysis which is a widely used management accounting technique.

From the analysis it is found that the debtors tursnover ratio shows an increasing trend, and debt collection period shows an decreasing trend, from the trend analysis it is found that the sales and debtors for the next two years are forecasted and thus it also shows an increasing trend. From the analysis it is inferred that the company is following an sustainable credit policy.

ACKNOWLEDGEMENT

It is inevitable that thoughts and ideas of other people tend to drift into the subconscious when one feels to acknowledge helping derived from others. I acknowledge to all those who have helped me in the preparation of this project work.

I would like to thank the god almighty for his guidance without whom this project wouldn't have become reality.

I wish to express my deep gratitude to the principal Dr. Joseph V. Thanikal for his guidance and encouragement to complete my project work.

I wish to express my sincere thanks to Prof. Devanathan – Director, KCT Business School, for his continuous encouragement throughout my project.

I owe my heartfelt gratitude to Prof. A. Senthil kumar, KCT Business School, for his help and valuable guidance given to me through out my project.

I express my sincere thanks to Mr. A. L. Vasudevan(GM), Training center, Lucas-TVS Limited, for granting permission to do my project work.

I extend my sincere gratitude to Mr. D. Raman, Manager(Costing) Finance, Lucas-TVS Limited, for his guidance to complete my project successfully.

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Lastly I thank all the employees in the organization who were involved knowingly or unknowingly to make this project work successful.

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CHAPTER – 1

1.1 INTRODUCTION:

Debtors constitute a substantial portion of current assets of large majority of companies. In India, trade debtors, after inventories, are the major components of current assets. They form about one-third of current assets in India. Granting credit and creating debtors amount to the blocking of the firms funds. The interval between the sale and the date of payment has to be financed out of working capital. This necessitates the firm to get funds from banks nor other sources. Thus, trade debtors represent investment. As substantial amounts are tied up in trade debtors, it needs careful analysis and proper management.

Trade credit arises when a firm sells its products or services on credit and does not receive cash immediately. It is an essential marketing tool, acting as a movement of goods through production and distribution stages to customers. A firm grants trade credit to protect its sales from the competitors and to attract the potential customers to buy its products at favorable terms. Trade credit creates **accounts receivables or trade debtors,** also referred to as book debts in India that the firm is expected to collect in the near future. The customers from whom the receivables or books debts have to be collected in the future are called trade debtors or simply as debtors and represent the firms claim or asset.

The credit sale has three characteristics:

1. It involves an element of risk that should be carefully analyzed. Cash sales are totally risk less, but not the credit sales as the cash payment are yet to be received.

2. It is based on economic value. To the buyer, the economic value in goods or services passes immediately at the time of sale, while the seller expects an equivalent value to be received later on.

3. It implies futurity. The buyer will make the cash payment for goods and services received by him in a future period.

Accounts Receivable Definition:

Money which is owed to a company by a customer for products and services provided on credit. This is treated as a current asset on a balance sheet. A specific sale is generally only treated as an account receivable after the customer is sent an invoice.

Accounts receivable is one of a series of accounting transactions dealing with the billing of customers who owe money to a person, company or organization for goods and services that have been provided to the customer. In most business entities this is typically done by generating an invoice and mailing or electronically delivering it to the customer which is to be paid within an established timeframe called credit or payment terms.

While booking a receivable is accomplished by a simple accounting transaction, the process of maintaining and collecting payments on the accounts receivable subsidiary account balances can be a full time proposition. Depending on the industry in practice, accounts receivable payments can be received up to 10 - 15 days after the due date has been reached. These types of payment practices are sometimes developed by industry standards, corporate policy, or because of the financial condition of the client.

On a company's balance sheet, accounts receivable is the amount that customers owe to that company. Sometimes called trade receivables, they are classified as current assets. To record a journal entry for a sale on account, one must debit a receivable and credit a revenue account. When the customer pays off their accounts, one debits cash and credits the receivable in the journal entry. The ending balance on the trial balance sheet for accounts receivable is always debit.

Since not all customer debts will be collected, businesses typically record an allowance for bad debts which is subtracted from total accounts receivable. When accounts receivable are not paid, some companies turn them over to third party collection agencies or collection attorneys who will attempt to recover the debt via negotiating payment plans, settlement offers or legal action. **Outstanding advances are part of accounts receivables:** If a company gets an order from its customers with advance agreed in payment terms. Since no billing is being done to claim the advances several times this area of collectible is not reflected in Accounts

Receivables. Ideally, since advance payment is mutually agreed term, it is the responsibility of the accounts department to take out periodically the statement showing advance collectible and should be provided to sales & marketing for collection of advances. The payment of accounts receivable can be protected either by a letter of credit or by Trade Credit Insurance.

Companies can use their accounts receivable as collateral when obtaining a loan (Asset-based lending) or sell them through Factoring (finance). Pools or portfolios of accounts receivable can be sold in the capital markets through a Securitization.

NATURE OF CREDIT POLICY:

A firms investment in accounts receivable depends on:

- The volume of credit sales
- The collection period

The volume of credit sales is a function of the firm's total sales and the percentage of credit sales to total sales. Total sales depends on market size, firm's market share, product quality, intensity of competition, economic conditions etc. The financial manager hardly has any control over these variables. The percentage of credit sales to total sales as mostly influenced by the nature of business and industry norms.

The major controllable decision variables include the following:

1. **Credit standards and analysis**
2. **Credit terms**
3. **Collection policy and procedures.**

CREDIT STANDARDS:

The term credit standards represent the basic criteria which a firm follows in selecting customers for the purpose of credit extension. The firm may tight credit standards; that is, it may sell mostly on cash basis, and may extend credit only to the most reliable and financial strong customers. Such standards will result in to bad debt losses, and less cost of credit administration. But the firm may not be able to expand sales. The profit sacrificed on lost sales

may be more than the cost saved by the firm. On the contrary, if the credit standards are loose, the firm may have large sales. But the firm will have to carry large receivables. The cost of administrating credit and bad-debt will also increase. Thus the choice of optimum credit standards involves a trade off between incremental return and incremental costs.

CREDIT ANALYSIS:

The next aspect of Credit policies of a firm is credit analysis and investigation. Credit standards influence the quality of the firm's customers.

There are two aspects of the quality of the customers:

- The time taken by the customers to repay credit obligation.
- The default rate.

The **average collection period** (ACP) determines the speed of payment by customers. It measures the number of days for which credit sales remain outstanding. The longer the collection period, the higher the firm's investment in accounts receivable.

Default rate can be measured in terms of bad debts losses ratio-the proportion of uncollected receivable. Bad debts losses ratio indicates default risk. Default risk is that the customer will fail to repay the credit obligation.

CREDIT TERMS:

The stipulation under which the firm sells on credit to customers are called credit terms. These include:

(a) The credit period.

(b) The cash discount.

Credit period:

The length of time for which credit is extended to customers is called the credit period. The firm's credit period may be governed by the industry norms. But depending on its objectives, the firm may lengthen the credit period. On the other hand, the firm may tighten its credit period if customers are defaulting too frequently and bad-debt losses are building up.

A firm lengthens its credit period to increase its operating profit through expanded sales. However, there will be net increase in operating profit only when the cost of extended credit period is less then the incremental operating profit. With the increased sales and extended

credit period, investment would increase. Two factors cause this increase: (a) incremental sales result in incremental receivable and (b) existing customers will take more time to repay credit obligation (i.e., the average collection period will increase), thus increasing the level of receivable.

Cash discounts:

A cash discount is a reduction in payment offered to customers to induce them to repay credit obligations with in specified period of time, which will be less than the normal credit period. It is usually expressed as a percentage of sales. Cash discount terms indicate the rate of discount and the period for which it is available. If the customers does not avail the offer, he must make the payment within normal credit period. A firm uses credit discount as a tool to increase sales and accelerate collections from customers. Thus the level of receivables and associated costs may be reduced. The cost involved is the discount taken by the customers.

Collection policy and procedures:

A collection policy is needed because all customers do not pay the bills in time. Some customers are slow payers while some are non payers. The collection effort should therefore, aim at accelerating collections from slow players and reducing bad debt losses. A collection policy should ensure prompt and regular collection. Prompt collection is needed for fast turnover of working capital, keeping collection costs and bad debts within limits and maintain collection efficiency. Regularity in collections keeps debtors alert and they tend to pay their dues promptly.

The collection policy should lay down clear cut collection procedures. The collection procedures for past dues or delinquent accounts should be established in unambiguous terms. The slow paying customers should be handed very tactfully. Some of them may be permanent customers. The collection process initiated quickly with out giving any chance to them, may antagonize them, and the firm may lose them to competitors.

The responsibility for collection and follow up should be explicitly fixed. The finance department maintains the records and information. It is responsible for collection, it will consult the sales department before initiating an action against the non-paying customers.

Similarly the sales department must obtain past information about the customer from the finance department before granting credit to them.

Though the collection procedures should be firmly established, individual cases should be dealt with on their merits. Some customers may be temporarily in tight financial position and inspite of their best intentions may not be able to pay on due date. This may be due to recessionary conditions, or other factors beyond the control of the customers. Such cases need special considerations. The collection procedure against them should be initiated only after they overcome their financial difficulties and do not intend to pay promptly.

The firm should decide about offering cash discount or prompt. Cash discount is a cost to the firm for ensuring faster recovery of cash. Some customers fail to pay within the specified discount period, yet they may make payment after deducting the amount of cash discounts. Such cases must be promptly identified and necessary action should be initiated against them to recover the full amount.

The credit evaluation procedure of the individual accounts should involve the following steps:

- credit information
- credit investigation
- credit limits

Collection efforts:

The firm should follow a well laid down collection policy and procedure to collect dues from its customers. When the normal credit period granted to a customer is over, and he has not made the payment, the firm should send a polite letter to him reminding him that the account is overdue. If receivable still remains uncollected, letters may be followed by telephone, telegram and personal visit of the firm representative. If the payment is still not made, the firm may initiate a legal action against the customer. Before taking the legal action, the firm must examine the customer's financial condition. If it is weak, legal action against him will simply hasten his insolvency. The firm will not be able to get anything from the customers. Under such situation, it is better to be patient and wait, or accept reduced payment in settlement of the account.

1.2. LITERATURE REVIEW:

Barbara Summers, Nicholas Wilson[1], said, "The firm's decision to use factoring amongst a cross-sectional sample of 655 manufacturing companies using a rich firm-level database. The paper develops and tests hypotheses that explain this particular choice of credit and financial management policy. We find strong evidence of a 'financing demand' explanation for the use of factoring, and also some support for theories which relate the decision to use a factor to the firm's product characteristics, to market characteristics and to the preferences of the factor (supply constraints). The motivation to use factoring, however, appears to be related more to a demand for asset-based finance from small companies than to firm-level choices about organizational structure."

Richard Pike, Nam Sang Cheng[2], said, "A central element in developing credit management policy involves design choices on the extent to which credit activities are best managed internally or through specialist market intermediaries. This paper draws on the findings of a survey on the credit management practices and policies of large UK companies to: (1) Examine the type of firm most likely to enter into specialist external credit management structural arrangements; and (2) identify contextual and credit policy choices influencing the credit period taken and late payment of debts. The study found that specialist intermediaries are not particularly common in large firms. The paper also identifies a number of contextual and policy variables that help explain variation in debtor days and late payment by customers".

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[1] Barbara Summers, Nicholas Wilson, "Trade Credit Management and the Decision to Use Factoring: An Empirical Study", Journal of Business Finance & Accounting, Volume 27, Issue 1-2, January/March 2000, Page 37-68.

[2] Richard Pike, Nam Sang Cheng (2001), "Credit Management: An Examination of Policy Choices, Practices and Late Payment in UK Companies", Journal of Business Finance & Accounting, Volume 28 Issue 7&8, September/October 2001, Page 1013-1042.

Greet Asselbergh[3], said, "In this paper, the organizational behavior in managing accounts receivable is studied. It is based on the recent surge of interest in trade credit management from both academics and practitioners emphasizing 1) the rather permanent character of these short-term but continuously renewed investments and 2) their strategic potential due to the existence of financial, tax-based, operating, transaction and pricing motives. The paper focuses on a search for sources of such a strategic value and for the determinants of its risk. More specifically this potential strategic value is said to create a need for flexibility and control in managing accounts receivable. It will therefore induce a need for internalization of its management".

Launder, William. American Banker[4], said, "The article reports that Debt Resolve Inc. is buying the Creditors Interchange *Receivables Management* LLC collections agency to extend the services it offers to creditors. Debt Resolve offers an online platform for negotiating repayment plans. Debt Resolve says the purchase is part of the company's plan to expand internationally, organically, and through acquisitions".

Rogers, Barry[5], said, "The article discusses on the mechanisms of finance to the growth in Russia. Factoring is the mechanism which has been the only available in the country since 1998, with a growth of 100% year on year by invoice value. Another mechanism is the *receivables management* outsourcing (RMO), which is found to be a good solution when Russia is the choice for market. It is the service provided by some factoring companies and by respectable Russian banks. Bad debt protection is also available to protect against buyer insolvency and protracted default. A debtor *management* process includes checking the sales contract, debtor credit assessment, dunning procedures and repatriation of funds to foreign or Russian clients".

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[3] Greet Asselbergh, "A Strategic Approach on Organizing Accounts Receivable Management", Journal of Management and Governance, Springer Netherlands, Volume 3, Number 1 / March, 1999, pages: 1-29.

[4] Launder, William. American Banker, "Debt Resolve Acquiring Collections Agency", 5/2/2007, Vol. 172 Issue 84, p7-7.

[5] Rogers, Barry. "Factoring and Receivables management outsourcing", Credit **Management**, Dec2006, pp: 27-27.

Salek, John G. Financial Executive[6], Said, "The article discusses three processes that can help companies gain greater profitability from *receivables management*. The processes include creating an executive portfolio strategy which makes a concrete definition of how to manage *receivables* assets, defining a dispute resolution process that prevents customers from delaying payment and deducting fees from invoices, and ensuring accurate order fulfillment and invoicing, particularly when a customer has previously been given the wrong order".

Hawser, Anita. Global Finance[7], said, "The article presents the world's best banks and treasury *management* software providers in 2007. Citigroup Inc.'s on-going technology investment, product innovation and standardization of Citigroup continues to yield. The Global Transaction Banking business of Deutsche Bank AG has been highly regarded in terms of qualitative market indicators. The integrated payments and *receivables management* solutions of Hongkong and Shanghai Banking Corp. (HSBC) have been well received".

Castellano, Matthew; Scibetta, Steve. hfm (Healthcare Financial Management)[8], said, "It Provides information about the improvement of revenue cycle through the use of an automated *receivables management* information system in health care industry in the U.S. Determination of the insurance payment; Replacement of patient accounting system; Inclusion of the interactive voice response system".

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[6] Salek, John G.. Financial Executive, "UNLOCKING Greater Profitability from Receivables management", oct2006, Vol. 22 Issue 8, p55-56, 2p.

[7] Hawser, Anita. Global Finance, "WORLD'S BEST TRESURY PROVIDERS 2007" Vol. 21 Issue: 3, Mar2007, p p28-39, 10p.

[8] Castellano, Matthew; Scibetta, Steve. hfm (Healthcare Financial Management), "An automative Response" Sep2005, Vol. 59 Issue 9, p90-92, 3p.

Stinson, Sonya[9], Said, "It Emphasizes the need for business owners to protect their intellectual property in the U.S. Efforts of Patrick Jouve's startup, *Receivables Management* Consultants Corp., to help companies protect their assets by collecting money owed by their customers; Four main categories of intellectual property; U.S. trademark owners' need to submit their international applications through the U.S. Patent Office".

1.3. OBJECTIVES:

Primary Objective:

To study about the receivables management system of the organization.

Secondary Objective:

1. To study and analyze how effectively the debtors are being managed in Lucas TVS Ltd.

2. To study the various parameters and their influence in receivables management in the company.

3. To study about the credit policy of the company.

1.4. STATEMENT OF THE PROBLEM:

In the study, efforts have been made to conduct a detailed analysis of Receivables management functions in Lucas –TVS. For this purpose, detailed research has been conducted such as :

- Existing system of Accounts receivable adopted by the company.
- To analyse how the receivables are effectively managed by the company.

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[9] Stinson, Sonya. New Orleans CityBusiness, "Business need to keep protecting intellectual property", Vol. 24 Issue 45, 5/3/2004, p p: 32-33, 2p.

1.5. SCOPE OF THE STUDY:

The study highlights on the various aspects like company's ability to get back their loans at agreed duration and installments, the company's ability to retrieve their money from the defaulter or any compensation for the same and any legal actions taken against default customers. The study says about the various credit proposals applied to the company to different customers. The customers who are availing the credit facility from the company are bound to repay it in prespecified duration in agreed installments and interest rates. The present study is confined to the analysis and interpretation of financial statement maintained by the company. The technique employed for the purpose of the study is Trend analysis, comparative study and ratio analysis. The study is meant to throw the light on the Receivables Management of LUCAS-TVS Limited.

1.6. RESEARCH METHODOLOGY:

Type of Research:

Descriptive research includes fact-finding enquiries of different kind. The major purpose of descriptive research is the description of the state of affairs, as it exist at the present. Descriptive research does not involve the formulation of the hypothesis rather it deals with an investigate study of an exiting situation.

In a descriptive study the first step is to specify the objective with sufficient precision to ensure that the data collected are relevant. If this is not done carefully, the study may not provide the desired information. The research design adopted for the study was descriptive in nature. This descriptive research helps in anlysing the various records and so it enables to come to a conclusion.

MODE OF COLLECTION:

Data is the recorded measure of phenomenon. The collection of data can be done through two ways:-

Primary Data:

Primary data refers to the fresh information and collected for the first time. Thus, these information are happening to be original in chapter. These information are gathered through the interaction.

Some of the primary data used in the collection of information in the study are:

1. Discussion with the finance department.
2. Observation of the activities and actions under taken at the finance department.

Secondary Data:

On the other hand, the secondary data are those information which have already been collected by someone else and recorded. These information are those have already been passed the statistical process.

Period of the study:

The study uses the financial reports of the past and successive financial years between 2002 – 2003.

Tools for analysis:

In order to study and analyse the debtors management of the company the following tools are used.

- Ratio Analysis.

- Trend Analysis.

- Correlation Analysis.

1.7. LIMITATIONS:

- The study is limited to the past 5 year's data only.
- The study uses secondary data predominantly thus any defects in the secondary data are bound to be reflected.
- The analysis has been done on with the years and does not reflect on a month to month basis.

1.8. CHAPTER SCHEME:

The FIRST CHAPTER is introductory in nature. This chapter tells about the objectives and scope of the study and its limitations.

The SECOND CHAPTER conveys about the history of the LUCAS-TVS LTD., highlights the origin and development, objectives and production, financial and working of the company, development programmes and collaboration with foreign countries of the company

The THIRD CHAPTER gives the macro and micro scenario with respect to the auto component industry.

The FOURTH CHAPTER presents the data analysis and interpretation.

The FIFTH CHAPTER gives summary of findings and concludes the study with relevant suggestions.

CHAPTER – 2
Organisation Profile

2.1 HISTORY OF THE ORGANISATION:

TVS Group was established in 1911 by T.V.Sundram Iyengar, one of the visionaries of the Indian industry. His ideas were years ahead of their times. Three years before World War I, when the automobile was still seen as some kind of intimidating "horse-less carriage", he had the vision to set up South India's first ever rural bus service and over the years, this transport company became the largest of its kind in the country, legendary for its punctuality and service. In fact, the rules and regulations laid down by him later became the blue print for the Motor Vehicles Act. The importance given by the founder to Trust, Value and Service - TVS, are the basic tenets of the TQM framework even today. T.V.Sundram Iyengar's philosophy of business reflected the kind of man he was - simple and stern. It was based rigidly on four concepts - Quality, Service, Reliability and a Sense of Ethics. The TVS Group is the largest manufacturer and distributor of automotive components in India, with a turnover in excess of 2.7 billion US dollars and a family of over 25,000 members.

Lucas-TVS was established in 1961 as a joint venture between Lucas Industries, UK and the TVS group. It is a leading manufacturer of auto electrical products and diesel fuel injection equipment in India. It reaches out to all segments of the automotive industry such as passenger cars, commercial vehicles, tractors, jeeps, two wheelers and off-highway vehicles, as well as for stationary and marine applications. Lucas-TVS was for sometime a part of Varity, the Anglo American company formed by the merger of Lucas Industries of UK and Varity Corporation of US. Now Lucas-TVS is fully owned by the TVS Group. The combination of these two well-known groups has resulted in the establishment of a vibrant company, which has had a successful track record of sustained growth over the last three decades. TVS is one of India's twenty large industrial houses with twenty-five manufacturing companies and a turnover in excess of US$ 1.3 billion. The turnover of Lucas-TVS and its divisions is US$ 233 million during 2003-2004.

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MISSION

To be a respected supplier in the global auto industry, by developing innovative products and solutions of value to customers through creative skill and involvement of employees, suppliers and dealers and use of contemporary technology.

VISION

- **To be the Supplier of Choice of all leading vehicle manufacturers in India.**
- **To be a recognized Original Equipment Supplier in Asia Pacific and Middle East markets**
- **To achieve global recognition for innovative approach to products and solutions.**
- **And, by 2010, to sell Rs. 2000 Crores (USD 430 million) of products and solutions.**

The milestones in the journey of Lucas-TVS as it has emerged today are listed.

- Lucas-TVS today has emerged as a total automobile electrical system supplier, operating from four plants located at Chennai, Pondicherry, Pune, and Rewari in Haryana.
- The electrical division of Lucas-TVS manufactures a complete range of auto electrical products - namely starters, alternators, wipers, and distributors, making it a "one-stop shop" for the automotive industry.
- Currently the company produces over 2.5 million starters and alternators per annum, and has plans to double the volume.
- The Delphi-TVS Fuel Injection Equipment (FIE) division makes state-of-the-art rotary pumps, thus providing a competitive supply option for this vital component.

Lucas TVS has grown hand in hand with the automobile industry in the country. The company's policies have recognised the need to respond effectively to changing customer needs, helping to propel it to a position of leadership. The company has raised its standards on quality, productivity, reliability and flexibility by channeling its interests.

At present, there are five divisions:

Divisions	Turn-over during 2006 - 2007	
	Crores INR	Million USD
Auto Electricals L-TVS	902.57	220.14
Fuel Injection Equipment (FIE) – DTVS	494.81	120.69
Electronic Ignition Systems (INEL)	143.18	34.92
Automotive Lighting (IJL)	110.10	26.85
After Market Operations (LIS)	144.31	35.20

2.2 LUCAS-TVS GROUP OF COMPANIES:

- Delphi TVS.
- Lucas Indian Service.
- Indian Nippon Electricals Ltd.
- India Japan Lighting.

Delphi TVS is a joint venture between Delphi Automotive Systems, USA and T V Sundram Iyengar and Sons, India manufacturing diesel fuel equipment for passenger and commercial vehicles. Lucas Indian Service was established in 1930 as a specialist organization in sales and service of "Lucas-TVS" auto Electricals and "Delphi-TVS" diesel fuel injection equipment. LIS also manufactures automotive products like ignition coils and solenoid switches in Chennai, marketed under the brand name Lucas. INEL is situated in the industrial town of Hosur. Established in 1985 as a manufacturer of electric ignition systems for two wheelers and portable gensets, INEL is a joint venture of Lucas Indian Service, India and Kokusan Denki Co. Ltd., Japan. India Japan Lighting was incorporated in December 1996. It is a joint venture between Lucas-TVS Limited, Chennai and Koito Manufacturing Company Limited, Japan. IJL is a manufacturer of automotive lighting equipment.

TVS Group Companies

The TVS Group, with a turnover of over one billion dollars, is the largest manufacturer of automotive components in India. The group produces autoelectricals, diesel fuel injection systems, braking systems, automotive wheels and axle fasteners, powder metal

components, radiator caps, two wheelers and computer peripherals. Backed by five service and distribution companies with an extensive network across the country, the group has the largest distribution network for automotive products in India.

COMPANY	PRODUCTS
Manufacturing companies	
Axles India Ltd.	Automotive axles
Brakes India Ltd.	Hydraulic brakes & clutch actuation systems
India Nippon Electricals Ltd.	Magnetos, Two/Three wheeler ignition systems
India Japan Lighting Limited.	Headlamps, Rear combination lamps and Various other si lamps for Automotive and Two Wheeler applications.
Lakshmi Auto Components Ltd.	Engine/transmission components
Lucas-TVS Ltd.	Auto electricals/
TVS Srichakra Ltd.	Automotive tyres
Sundaram Brake Linings Ltd.	Brake linings & clutch facings
Delphi-TVS Ltd.	Diesel fuel injection equipment
Sundaram Clayton Ltd.	Air brakes
Sundaram Fasteners Ltd.	High tensile fasteners, cold extruded products, sinte components, intelligent systems, radiator caps
Sundaram Textiles Ltd.	Yarn
Turbo Energy Ltd.	Turbo chargers
TVS Interconnect Systems Limited.	Electronic connectors
TVS Electronics Ltd.	Computer peripherals
TVS Sewing Needles Ltd.	Sewing needles
TVS Motor Company Limited.	Two wheelers
TVS Cherry Limited.	Precision miniature, sub-miniature, selector switches, hall el sensors, key switches and advanced performance/special purp keyboards.
Wheels India Ltd.	Automotive wheels
Distribution companies	
India Motor Parts & Accessories Ltd.	Distributors of automotive components
Lucas Indian Service Ltd.	Distributors of auto electrical and auto components, Fuel Injec Equipment, LISPART & Batteries.
T V Sundaram Iyengar & Sons Ltd.	Distributors of passenger cars, commercial vehicles, automo spare parts
Other companies	
Southern Roadways Ltd.	Freight services
Sunco Machines Ltd.	Precure tyre retreading equipment
Sundaram Industries Ltd.	Tyre retreading, coach building, rubber components

2.3. QUALITY POLICY:

"Lucas TVS is committed to achieving ever increasing levels of customer satisfaction through continuous improvements to the quality of the products and services. It will be the company's endeavour to increase customer trust and confidence in the label 'Made in Lucas TVS'."

Quality is no longer an option but a basic requirement in today's world. At Lucas TVS, quality in inbuilt in every phase of manufacture. The company's quality assurance measures stand on the foundation of a solid belief - that quality begins and ends with the customer. This commitment forms the backbone of its approach to Quality Assurance.

Lucas TVS has adopted a prevention-oriented quality policy though ingrained with the traditional ideas of quality control. Everyone from the highest levels of the organisation to the lowest practise quality control both as an individual and as a team.

An effective Quality Control System has resulted in the recognition of the company's outstanding achievements in the various fields. Lucas-TVS was awarded the ISO 9001 certified by BVQI in December 1993. The company reached a further milestone when it recently received a certificate of recognition from BVQI for QS 9000 for Auto Electricals.

Lucas-TVS has bagged the Rajiv Gandhi National Quality Award for 2006. This award is for the category "large scale manufacturing industry ".

Lucas-TVS is a pioneer in manufacturing transformation in the Indian industry (since 1985-90) through a combination of methodology and technology implemented through a series of 'Change Sessions' done through the people and by the employees. In simple terms the Change Programs were focused on: Process Lay-out to Product Lay-out (Cellular concept) - Module system of Shop floor (Customer Centric). Decentralized Organization structure with autonomy to operation / production teams. Nagare Cells in manufacturing areas with auto cycle machines controlling cycle time. And, Single Piece Flow cells in Assembly modules with Large Cells in place (Islands integrated).Other focal points of the Change programs were: Lead time reduction features like **QCT** (Quick Change Tooling),**Chaku-Chaku** (auto

unloading), **Single Piece charging system** (material feeding) dedicated containers, **pull system (2 bin** - C Class for small parts and **Kanban** for A and B parts), **e-Kanban** (communication to suppliers to dispatch) are in place in all the modules. Quality initiatives like online maker control of Quality, **Cpk** improvements, **SPC**, **Measured Quality**, **Poka-Yoke** (Fool proofing), **SOP** (Standard Operating Procedure), enable to retain or improve Quality performance. Productivity is the combined result of Methodology and Low Cost Automation led by **KMT** (Kaizen Module Team) effort of employees.

We are committed to achieving greater levels of customer satisfaction through constant improvement to the product quality and service, by improving the effectiveness of the Quality Management System. Our endeavor is to increase customer trust and confidence in the label **"Made by Lucas-TVS"**.

As a responsible corporate entity, we are committed to protection, preservation and improvement of the environment by continually orienting our activities, products and processes and services so as to: Institutionalize adoption of environment friendly concept while designing our products and processes Conserve resources like copper, energy, varnish, oils, compressed air, and water by applying the concept of **3R** (reduce, reuse and recycle). Minimize generation of inevitable wastes like - waste oil, used coolant, and the like. Improve working environment through good house keeping, taking pro active measures for the health and safety of our employee and development of our greenery. Comply with all relevant legal and other requirements. Spread awareness about the importance of the environmental protection throughout the organization as well as among our business associates such as suppliers, dealers and customers.

A very unique practice in Lucas-TVS wherein employees voluntarily organize themselves as teams and focus on 5S in shop floor, 5S in office, TPM, Supplies, Safety, Energy and Environmental issues. They participate in these activities during their off time (holidays), select the area pertaining to them and implement 5S, TPM, Safety and Environment. Quality Improvement Team (QIT) is a cross-functional team activity involving engineers and officers. The team takes up problems of higher importance while also focusing on customer requirements and providing effective improvements. The department head reviews the progress of the team.

2.4 PRODUCT PROFILE:

Starter Motor:

TYPE	VOLTAGE	K.W.	APPLICATIONS
SM4	12	0.16	Two wheeler-50cc
SM5	12	0.26	Two wheeler-100cc
SM6	12	0.35	Two wheeler-150cc
SM76PE	12	0.8	cars
SM 82	12	1.2	cars
M35G	12	0.8	cars
M35G SCOB	12	0.65	cars
P-R/D	12	1.4/1.7/2.2/2.8	cars/LCVs/HCVs
2M14	12	1.6	LCVs
2SM114	12	2	LCVs/Tractors
3SM114	12	2.2	LCVs/Tractors
5SM114	12	2.2	LCVs/Tractors
6M14	12	2.2	LCVs/Tractors
7M14	24	4.5	Commercial vehicles
2SM127	12	2.8	Commercial vehicles
3SM127	12	2.8	Commercial vehicles
SP5	12	2.7	Commercial vehicles
BS5	24	4	Commercial vehicles
SL5	24	6	Commercial vehicles
SM130PE	12	5	Petrol / diesel engines
SM130PE	24	7.5	Heavy duty diesel engines

Alternator:

PRODUCT	OUTPUT VOLTAGE	RATING CURRENT	APPLICATIONS
SA45	12V	135A	Utility Vehicles.
3SA45 With 30cc Vacuum Pump	12V	135A	Utility Vehicles.
A108	50A/55A	-	Cars.
A115	12V	36A / 45A	Light Commercial Vehicles, Commercial Vehicles, Tractors.
SA15	12V	40A	Cars, Utility Vehicles
3HA15 With 30cc Vacuum Pump	12V	40A	Light Commercial Vehicles, Utility Vehicles
SA23 12V	12V	65A	Commercial Vehicles
SA23 24V	24V	35A / 45A	Commercial Vehicles
2SA23	12V	65A	Commercial Vehicles, Earth Movers
3SA23 With Heavy Duty Bearings	12V	65A	Light Commercial Vehicles, Commercial Vehicles, Cars
SA28	12V	70/80A/85A/90A	Cars
GAC5R 12V	12V	53A	Heavy Commercial Vehicles
GAC5R 24V	24V	31A	Heavy Commercial Vehicles

Headlamp:

TYPE	VOLTAGE	APPLICATIONS
29FR	12	Cars
Aerodynamic Head Lamps	12	Cars
RCL	12	Cars
F700 / MCF700 / S700	12	cars /LCVs / CVs / motor cycles
33FR	12 / 24	cars /LCVs / CVs

Dynamo:

TYPE	OUTPUT RATING	APPLICATION
C40AQ	12V / 11A	Tractors

Dynamo Regulator:

TYPE	VOLTAGE	REGULATING VOLTAGE	APPLICATION
3GC	12	13.7 TO 15.1	cars / LCVs / tractors
3GC	24	27.5 TO 29	commercial vehicles
RB340	12	13.7 TO 15.1	Tractors

Ignition Coil:

PA12	12	Cars
7C6 With Ballast Resistor	12	Cars
7C12	12	Cars

Distributor:

45D3	12	Cars
45D4	12	Cars
ESA	12	Cars
CAM Sensor	12	Cars

Diesel fuel injection:

1. ROTARY FUEL INJECTION PUMP RANGE - DP200:

The DP200 range of direct injection fuel pumps is specifically engineered to enable easier application programmes in the light truck and high variety agricultural, industrial and marine markets. The range is currently available for 2,3,4or 6 cylinder engines of up to 1.3 litres per cylinder.

2. Rotary Fuel Injection Pump – DPC

The DPC range of rotary fuel injection pumps has been developed specifically for indirect injection diesel engines for passenger cars and light vans. The range is currently available for 4 cylinder engines up to a capacity of 0.75 litres per cylinder

2.5 FUTURE PLANS OF THE ORGANISATION:

1. Lucas-TVS, a closely-held company of the TVS Group, will be setting up a plant on a 10-acre site at Singur in West Bengal to cater to Tata's requirements.

2. Leading auto electrical parts manufacturer Lucas-TVS, which will be supplying starters and alternators for Tata's Nano.

3. Lucas-TVS is developing a **'start-stop' technology** which will enable the engine of a vehicle to turn itself off for a period of time at traffic signals.This technology, showcased at the recent Auto Expo event in Delhi, is aimed at saving fuel and reducing emissions. **Lucas-TVS is the first Indian company to develop such a technology**.

4. Lucas-TVS, which expects to end fiscal 2008 with revenues of Rs 1,000 crore, also plans to give a big push to exports, which are expected to account for Rs 75 crore by March 2008.

5. The company expects to double exports by March 2009. It is targeting a turnover of Rs 1,500 crore, including Rs 300 crore from businesses outside India, by 2010-11.

2.6 LUCAS-TVS CUSTOMER NAMES:

1. **CARS:**

   MARUTI UDYOG

   TELCO –SQIC

   HYUNDAI MOTORS

   FORD INDIA

   AVTEC LIMITED

   WEST INDIA POWER EQUIPMENT

   FIAT INDIA

   GENERAL MOTORS

2. **COMMERCIAL VEHICLES:**

      TELCO

      BAJAJ AUTO

      FORCE MOTORS

      TATA CUMMINS LTD

      ASHOK LEYLAND

      M & M JEEP

      SWARAJ MAZDA

3. **TRACTORS:**

      M & M

      PUNJAB TRACTORS LTD

      TRACTORS AND FARM EQUIPMENTS

      HMT LIMITED

      ESCORTS

      EICHER

      L & T

4. **ENGINES:**

      KIRLOSKAR OIL ENGINES

      SIMPSONS

      TATA CUMMINS INDIA LTD

      GREAVES COTTON INDIA LTD

      LOMBARDINI

5. **TWO WHEELERS:**

      TVS MOTORS COMPANY LTD

      BAJAJ AUTO LTD

      BAJAJ YAMAHA LTD

      SOORAJ AUTO LTD

      SCOOTERS INDIA LTD.

2.7. CUSTOMER RECEIVABLES SYSTEM

Chart no.1 showing Process Flow Diagram

S.NO	DESCRIPTION	OWNER
1.	Receipt of final invoice	Marketing
2.	Receipt of Hundis / Debit notes / Covering letters	Marketing
3.	Checking and signing of hundis	Marketing
4.	Dispatch of invoices / hundis to banks / customers/ area office	Finance
5.	Receiving remittance vouchers and Cheques from area office	Area office
6.	checking and keying the cheques/invoice/ deduction data in the pc based program and transferring to marketing mini computer system	Finance
7.	monitoring and transferring of receipts for cash flow purpose.	Finance
8.	Payment of sales promotion expense	Finance
9.	Price revision input updation for raising Debit notes/credit notes	Finance
10.	Daily collection of statement	Finance
11.	Filing of payment vouchers	Finance

S.NO	DESCRIPTION	OWNER
12.	Customer master updation/ modification	Marketing/ Finance
13.	Transfer of sales data into AR- system	Data processing
14.	Preparation of journal entries	Finance
15.	Feeding journal/ debit notes/ credit notes to Data processing	Finance
16.	Processing and preparation	Data processing
17.	checking the control/receipt of ledger	Finance
18.	Preparation of MIS reports	Finance
19.	freight / courier bills checking / accounting/ effecting payments	Finance
20.	dispatch of due statements to customers and area office	Finance
21.	Deductions intimation letters to customers	Finance

Chief Executive & Managing Director

- Senior VP (Quality)
- Executive VP Mkt &Bus Development
  - GM (OE)
  - GM (Service)
  - GM (Exports)
- Executive VP (Finance)
  - ACS & AGM (Taxation)
    - Manager Finance (Taxation)
  - GM (Finance)
    - Manager Finance (MIS)
    - Manager Finance (B / AR Section)
    - Manager Finance (Costing Pricing)
    - AGM Finance (Operations)
      - Assistant Manager (Bills)
      - Assistant Manager (Capex)
      - Assistant Manager (MIS)
  - GM (I T)
- President (Operations)
  - General Manager (Civil /Electrical/ Mechanical)
  - Executive VP (Operations)
    - GM (Operations) Product unit 1
    - GM (Operations) Product unit 2
    - GM (Operations) Product unit 3
- Executive Director (Development)
  - Assistant Vice President (Engineering)
    - Assistant General Manager (Engineering) Product 1
    - Assistant General Manager (Engineering) Product 2
- General Manager (Internal Audit)
- Executive Vice President (HR)
  - Recruitment

xpansion

Assistant Company
y Assistant General
r
eneral Manager
ice President
Marketing
usiness
Bills Payable /
ts receivable
Management
tion System

CHAPTER -3
MACRO AND MICRO ANALYSIS

MACRO ANALYSIS:

The global auto component industry is expected to touch US$ 1.9 trillion by 2015, of which around 40 per cent (US$ 700 billion) is potentially expected to be sourced from low cost countries like India.

The auto parts industry directly influences the economies of the United States and the world. In a typical year, The U.S. auto parts industry generates around 17 percent of manufacturers' shipments of durable goods (products designed to last at least three years). Auto parts production consumes large amounts of iron, steel, aluminum, and natural rubber. The automobile industry also consumes more copper, glass, zinc, leather, plastic, lead, and platinum than any other U.S. industry. In 1997, U.S. retail sales of auto parts exceeded $284 billion, 3.5 percent of the nation's gross domestic product.

The U.S. auto parts industry has experienced strong job growth. In 1996, the auto parts industry accounted for 9 percent of all U.S. jobs producing durable goods, the highest level since 1979. Auto parts production workers earned compensation totaling $13.4 billion—a nearly 50 percent increase since 1990—and equal to 14 percent of the total paid by all manufacturers of durable goods. Sales of U.S. auto parts to Americans are expected to remain near the same level in the future, with about 1 to 2 percent growth per year, while foreign markets are expanding at rates that are two, three, and even ten times faster. Because exports will be essential to expanding the auto and auto parts industries, U.S. trade officials have negotiated trade agreements such as the Memorandum of Understanding with Korea (1993), the North American Free Trade Agreement (NAFTA, 1994), and the U.S. –Japan Automotive Framework Agreement (1995). These and other agreements have increased auto parts and other exports to Japan, Mexico, and Korea many times over.

In 1994, the United States successfully promoted the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), which helped American auto export

potential because it improved access to both major and developing markets. These initiatives have helped the U.S. Automotive industry achieves the highest level of exports on record. Between 1993 and 1996, Shipments abroad of motor vehicle increased 36 percent, and U.S. automotive parts exports increased 28 percent. The value of motor vehicle and parts exports reached $47.4 billion in 1996, up 7 percent from the previous year.

MICRO ANALYSIS:

Overview:

The automotive component industry is an important sector of the **Indian** economy and a major foreign exchange earner for the country. There are around 400 major players in the auto component sector. Most of them are distributed in the north, south, and, western parts of India around major Automotive Vehicle Manufacturers (AVMs). These AVMs contributed largely towards the development of component suppliers through technical and or financial collaborations.

The automotive component industry manufactures a wide range of parts including castings, forgings, finished, semi-finished components, assemblies, and subassemblies for all types of vehicles produced in India.

Presently, the Indian automotive component industry is highly fragmented. This industry can be divided into the organized and the unorganized categories of manufacturers. The organized component manufacturers supply components to at least one of the Original Equipment (OE) vehicle manufacturers. They also have access to technology due to their tie-ups with some of the foreign collaborators or through associate AVM.

The OE market is predominantly catered to by the organized sector. The 400 odd organized producers contribute around 80 percent to this market. Presently, these manufacturers have grown in size and numbers beyond the control of OE manufacturers. They control about 65 percent of the aftermarket

There are 402 medium and large key players in auto components in the organized sector along with 6000 ancillary units. However in the unorganized sector there are

approximately 5000 SSIs. The direct employment generated by the medium and large firms in the organized sector is 2,50,000. No figures are available for unorganized sector.

The Indian auto component industry has been navigating through a period of rapid changes with great élan. Driven by global competition and the recent shift in focus of global automobile manufacturers, business rules are changing and liberalisation has had sweeping ramifications for the industry. The global auto components industry is estimated at US$1.2 trillion. The Indian auto component sector has been growing at 20% per annum since 2000 and is projected to maintain the high-growth phase of 15-20% till 2015.

The Indian auto component industry is one of the few sectors in the economy that has a distinct global competitive advantage in terms of cost and quality. The value in sourcing auto components from India includes low labour cost, raw material availability, technically skilled manpower and quality assurance. An average cost reduction of nearly 25-30% has attracted several global automobile manufacturers to set base since 1991. India's process-engineering skills, applied to re-designing of production processes, have enabled reduction in manufacturing costs of components. Today, India has become the outsourcing hub for several global automobile manufacturers.

Innovation and cost pruning hold the key to meeting the global challenge of rising demand from developed countries and competition from other emerging economies. Several large Indian auto component manufacturers are already gearing to this new reality and are in the process of substantially investing in capacity expansion, establishing partnerships in India and abroad, acquiring companies overseas and setting up greenfield ventures, R&D facilities and design capabilities. Some leading manufacturers of auto components in India include Motor Industries Company of India, Bharat Forge, Sundaram Fasteners, Wheels India, Amtek Auto, Motherson Sumi, Rico Auto and Subros. The India's Top 500 Companies, published by Dun & Bradstreet in 2006, listed 22 auto component manufacturers as top companies in India with a total

turnover of US$ 3 bn. These companies are in the process of making a mark on the global arena, and some have already acquired assets abroad.

Industry Structure:

The total turnover of the Indian auto component industry is estimated at US$9 bn in 2006. The industry has the resources to manufacture the entire range of auto products required for vehicle manufacturing, approximately 20,000 components. The entry of global manufacturers into India during the 1990s enabled induction of new technologies, new products, improved quality and better efficiencies in operations. This in turn effectively acted as a catalyst to the local development of the component industry.

The Indian auto component industry is extensive and highly fragmented. Estimates by the Department of Heavy Industries, Government of India, indicate there are over 400 large firms who are part of the organised sector and cater largely to the Original Equipment Manufacturers (OEMs). Another 10,000 firms exist in the unorganised sector that operates in a tier-format. The firms in this segment operate in low technology products and cater to Tier I and Tier II suppliers and also serve the replacement market

Around 4% of the companies operating in the auto component segment cater to 80% of the demand emanating from OEMs. Within the unorganised segment, apart from supplying in the aftermarket, a number of players are also involved in job work and contract.

The range of products manufactured, with each broad product segment having a different market structure and technology, has negated any possible concentration of the market in a few hands. The market is so large and diverse that a large number of players can be absorbed to accommodate buyer needs. However, there are a select few large companies that have integrated their operations across the value chain. The key to competing in this industry is through specialisation by product-type, and integrating operations across the related area of specialisation.

An interesting insight provided by a study conducted by the National Council of Applied Economic Research revealed that the market segments for auto components included OEMs constituting 33%, local components having 25% with the balance 42% comprising of spurious market including re-conditioned parts. A large part of the spurious or grey market companies are in the unorganised sector.

The regional base of auto component manufacturers is mostly concentrated in the West, North and South of India. This regional concentration of auto component manufacturers has been dictated by the emergence of automobile manufacturers in these regions. The set up of Tata Motors, Bajaj, Mahindra & Mahindra and TVS in the 1950s and 1960s laid the foundation for auto component manufacturers in the West and South, whilst the entry of Maruti during the 1980s created the base in the North.

Industry Growth:

According to the Auto Component Manufacturers Association (ACMA), the apex body of component makers in India, global sourcing of components from the country will double from US$ 2.95 billion to US$ 5.9 billion in 2008-09, and is slated to hit US$ 20 billion in seven years.

Of the total global auto components trade of US$ 185 billion, India's share is 0.4 per cent. The auto component sector generated sales of about US$ 15 billion in fiscal year 2006-07, including US$ 2.8 billion worth of exports, says ACMA. Industry sales will swell to US$ 40 billion by 2016 with US$ 20 billion coming from exports, ACMA says.

The global auto component industry is expected to touch US$ 1.9 trillion by 2015, of which around 40 per cent (US$ 700 billion) is potentially expected to be sourced from low cost countries like India.

The ACMA-McKinsey Vision 2015 document estimates the potential for the Indian auto component industry to be US$ 40-45 billion by 2015. Of this, 50 per cent is expected to come from exports.

India is estimated to have the potential to become one of the top five auto component economies by 2025. The industry has been experiencing a high growth rate of 20 per cent over the period 2000-05 and is expected to grow at a rate of 17 per cent over the period 2006-14. Similarly, while growth rate of exports has been 25 per cent during 2000-05, the growth rate is expected to grow by 34 per cent during 2006-14.

A large number of cars in North America, Europe and in other auto marts of the world now carry Indian brands under their bonnets. Of the US$ 2.21 billion worth of component exports by the Indian auto component industry, around 70 per cent are bought by global majors such as General Motors, Ford Motor and DaimlerChrysler, among others.

India's component industry now has the capability to manufacture the entire range of auto-components, such as engine parts, drive, transmission parts, suspension and braking parts, electrical parts, and body and chassis parts, with engine parts making up nearly a third of all exports.

- Engine parts (31 per cent)
- Drive transmission and steering parts (19 per cent)
- Body and chassis (12 per cent)
- Suspension and braking parts (12 per cent)
- Equipment (10 per cent)
- Electrical parts (9 per cent)
- Others (7 per cent)

The share of exports in total production has risen from 10 per cent in 1997 to 18 per cent in 2006. The industry is poised to jump from exports of US$ 1.8 billion in 2004-05 to US$ 2.89 billion in 2006-07 and US$ 5.9 billion in 2008-09. According to ACMA, more than a third (36 per cent) of Indian auto component exports head for Europe, with North America featuring a close second at 26 per cent.

The composition of exports in terms of the proportion of original equipment manufacturer (OEM) and aftermarket has undergone a sweeping change since the past

decade. The ratio of OEM to aftermarket has changed from 35:65 in the 1990s to 75:25 in 2006.

Production of auto ancillaries was estimated at US$10 bn in 2005-06 and has been growing at a robust 20% per annum since 2000. Exports of auto components have been strong growing at 24% per annum since 2000. This growth in exports if sustained for another five years will see India's auto components exports will touch US$ 5 bn by 2011 from the US$ 2 bn at present.

Till the 1990s, the auto component industry was solely dependent on the domestic automobile industry to drive the demand for ancillary products. This composition of the market however is undergoing radical changes with global outsourcing gaining momentum. In recent times, exports has emerged as a significant driver of growth, and the demand emanating from global OEMs and Tier I manufacturers has opened new opportunities for the auto component industry in India. At the same time, a bright outlook for the domestic automobile industry also offers significant growth potential, given the fast rising income levels with a rapidly growing middle and high income consumers.

Share of exports in total production has risen from 10% in 1997 to 18% in 2006. The composition of exports in terms of the proportion of OEM and aftermarket has also undergone a sweeping change since the past decade. The ratio of OEM to aftermarket has changed from 35:65 in the 1990s to 75:25 in 2006. While exports have been booming, there has been a sharp rise in imports of auto components as well, especially in the last three years. From an import of US$ 250 mn in FY03, they have gone up to US$750 mn in FY06. This is a healthy trend, indicative of rising domestic demand.

Investments:

Since 2000, the auto component industry has recorded an investment level of Rs 18 bn and has attracted US$ 530 mn in terms of foreign direct investment. Investments in the sector have been growing at 14% per year. In 2005-06, investments touched US$ 4.4 bn, and are expected to grow significantly in future.

The Investment Commission has set a target of attracting foreign investment worth US$ 5 bn for the next five years to increase India's share in the global auto components market from the present 0.4% to 3-4%. This is a sizeable target considering the meagre amount of FDI currently coming into the industry. The changing perception of global auto makers is however fast altering this scenario.

With less than 1% share in the global market, India has tremendous potential to emerge as a supply base. Several global giants like Ford and Toyota have already set up base in India to source auto components. Outsourcing is fast catching up with domestic OEMs as well, with most Indian OEMs today sourcing nearly 70-80% of their component requirements from vendors.

This changing business scenario is leading to an inevitable outcome of consolidation within the industry. The takeover of Kar Mobiles by Rane Engine and of Gero Auto by Uma Precision are few instances. However, such mergers and takeovers will be few and far in between in the auto component industry, unlike the churn out anticipated in other emerging industries – the principal factor being the vastness of the market and the range of products that need to be delivered.

Rather than domestic consolidation, the general trend at present is for the large auto component manufacturers to establish a global presence. Top auto component manufacturers have already set up base in the global markets, especially in Europe. Overall, there have already been 16 acquisitions, with six made in 2005. The industry is the third highest among the Indian industries after IT and Pharma, in acquiring overseas assets. These acquisitions have largely been in Europe and the USA. This trend has been possible as the auto ancillary industry in these countries have been collapsing, thus making it affordable to acquire these companies. Nevertheless, this will provide a base for Indian companies to access the European and American markets.

Indian auto component companies are also setting up bases in other emerging economies, who are potential competitors, for instance, Sundaram Fasteners' greenfield facility in Zhejiang and Bharat Forge's joint venture with the Chinese automotive major

FAW Corporation. Another auto component manufacturer with plans to enter China is PMP Components, which intends to set up a sourcing base to establish itself as a low cost supplier.

MAJOR PLAYERS AND KEY FEATURES OF AUTO COMPONENT INDUSTRY:

ENGINE PARTS:

In terms of use, 'Engine Parts' is the most important product segment. According to the classification by ACMA, the primary sub-segments in the Engine Parts segment are: pistons, piston rings, engine valves, carburettors and fuel delivery systems.

Key Features:

- Engine Parts is the second largest product segment of the automotive components industry with a 24% production share. The segment is classified in terms of core engine, fuel delivery and other components.
- Engine assembly is a high precision job, requiring adherence to high level of quality norms. The demand shares of the replacement and export markets for the Engine Parts segment vary significantly across products. It is as high as 60% for some products and as low as 10% for some others. The demand from OEMs varies from 40% to 90%. The share of the replacement market may decline in the short to medium term for some engine parts because of technological considerations.
- Technological changes are expected to drive the design and development of new products in this segment.
- Traditionally, the Engine Parts segment manages the highest operating margins in the components industry, because of higher sales realisations. However, with the slowdown in the automotive industry in recent years, there has been a relative decline in margins for the Engine Parts segment.

Major Players:

1. There are four major players in the pistons sub-segment: Goetze, Shriram Pistons & Rings, India Pistons, and Samkrg Pistons. Almost all players in the pistons sub-segment have technological tie-ups with global majors.

2. The piston rings sub-segment is dominated by Goetze, Shriram Pistons & Rings, Perfect Circle Victor and India Pistons

3. Rane Engine Valves, KAR Mobiles, and Shriram Pistons & Rings dominate the engine valves sub-segment. Technical collaboration exists for major players.

4. Ucal Fuel Systems, Spaco Carburettors & Escorts Auto Components are the prominent players in carburettors, a part of the petrol-based fuel injection systems sub-segment.

5. In diesel-based fuel injection systems, Mico, Delphi TVS Diesel System and Tata Cummins are the prominent players

ELECTRICAL PARTS:

The electrical system in an automotive consists mainly of starting, ignition and charging systems. According to the classification by ACMA, the primary sub-segments in the Electric Parts segment are: starter motors, generators, distributors, spark plugs, ignition coils, flywheel magnetos and voltage regulators, and electric ignition systems (EIS).

Key Features:

- Electrical Parts is the fifth largest product segment of the automotive components industry with an 8% production share.

- The demand share of the replacement and export markets is low for the segment at around 25%, while that of the OEM segment is around 75%.

- The operating margins of electrical parts manufacturers, which are lower than the industry average, have improved in recent years following a decline

in material costs. The material costs have declined as players have increasingly localised their operations, thus bringing down their reliance on imports.

Major Players:

1. Lucas TVS, Denso,
2. Motor Industries Co. (MICO),
3. Delco Remy Electricals and
4. India Nippon Electricals are the major players in the Electrical Parts segment.

Tamilnadu current annual output in the automotive sector is estimated to be $3-3.5 billion with an estimated share of 25 per cent in the Indian automotive Industry and its contribution to the State's Gross State Domestic Product is 7-8 per cent. Tamilnadu's auto components sector constitutes 35 per cent of India's auto component production that is produced in units situated in Chennai. The Tamilnadu State government plans to transform the state into one of the top three manufacturing hubs for automotive and auto ancillary in Asia by 2015.

There are 107 key players in Tamilnadu's Auto Component Industry with an investment of about Rs.36000 million ($ 800 million). The output is US $ 1,2 billion out of which the exports are US $ 140 million. The auto component industry in Tamilnadu provides employment to about 45,000 people. More than 50% of the companies are ISO certified while 26% are QS certified.

The Key OEM customers of auto component industry in Tamilnadu are GM, Ford, Daimler Chrysler, BMW, Volvo, Nissan, Piaggio and New Holland.

CHAPTER-4

DATA ANALYSIS AND INTERPRETATION

4.1 RATIO ANALYSIS:

Ratio analysis is one of the popular tools of financial statement analysis. A ratio can be defined as "the indicated quotient of two mathematical expressions" and as "the relationship between two or more things." A financial ratio is defined as a relationship between two variables taken from financial statements of the concern. It's a mathematical yardstick that measures the relationship between the two financial figures. Experts have identified ratios as significant and important tool, since they through considerable light on financial position of the concern.

4.1.1. DEBTORS TURNOVER RATIO:

The debtors also constitute major portion of the current assets as that of the inventory. The liquidity of the firm depends upon the realization of debtors. The high realization of debtors implies that the firm is highly liquid and vice versa.

As a company sells goods for both cash and credit, credit is used as a marketing tool by a number of companies. When the company extends credits it its customers, book debts are created in the company's accounts. Book debts are expected to be converted into cash over a short period and, therefore are included in current assets. The liquidity position of the company depends on the quality of debtors to a great extend. Financial analysis apply debtors turnover to judge the liquidity of debtors.
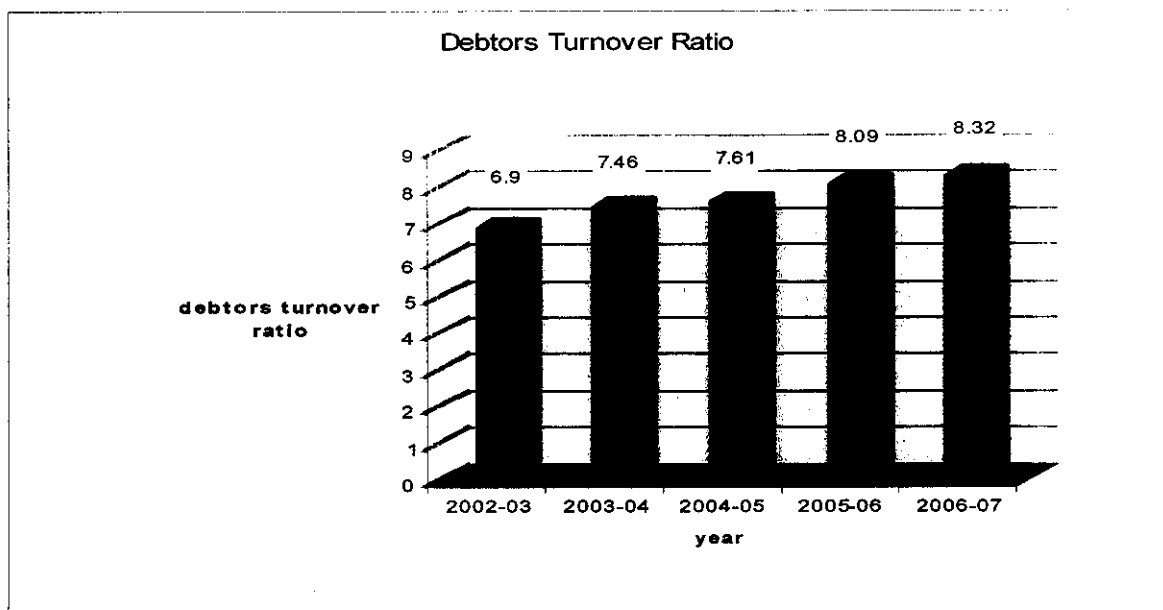
$$\text{Debtors turnover ratio} \quad = \quad \frac{\text{Credit Sales}}{\text{Debtors}}$$

Debtors turnover ratio indicates the number of times debtors turnover each year. Generally, higher the value of debtor's turnover, the more efficient is the arrangement of credit.

Table no.1 showing Total Debtors Turnover Ratio:

Year	Sales (Rs. in crores)	Debtors (Rs. in crores)	Debtors Turnover Ratio(in times)
2002-03	547.94	79.39	6.90
2003-04	639.25	85.63	7.46
2004-05	712.66	93.57	7.61
2005-06	806.59	99.67	8.09
2006-07	902.57	108.45	8.32

Chart no.2 showing Total Debtors Turnover Ratio

INFERENCE:

According to this table, the debtors turnover ratio for the years 2002-2007, the ratios are increasing (i.e) in 2002-03 the debtors are collected in 6.9 times in a year which is increased to 8.32 times in a year in 2006-2007. The higher the turnover ratios, the better is the trade credit management.

2. DEBT COLLECTION PERIOD:

The average collection period measures the quality of debtors because; it measures the speed of their collection. Shorter the average collection period, their better quality if debtors as a short collection period implies the prompt payment by debtors. An excessively long collection period implies a very liberal and inefficient credit and collection performance. This certainly delays the collection of cash and impairs of the company's liquidity.

Thus the collection period ratio indicates in two aspects:

- In determining the collectables of debtors
- In ascertaining the company's comparative strength and advantages relative to its credit policy a Performance vis-à-vis the competitors credit policies and performance.

$$\text{Debt collection period} = \frac{\text{Debtors}}{\text{Credit Sales}} \times 365 \text{ days}$$

Table no.2 showing Total Debt collection period:

| Year	Sales (Rs. In crores)	Debtors (Rs. In crores)	Debtors Collection Period (in days)
2002-03	547.94	79.39	52
2003-04	639.25	85.63	48
2004-05	712.66	93.57	47
2005-06	806.59	99.67	45
2006-07	902.57	108.45	43

Chart no.3 showing Total Debt collection period:
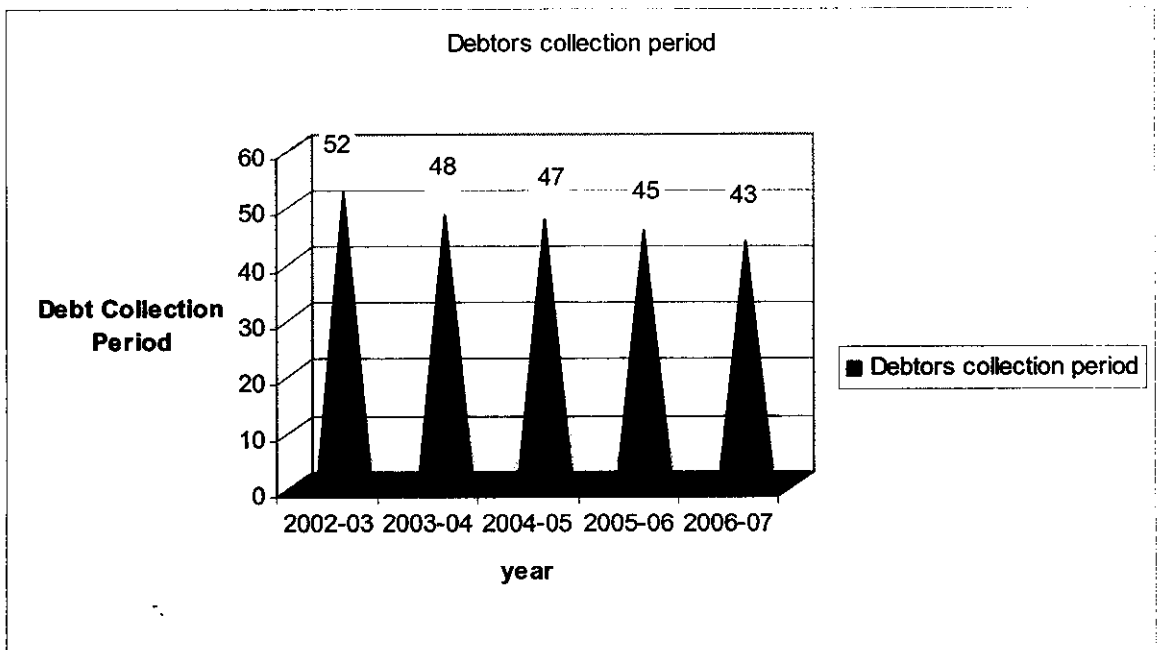
INFERENCE:

According to this table, the debt collection period for the years 2002-2007, Here, the

2006 – 07, which indicates that the debts are collected promptly by the company. This shows that the firm's debt collection team is performing well, as a result rate of which the realization has increased.

Table no.3 showing debtors turnover ratio of OE customers:

Year	OE Sales (Rs. In crores)	OE Debtors (Rs. In crores)	Debtors Turnover Ratio(in times)
2002-03	460.2696	67.4815	6.82
2003-04	536.97	72.7855	7.37
2004-05	598.6344	79.5345	7.52
2005-06	681.56855	84.7195	8.04
2006-07	762.67165	92.4536	8.24

Chart no.4 showing Debtors turnover ratio of OE customers:
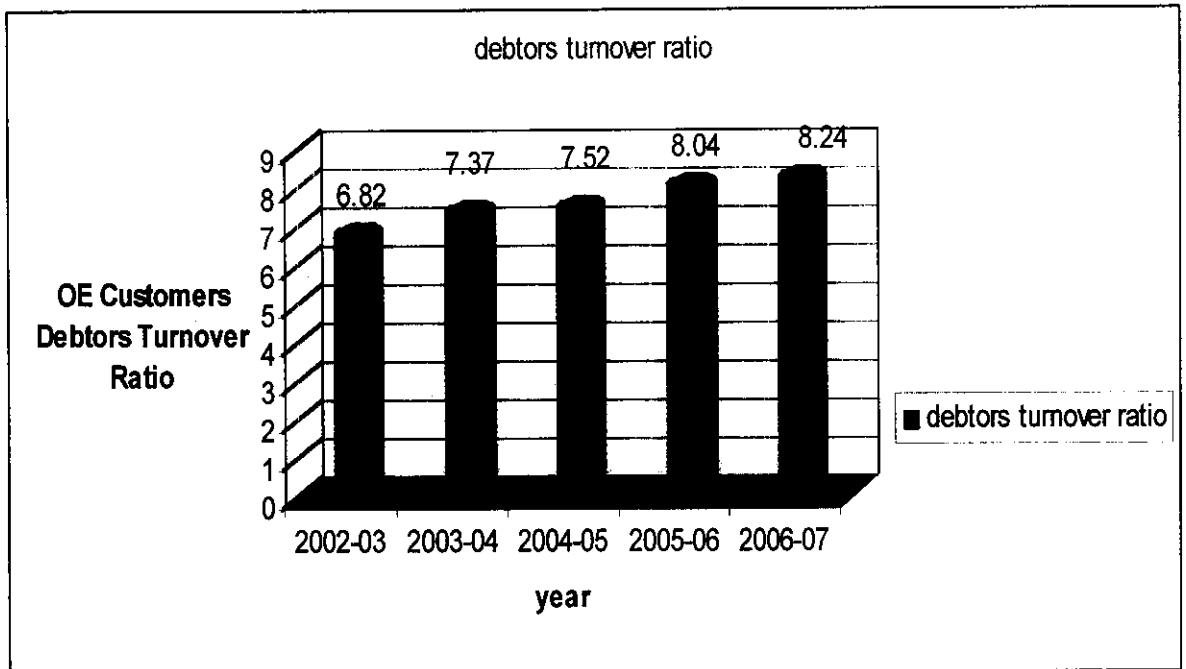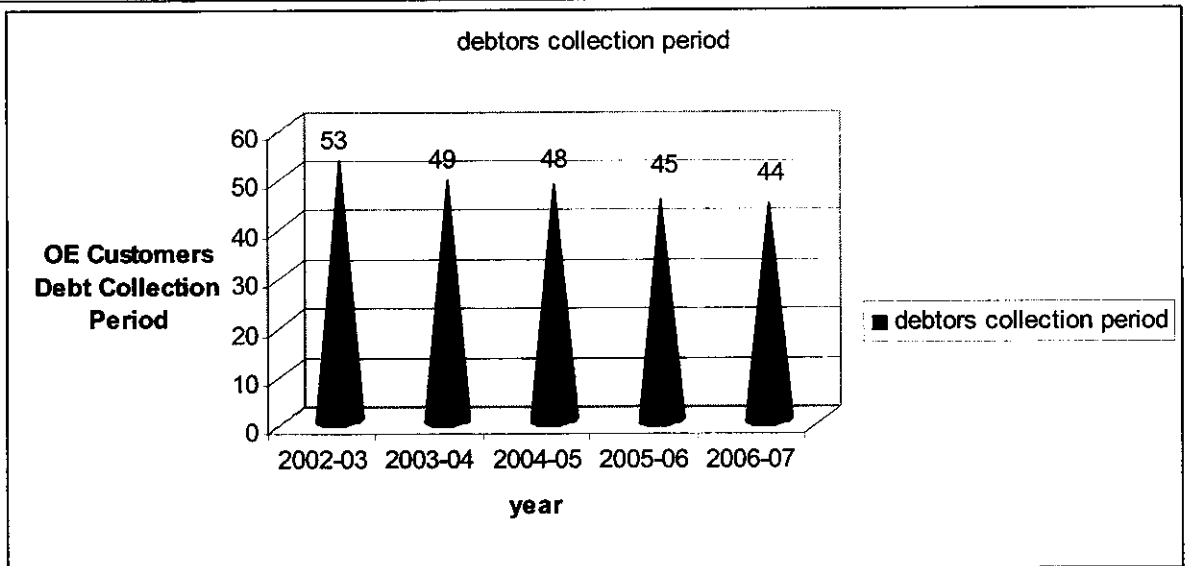
debtors turnover ratio

INFERENCE:

According to this table, the debtors turnover ratio of OE Customers for the years 2002-2007, the ratios are increasing (i.e) in 2002-03 the debtors are collected 6.82 times in a year which is increased to 8.24 times in a year in 2006-2007. The higher the turnover ratios, the better is the trade credit management.

Table no.4 showing debt collection period of OE Customers:

Chart no.5 showing Debt collection period of OE customers:

| Year	OE Sales (Rs. In crores)	OE Debtors (Rs. In crores)	Debtors Collection Period(in days)
2002-03	460.2696	67.4815	53
2003-04	536.97	72.7855	49
2004-05	598.6344	79.5345	48
2005-06	681.56855	84.7195	45
2006-07	762.67165	92.453625	44

INFERENCE:

According to this table, the debtors debt collection period for the years 2002-2007, which shows decrease in collection period i.e in 2002 – 03 , it indicates that the debts are collected promptly by the company. This is possible due to the constant follow up with the customers by the Area representatives with back up data on outstanding provided by the finance department through IT.

Table no.5 showing debtors turnover ratio of service customers:

Year	service sales	service debtors	debtors turnover ratio

2002-03	65.7528	9.5268	**6.9**
2003-04	79.90625	10.489675	**7.61**
2004-05	89.0825	11.2284	**7.93**
2005-06	100.82375	12.209575	**8.25**
2006-07	112.82125	13.55625	**8.32**

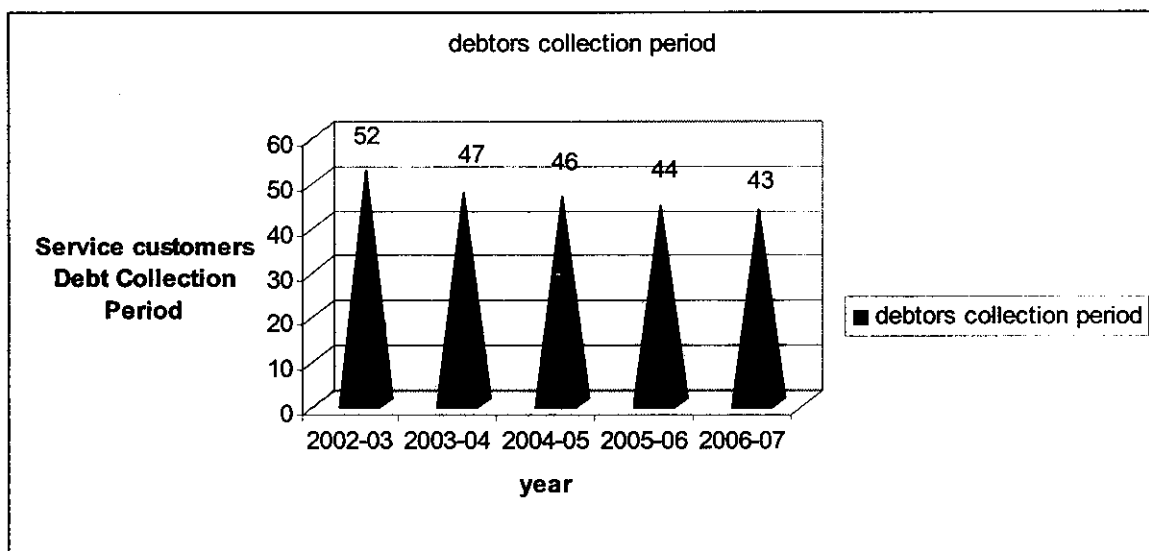Chart no.6 showing Debtors turnover ratio of Service customers.
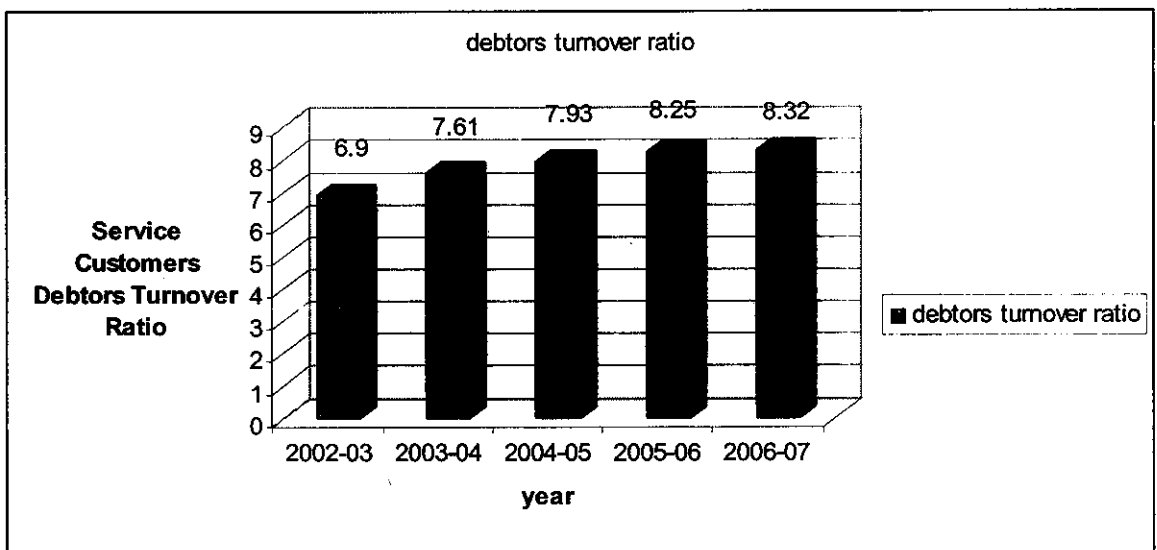
INFERENCE:

According to this table, the debtors turnover ratio of OE Customers for the years 2002-2007, the ratios are in an increasing trend. The higher the turnover ratios, the better is the trade credit management.

Table no.6 showing debt collection period of service customers:

year	service sales	service debtors	debtors collection

2002-03	65.7528	9.5268	**52**
2003-04	79.90625	10.489675	**47**
2004-05	89.0825	11.2284	**46**
2005-06	100.82375	12.209575	**44**
2006-07	112.82125	13.55625	**43**

Chart no.7 showing Debtors collection period of Service customers:
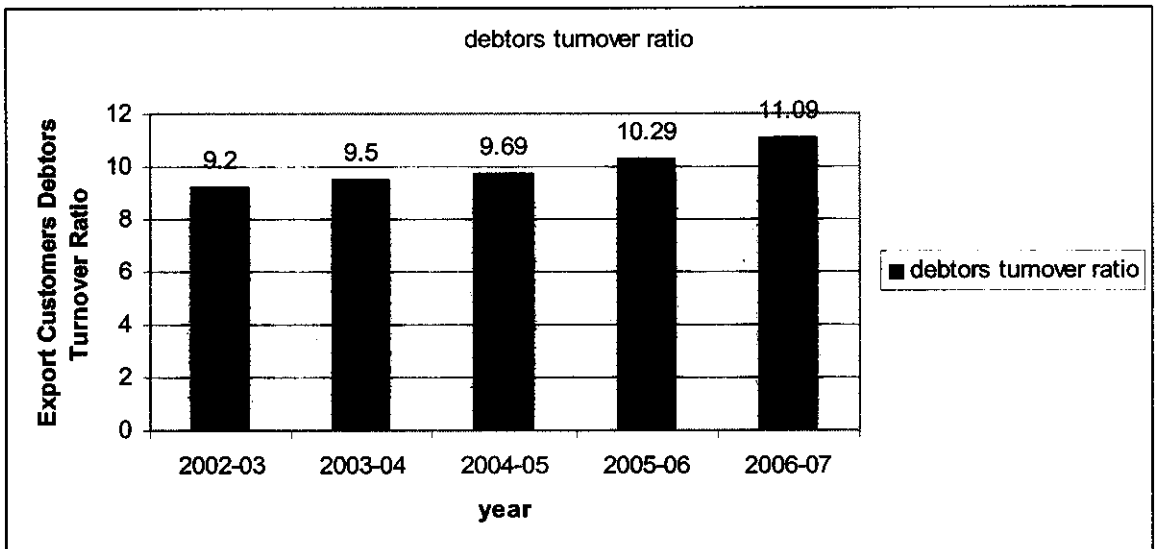

INFERENCE:

According to this table, the debtors debt collection period for the years 2002-2007, which shows decrease in collection period, it indicates that the debts are collected promptly by the company.

Table no.7 showing debtors turnover ratio of export customers:

Year	Export Sales	Export Debtors	Debtors Turnover Ratio

2002-03	21.9176	2.3817	**9.2**
2003-04	22.37375	2.354825	**9.5**
2004-05	24.9431	2.573175	**9.69**
2005-06	28.23065	2.740925	**10.29**
2006-07	27.0771	2.440125	**11.09**

Chart no.8 showing Debtors turnover ratio of Export customers:
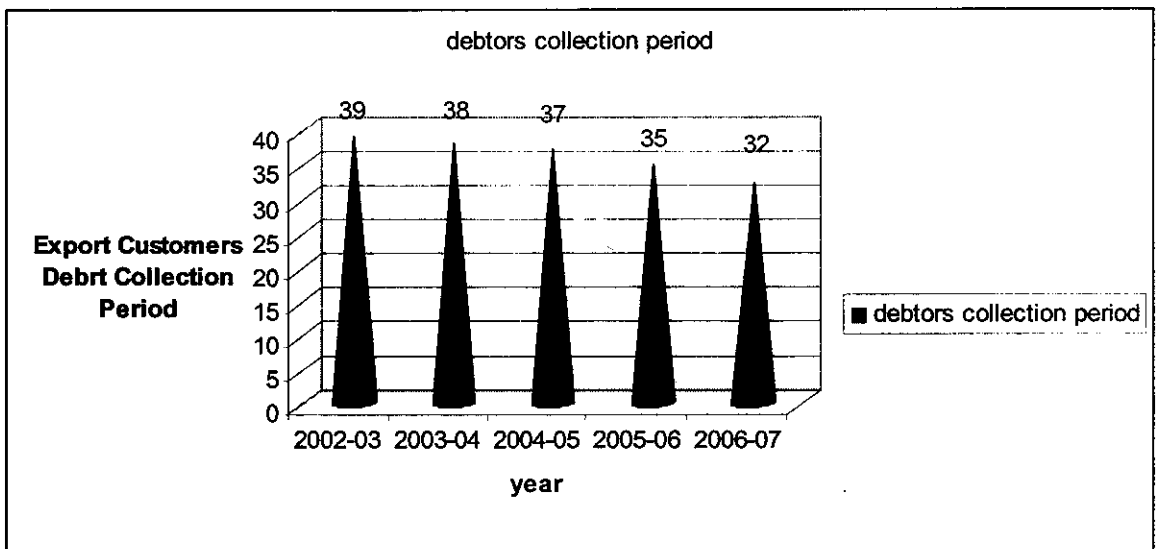

INFERENCE:

According to this table, the debtors turnover ratio of SERVICE Customers for the years 2002-2007, the ratios are in an increasing trend. The higher the turnover ratios, the better is the trade credit management

Table no.8 showing debt collection period of Export customers:

| Year | export sales | export debtors | Debtors collection |

2002-03	21.917	2.381	**39**
2003-04	22.373	2.354	**38**
2004-05	24.943	2.573	**37**
2005-06	28.230	2.740	**35**
2006-07	27.077	2.440	**32**

Chart no.9 showing Debt collection period of Export customers:

INFERENCE:

According to this table, the debtors debt collection period for the years 2002-2007, which shows decrease in collection period, it indicates that the debts are collected promptly by the company.

4.2 CORRELATION ANALYSIS:

Correlation analysis is the statistical tool we can use to describe the degree to which one variable is linearly related to another. The sign of r indicates the direction of the relationship between the two variables x and y.

The properties of correlation coefficient are:

1. the correlation coefficient is unaffected by chance in origin of reference and scale of reference.

2. the value of correlation coefficient lies between -1 and +1 (-1= r = +1).

Table no.9 showing Karlpearsons coefficient of correlation

Year	sales(x)	debtors(y)	$(x - \bar{x})$	$(y - \bar{y})$	$(x - \bar{x})^2$	$(y - \bar{y})^2$	$(x-\bar{x})(y-\bar{y})$
2002-03	547.94	79.39	-173.862	-13.952	30227.99	194.65	2425.72
2003-04	639.25	85.63	-82.552	-7.712	6814.83	59.47	636.64
2004-05	712.66	93.57	-9.142	0.228	83.5761	0.05	-2.08
2005-06	806.59	99.67	84.788	6.328	7189.00	40.04	536.53
2006-07	902.57	108.45	180.768	15.108	32677.07	228.25	2731.04
TOTAL	3609.01	466.71	0	0	76992.47	522.48	6327.86

$$\bar{x} = \frac{?x}{N} \qquad \bar{y} = \frac{?y}{N}$$

$$\bar{x} = \frac{3609.01}{5} = 721.802 \qquad \bar{y} = \frac{466.71}{5} = 93.342$$

$$r = \frac{?(x-\bar{x})*(y-\bar{y})}{\sqrt{(x-\bar{x})^2} * \sqrt{(y-\bar{y})^2}} = +0.99$$

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INFERENCE:

The relationship between two Sales and Debtors are direct and strong, thus there is a positive high degree correlation.

4.3. TREND ANALYSIS:

Trend analysis is based on the idea that what has happened in the past gives traders an idea of what will happen in the future. The analysis of a variable's past value changes to determine if a trend exists and, if so, what the trend indicates. Trend analysis is an important tool for data analysis and interpretation of financial statement. Trend in general signifies the tendency. In other words the review and appraisal of tendency in accounting variables are nothing but trend analysis. Such analysis plays a significant role in budgeting. Financial statements of many years are required to calculate the trend ratio or percentage and information contained in these statements are tabulated separately for number of years

Table no.10 showing trend analysis for Total Sales:

Year	Total Sales (y)	x	x^2	xy	Yc= a+bx
2002-03	547.94	-2	4	-1095.88	546.482
2003-04	639.25	-1	1	-639.25	634.142
2004-05	712.66	0	0	0	721.802
2005-06	806.59	1	1	806.59	809.462
2006-07	902.57	2	4	1805.14	897.122
TOTAL	3609.01	0	10	876.6	3609.01

By applying the straight line equation,

Yc= a + bx

Y= calculated trend value of y

a = ? y / n   b = ? xy / x^2

a = 3609.01 / 5 = **721.802**   b = 876.60 / 10 = **87.66**

Yc = a + bx,

2007 – 08, Yc = 721.802 + 87.66 (3)

          = **984.782**

2008 – 09, Yc = 721.802 + 87.66(4)

          = **1072.442**

Chart no.10 showing trend values for Total

Trend Values (Sales)
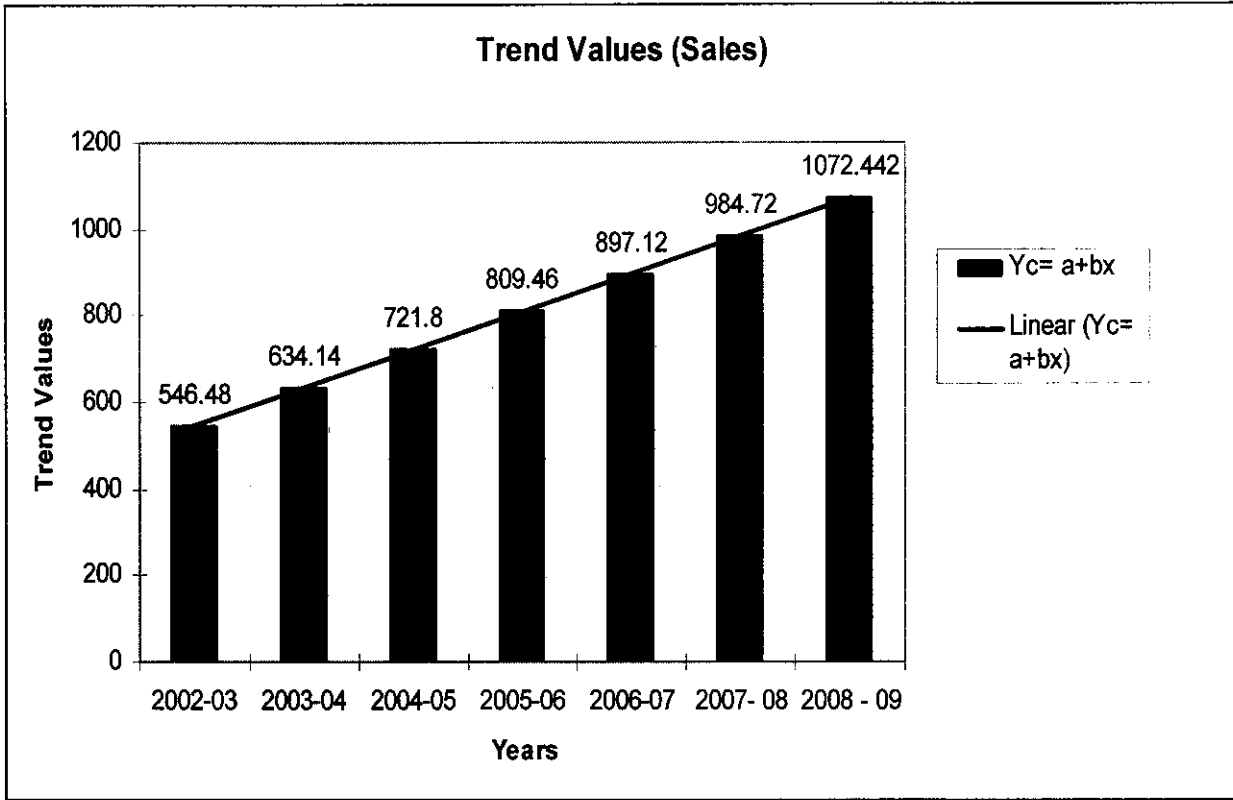
INFERENCE:

Thus the sales of next two years are estimated to be Rs. 984.782 crores and Rs.1072.442 crores. It shows an increasing trend, thus it implies that the company is performing well.

Table no.11 showing Trend Analysis for Total Debtors:

Year	Debtors(y)	X	x^2	xy	Y= a+bx
2002-03	79.39	-2	4	-158.78	**78.91**
2003-04	85.63	-1	1	-85.63	**86.126**
2004-05	93.57	0	0	0	**93.342**
2005-06	99.67	1	1	99.67	**100.558**
2006-07	108.45	2	4	216.9	**107.774**
TOTAL	466.71	0	10	72.16	**459.494**

By applying the straight line equation,

Yc= a + bx

Y= calculated trend value of y

a = ? y / n

a = 466.71 / 5 = 93.342

b = ? xy / x^2

b = 72.16 / 10 = 7.216

Yc = a + bx

2007 - 08 Yc = 93.342 + 7.216 (3)

= 114.99

2008 - 09 Yc = 93.342 + 7.216 (4)

= 122.206

Trend Value (Debtors)
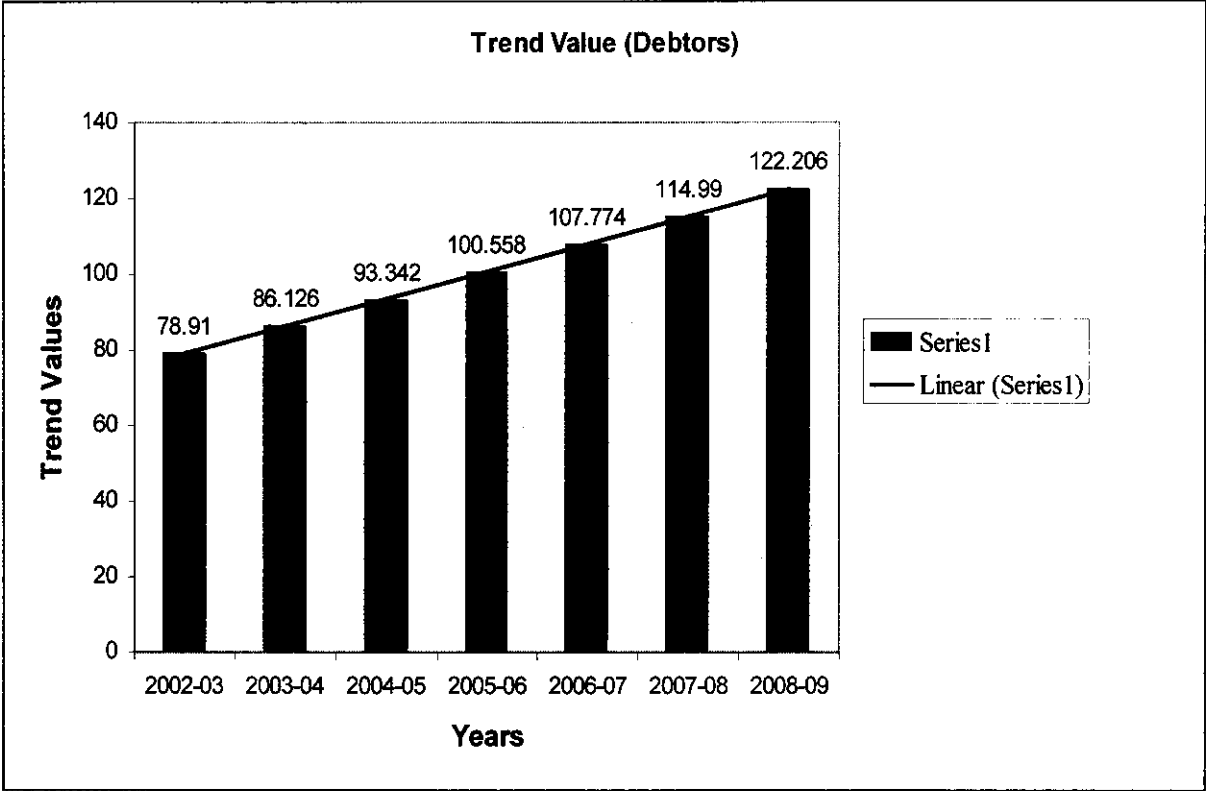
INFERENCE:

Thus the debtors of next two years are estimated to be Rs. 114.99 crores and Rs. 122.206 crores. Thus the debtors also shows an increasing trend.

Table no.12 showing trend analysis of OE sales

Year	OE Sales (y)	x	x^2	xy	Yc= a+bx
2002-03	460.27	-2	4	-920.54	**458.1423**
2003-04	536.97	-1	1	-536.97	**533.0826**
2004-05	598.63	0	0	0	**608.0228**
2005-06	681.57	1	1	681.57	**682.9631**
2006-07	762.67	2	4	1525.34	**757.9034**
TOTAL	3040.11	0	10	749.40	**3040.11**

By applying the straight line equation,

$$Yc= a + bx$$

Y= calculated trend value of y

a = ? y / n

a = 3040.11 / 5 = 608.02

b = ? xy / x^2

b = 749.40 / 10 = 74.94

Yc = a + bx

2007 - 08   Yc = 608.02+74.94 (3)

= 832.85

2008 - 09   Yc = 608.02 + 74.94 (4)

= 907.78

Chart no.12 showing Trend values of Sales of OE customers:

Trend values (OE Sales)
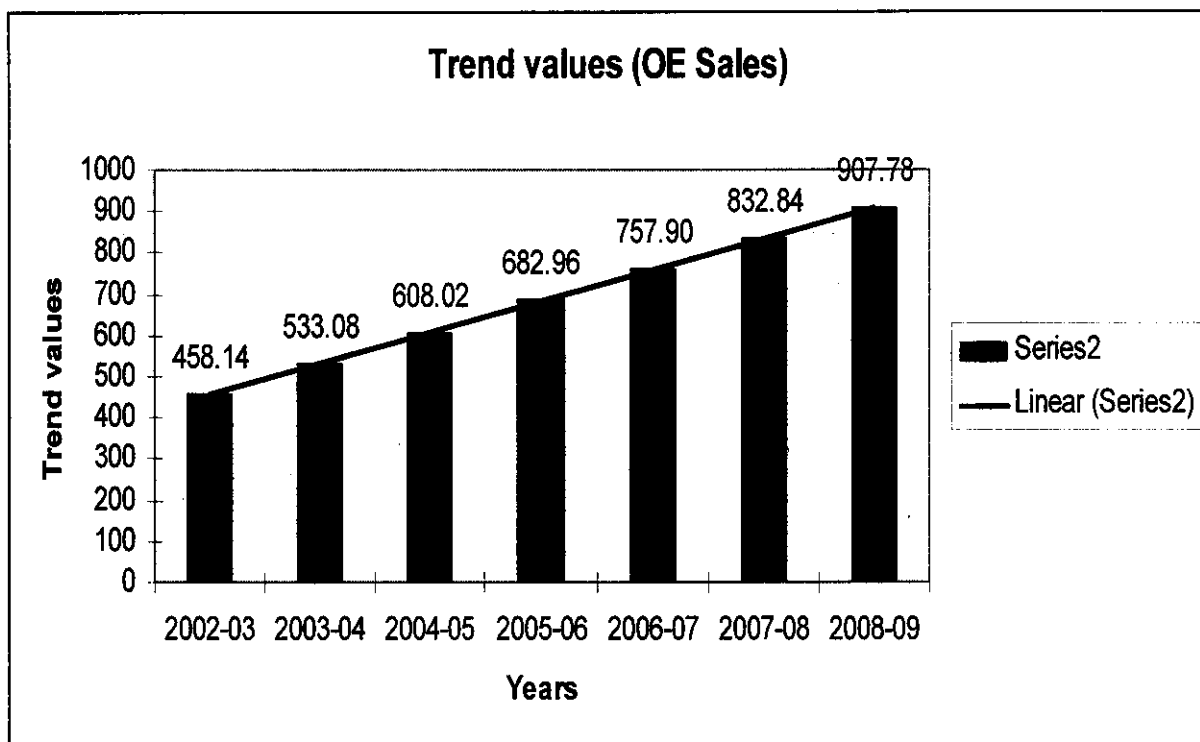
INFERENCE:

Thus the Sales of OE customers of next two years are estimated to be Rs. 832.84 crores and   Rs. 907.78 crores. The projected sales shows an increasing trend.

Year	Service Sales (y)	x	x^2	Xy	Yc= a+bx
2002-03	65.75	-2	4	-131.51	66.67
2003-04	79.90	-1	1	-79.91	78.17
2004-05	89.08	0	0	0	89.67
2005-06	100.82	1	1	100.82	101.18
2006-07	112.82	2	4	225.64	112.68
TOTAL	448.37	0	10	115.08	448.37

By applying the straight line equation,

Yc= a + bx

Y= calculated trend value of y

a = ? y / n

a = 448.37 / 5 = 89.67

b = ? xy / x^2

b = 115.08/ 10 = 11.51

Yc = a + bx

2007 - 08   Yc = 89.67+11.51 (3)

=124.1936

2008 - 09   Yc = 89.67+11.51(4)

=135.6991

Chart no.13 showing trend values of Service customers sales

Trend values (service sales)
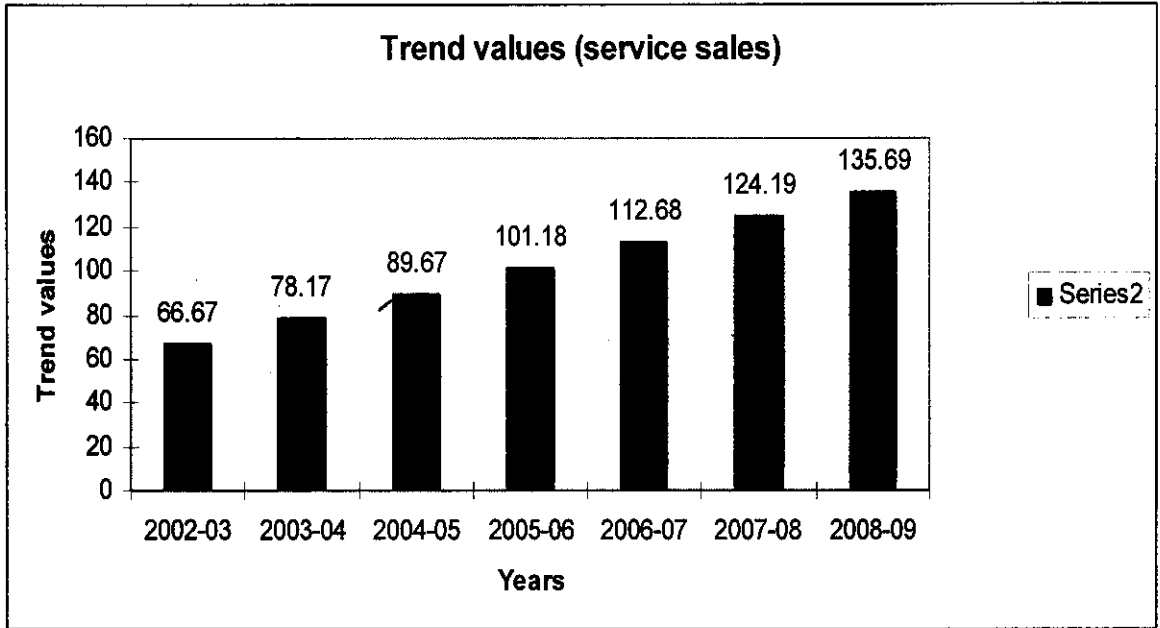
INFERENCE:

Thus the Sales of OE customers of next two years are estimated to be Rs. 124.19 crores and   Rs. 135.69 crores. The projected sales shows an increasing trend.

Year	Export Sales (y)	x	x²	Xy	Yc= a+bx
2002-03	21.9176	-2	4	-43.8352	21.6733
2003-04	22.37375	-1	1	-22.37375	23.2909
2004-05	24.9431	0	0	0	24.9084
2005-06	28.23065	1	1	28.23065	26.526
2006-07	27.0771	2	4	54.1542	28.1436
TOTAL	124.5422	0	10	16.1759	29.7612

By applying the straight line equation,

$$Yc = a + bx$$

Y= calculated trend value of y

$a = ? \, y \,/\, n$

$a = 124.5422 \,/\, 5 = 24.90844$

$b = ? \, xy \,/\, x\text{\^{}}2$

$b = 16.1759 \,/\, 10 = 1.61759$

Yc = a + bx

2007 - 08   Yc = 24.90844+1.61759 (3)

= 29.7612

2008 - 09   Yc = 24.90844+1.61759 (4)

= 31.3788

Chart no.14 showing Trend values of Export customers sales:


Trend values(Export sales)
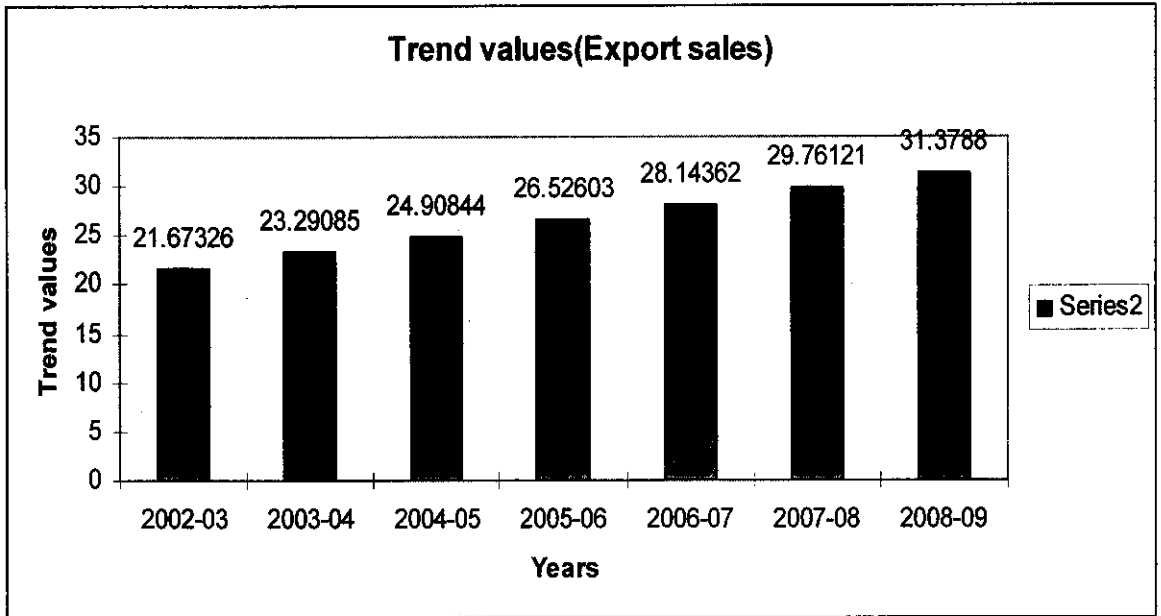
INFERENCE:

Thus the Sales of Export customers of next two years are estimated to be Rs. 29.76121 crores and Rs. 31.3788 crores. The projected sales shows an increasing trend.

Table no.15 showing future debtors turnover ratio for the year 2007 - 09

Year	Sales (Rs. in crores)	Debtors (Rs. in crores)	Debtors Turnover Ratio (in times)
2002-03	547.94	79.39	6.9
2003-04	639.25	85.63	7.46
2004-05	712.66	93.57	7.61
2005-06	806.59	99.67	8.09
2006-07	902.57	108.45	8.32
2007-08	984.72	114.99	8.56
2008-09	1072.442	122.206	8.78

Chart no.15 showing future debtors turnover ratio for the year 2007 - 09
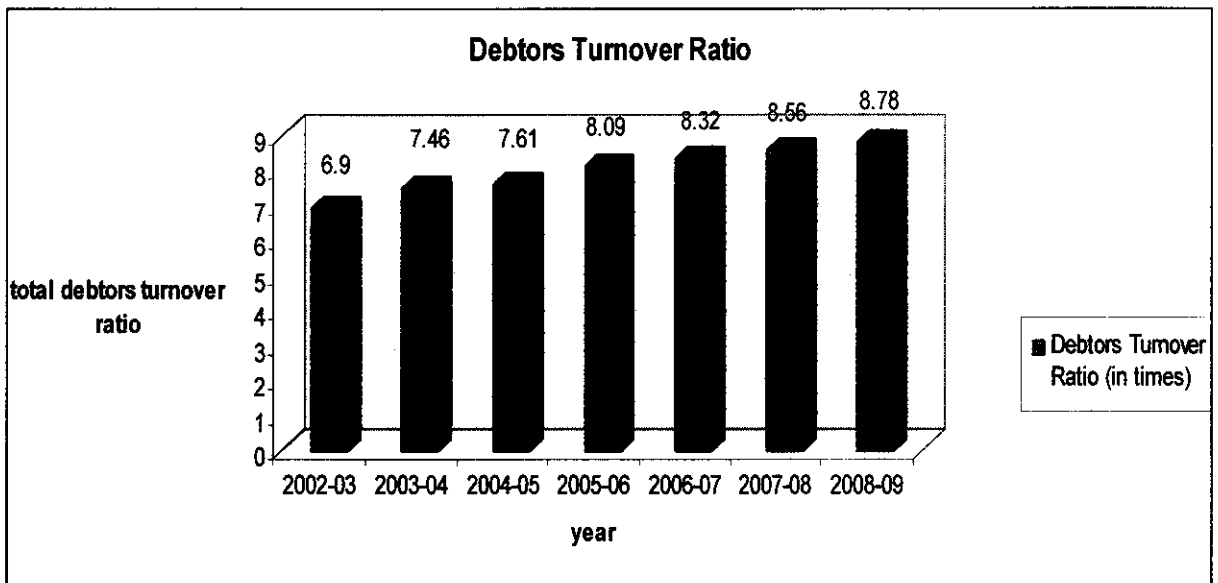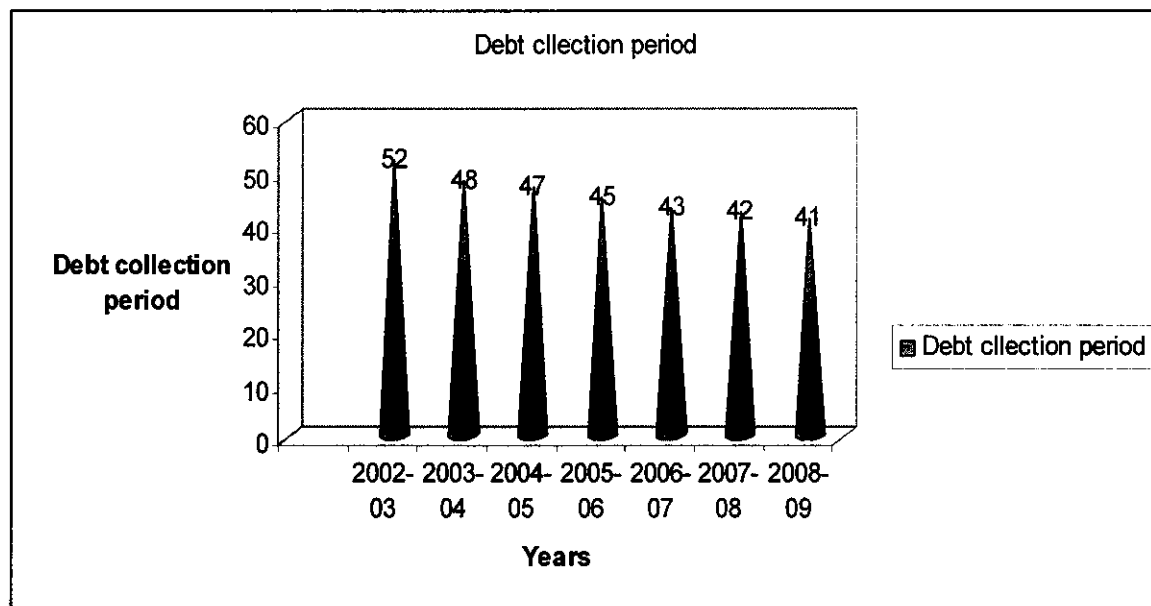

INFERENCE:

From the above table, it shows that the future debtors turnover ratio also shows an increasing trend, which indicated that the company is efficient in managing its credits. The credit policy is prompt and they are regular in their collection procedures.

Table no.16 showing future Debt collection Period for the year 2007 - 09

Year	Sales (Rs. in crores)	Debtors (Rs. in crores)	Debt collection period
2002-03	547.94	79.39	52
2003-04	639.25	85.63	48
2004-05	712.66	93.57	47
2005-06	806.59	99.67	45
2006-07	902.57	108.45	43
2007-08	984.72	114.99	42
2008-09	1072.442	122.206	41

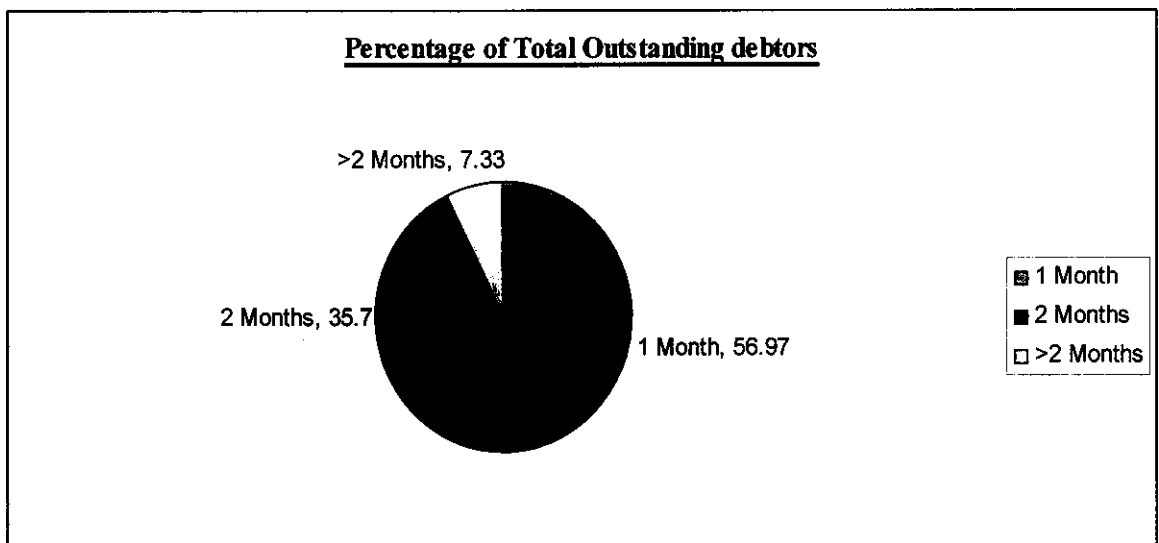Chart no.16 showing future Debt collection Period for the year 2007 - 09

INFERENCE:

From the above table, it shows that the future debt collection period also shows an decreasing trend, which indicated that the company is efficient in managing its credits. The credit policy is prompt and they are regular in their collection procedures.

for the year 2006-2007

Outstanding Period	Outstanding Amount of Debtors	Percentage of Total Outstanding debtors(%)
1 Month	24.56	**56.97**
2 Months	15.39	**35.7**
>2 Months	3.16	**7.33**
Total	**43.11**	**100**

Chart no.17 showing Ageing statement of Total Outstanding Debtors

for the year 2006-2007

Percentage of Total Outstanding debtors

>2 Months, 7.33

2 Months, 35.7

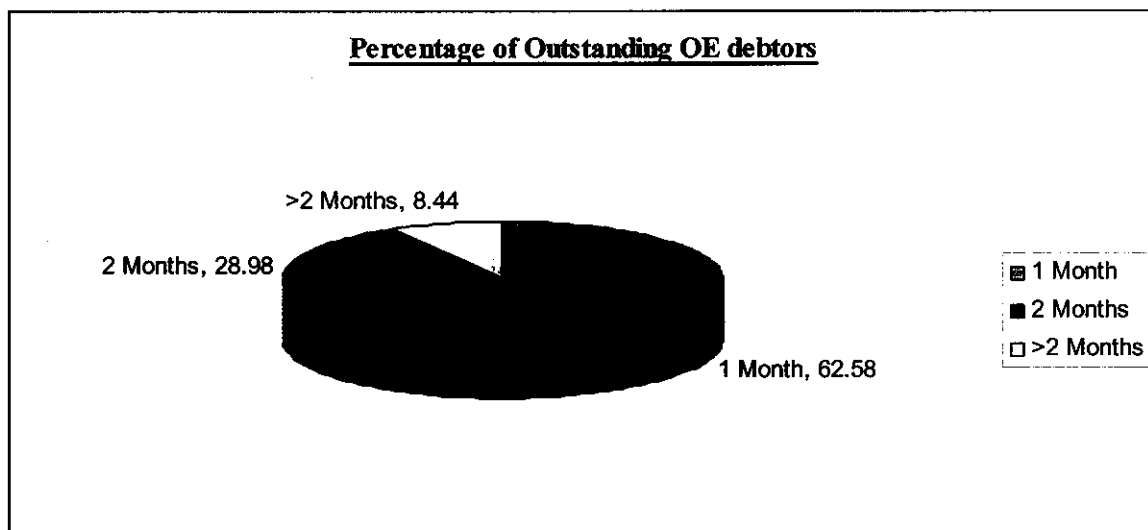1 Month, 56.97

1 Month
2 Months
>2 Months

INFERENCE:

From the above table the consolidated aging statement for the year 06 – 07, it shows that the outstanding of debtors has been decreased from 56.97% when the collection period is less than 1 month and it has been reduced to 7.33% when the collection period is greater than 2 months. This shows that the effectiveness of the credit policy.

for the year 2006 – 2007

Outstanding Period	Outstanding Amount of OE Debtors	Percentage of Outstanding OE debtors
1 Month	22.93	**62.58**
2 Months	10.62	**28.98**
>2 Months	3.09	**8.44**
Total	**36.64**	**100**

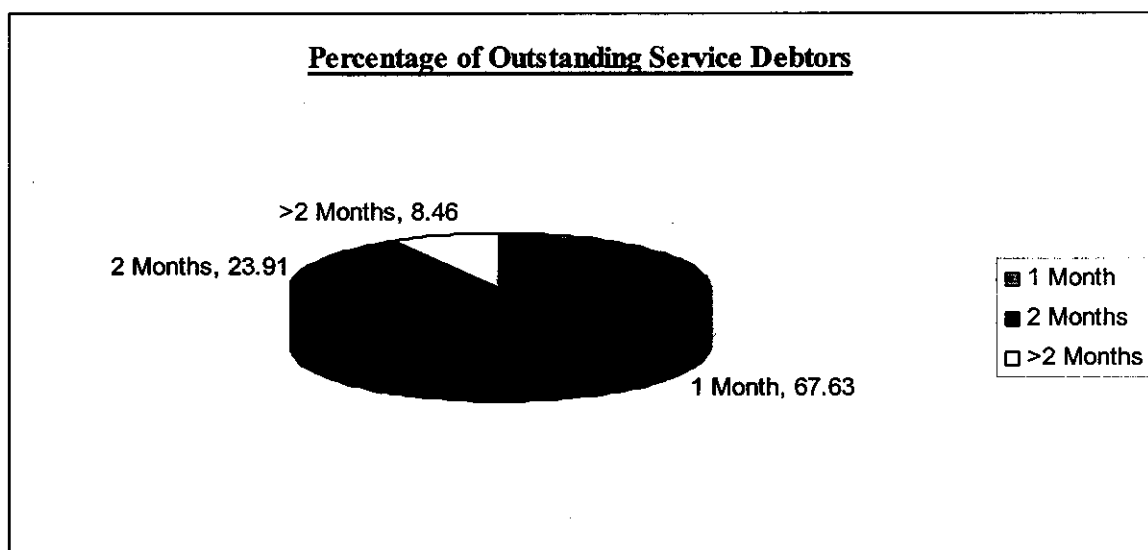Chart no.18 showing Ageing statement of OE Outstanding Debtors for the year 2006-2007

INFERENCE:

From the above table the consolidated aging statement for the year 06 – 07, it shows that the outstanding of debtors has been decreased from 62.58 % when the collection period is less than 1 month and it has been reduced to 8.44 % when the collection period is greater than 2 months. This shows that the effectiveness of the credit policy.

Table no.19 showing Ageing statement of Service customers Outstanding debtors for the year

2006 - 2007

Outstanding Period	Outstanding Amount of Service Debtors	Percentage of Outstanding Service Debtors
1 Month	3.79	67.63
2 Months	1.34	23.91
>2 Months	0.474	8.46
Total	5.604	100

Chart no.19 showing Ageing statement of Service customers Outstanding Debtors
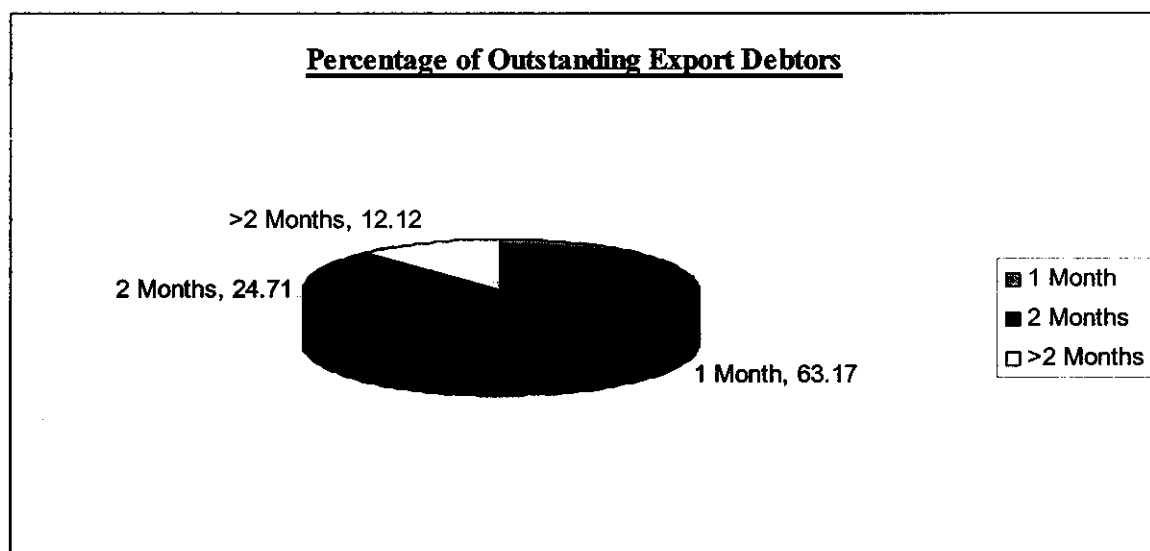
for the year 2006-2007

INFERENCE:

From the above table the consolidated aging statement for the year 06 – 07, it shows that the outstanding of debtors has been decreased from 67.63 % when the collection period is less than 1 month and it has been reduced to 8.46 % when the collection period is greater than 2 months. This shows that the effectiveness of the credit policy.

Table no.20 showing Ageing statement of outstanding Export debtors

for the year 2006 - 2007

Outstanding Period	Outstanding Amount of Export Debtors	Percentage of Outstanding Export Debtors
1 Month	0.547	63.17
2 Months	0.214	24.71
>2 Months	0.105	12.12
Total	0.866	100

Chart no.20 showing Ageing statement of Outstanding Export Debtors

for the year 2006-2007

Percentage of Outstanding Export Debtors

INFERENCE:

From the above table the consolidated aging statement for the year 06 – 07, it shows that the outstanding of debtors has been decreased from 63.17 % when the collection period is less than 1 month and it has been reduced to 12.12 % when the collection period is greater than 2 months. This shows that the effectiveness of the credit policy.

CHAPTER -5

CONCLUSIONS

5.1 FINDINGS & SUGGESTIONS:

1. There is proper Recivables management system in company.

2. Debtors turnover ratio:

   - The Total debtors turnover ratio for the years 2002-2007, the ratios are increasing (i.e) in 2002-03 the debtors are collected in 6.9 times in a year which is increased to 8.32 times in a year in 2006-2007. The higher the turnover ratios, the better is the trade credit management.

   - The debtors turnover ratio of OE Customers for the years 2002-2007, which shows an increasing from 6.82 in 2002 - 03 to 8.24 times in 2006 - 07.

   - The debtors turnover ratio of Service customers for the years 2002 to 2007 shows an increasing trend, i.e. from 6.9 in 2002 - 03 to 8.32 times in 2006 – 07.

   - The debtors turnover ratio of Export customers for the years 2002 to 2007 which shows an increasing from 9.2 in 2002 – 03 to 11.09 times in 2006 – 07.

   - The projected debtors turnover ratio for the years 2007 -08 and 2008 -09 also shows an increasing trend, (i.e) 8.56 and 8.78. This shows that the company is to able to maintain a sustainable credit policy and collection procedures.

3. Debt collection period:

   - The Total debt collection period for the years 2002-2007, is gradually decreased, (i.e) from 52 days in 2002 -03 to 43 days in 2006 – 07, which indicates that the debts are collected promptly by the company. This shows that the firm's debt collection team is performing well, as a

- The debt collection period of OE customers for the years 2002-2007, which shows decrease in collection period i.e. from 52 days to 44 days , it indicates that the debts are collected promptly by the company. This is possible due to the constant follow up with the customers by the Area representatives with back up data on outstanding provided by the finance department through IT.

- The debt collection period of Service customers for the years 2002-2007, which shows decrease in collection period i.e. from 52 days to 43 days .

- The debt collection period of Export customers for the years 2002-2007, which shows decrease in collection period i.e. from 39 days to 32 days .

- The projected debt collection period for the years 2007 -08 and 2008 -09 are 42 and 41 days also shows an decreasing trend. This shows that the company is to able to maintain a sustainable credit policy and collection procedures.

4. The total sales from the year 2002-03 to 2006-07 has been continuously increasing, it shows that the company is performing well . Thus the company's performing index shows improvement over the years.

5. The debtors Turnover Ratio shows an increasing trend and also maintains a reasonable level which is useful for the liquidity of the firm.

6. From the correlation analysis it is inferred that, There is a high degree positive correlation (i.e.) +0.99, thus the relationship between two variables is direct and strong.

7. From the Trend analysis it is inferred that the sales and debtors for the next two consecutive years 2007-08, and 2008-09 are estimated to be increasing, which shows that the company will be performing well in its future.

8. The credit is given to its customers mainly in the fashion, either less than 1 month, 1 – 2 months and >2 months. It shows that the company is practicing short term credit according to their customer needs.

9. Since the company is collecting large value of debts in short term (<1 months) duration, the company can have a good working capital to meet its current liabilities, reserves and surplus, and can also plan its future investments.

5.2 CONCLUSION:

The credit management in any manufacturing company calls for indepth study of its pattern of business. As the operations of such companies are complex having different manufacturing facilities requiring manpower and investments on plan for machines, supply chain management. The blocking of funds in operations can be avoided out, when a prudent policy on credit management exists.

In Lucas – TVS, the entire study was done on their credit management system with focus on the results out of the analysis of past period. Apart from the past data, statistical techniques were used for projections. The performance indices as per the historical data were extrapolated and prediction for future period was done.

The result was encouraging as it displayed improving trend. The trends were,

- Debtors turnover ratio increased from 6.9 times in 2002-03 to 8.78 times in 2008-09.

- Debt collection period is gradually decreased from 52 days in 2002-03 to 41 days in 2008-09.

- Ageing statement of total outstanding debtors for the year 2006-07 also shows an decreasing trend from 56.97% in less than 1 month to 7.33% in greater than 2 months.

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