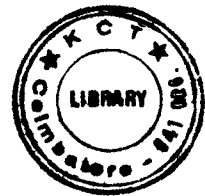


P-2014

**A STUDY ON THE COST OF CAPITAL AT ROOTS  
INDUSTRIES LIMITED, COIMBATORE**

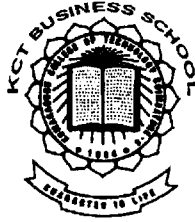


SUMMER PROJECT REPORT  
Submitted to the  
Faculty Of Management Sciences, Anna University  
In partial fulfillment of the requirement  
For the award of the degree of  
MASTER OF BUSINESS ADMINISTRATION

By

**C.ANBAZHAGAN**  
Reg No: 71205631003

October 2006  
DEPARTMENT OF MANAGEMENT STUDIES  
**KUMARAGURU COLLEGE OF TECHNOLOGY**  
COIMBATORE - 641006



**DEPARTMENT OF MANAGEMENT STUDIES**  
**KUMARAGURU COLLEGE OF TECHNOLOGY**  
**COIMBATORE**

**BONAFIDE CERTIFICATE**

Certified that this project titled "A Study on the Cost of Capital" at Roots Industries Limited, Coimbatore is the bonafide work of Mr.C.ANBAZHAGAN (Reg no: 71205631003) who carried out this 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**

**Prof. S. GANESAN**  
**Director**

---

Evaluated and viva-voce conducted on.....10.11.06.....


  
**Examiner I**  
**Examiner II**

## DECLARATION

I, hereby declare that this project report entitled as "A Study on the Cost of Capital" at Roots Industries Limited, Coimabtoe has been undertaken for academic purpose submitted to Anna University in partial fulfillment of the requirements 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. K. R. Ayyaswamy during the academic year 2006 – 2007.

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

Place: Coimbatore

  
(C. Anbazhagan)

Date:

No. : 1513Date : 01.11.06**PROJECT / INPLANT TRAINING / INTERNSHIP CERTIFICATE**is to certify that Mr. / Ms. C. ANBAZHAGANMBA II year student of KUMARAGIURU COLLEGE OFTECHNOLOGY has done / undergone / a Project / Inplant training / Internship on"A STUDY ON COST OF CAPITAL"in our ROOTS INDUSTRIES LIMITED duringperiod from 01.07.06 to 05.08.06during this period his / her conduct was GOOD  
(VIDASAN)  
GENERAL MANAGER - CORPORATE HRD.

## **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 wish to express my deep gratitude to the Principal Prof. Joseph V. Thanikal for his guidance and encouragement to complete my project work.

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

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I wish to acknowledge my sincere thanks to Mr. Kavidasan, General Manager Corporate HRD for granting me permission to undertake my project work in his esteemed organization.

I express my gratitude to Mr.S.Balasubramanian, Company Secretay, Roots Multi Clean Limited and also to the staffs of Roots Industries Limited who furnished all the information related the research work.

Last but not the least, my sincere thanks to my friends and parents for their continuous support and encouragement without which the project could not have been a success.

## ABSTRACT

This project is entitled “A study on the cost of capital at Roots Industries Limited”, conducted during the period of July 2006 at the Roots Industries Limited, Coimbatore, the period of study is from financial year 1999-2000 to 2004-2005.

In this study the cost of capital on the two components capitals viz debt versus equity (equity capital free reserves) has been analyzed and their respective costs were estimated. Also the weighted average cost of capital has been estimated for this period. The optimum debt- equity mix at where the weighted average cost of capital is low.

A comparison is made on the weighted average cost of capital with the sales and the profits.

Dupont analysis is used to find out the return on assets trend analysis along with comparative statement of sales, net income has been prepared to know the changes in the financial performance of the company.

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*CHAPTER – 1*  
*ORGANIZATION PROFILE*

# **1.ORGANIZATION PROFILE**

## **1.1 HISTORY OF THE ORGANIZATION**

Roots Industries Limited head quartered at Coimbatore in South India is the pioneer in Manufacturing Radiator Coolant recovery system in India and were also the first to introduce the servo brakes for light motor vehicles. The Company, Promoted by Mr.K.Ramaswamy a Master's degree holder in Automobile Engineering from Lincoln Technical Institute, USA diversified to manufacture high frequency wind and the Horns developed indigenously, and later started the promotion of various pneumatic horns.

With its new vibrating horns taking the market by storm the company currently holds the no.1 position in the market from 3600 horns in 1978-1979,the sales figure have touched 1.5 million horns in 1996-1997. This shows the recognition of the company as the pace setter in the Automobile Industry and its segments. The Company today is the leading supplier to O.E Manufacturers such as Hindustan Motors, Premier Automobiles, TELCO, Bajaj, Mahindra & Mahindra, LML, Maruthi, Suzuki, Pal Peugeot, UNO, Sipian, Rover and Hero Honda.

The Company has shown a tremendous growth in the export sector too, as the turnover has increased from Indian Rupees 4 million to 35 million in a span of years due its quality and Performance Coupled with cost efficiency. The firm has been participating in Automechanika since 1992 and Auto Expo 1993 at Delhi in order to expand their export division.

On the joint venture moves, the Company has tied up with the British Company to produce Inflatable Jacks. The Company has also acquired the European Homologation approvals for its Horns for EC/ECE Countries to enter in their market. Roots has entered into a technical collaboration with Robert Bosch S.A. This move will help them to increase their production capacity to 3 million horns per annum. M/S J. Osawa & Co,

Japan one of the largest industrial groups of that country, has chosen Roots for their tie-up arrangement to manufacture their J-Horns for Japanese market.

Since 1985 a member of Company Aruna Auto Castings Manufactures various non-ferrous Casting products and Caters to Textile Machinery Manufactures, Auto Component Manufacture and also regularly exports to Italy and USA.

The Company has state-of-the-art manufacturing facilities one at Coimbatore and another two near the city. The facilities include the latest CAD/CAM/EDP/Quality Assurance Centers. The R&D department is headed by Mr.K.Ramaswamy, the Managing Director himself. This is the 1<sup>st</sup> Company in India that has received the ISO 9001 Certificate under writers laboratories inc, USA for electric horn design and manufacturing currently the Co has gone for diversification to manufacture floor cleaning machines in Collaboration with Hako Works GMBH & Co of Germany. The products are exported to various countries like Japan, Germany, Sweden, and Australia.

### **About the Founder**

The Roots Group of Companies' founder Mr. Ramaswamy, born in an agricultural family. From his young age was very interested in repairing automobiles. This led to his getting the Master's Degree in Automobile Engineering from Lincoln Technical Institute, USA in 1969 and developing a unique **Radiator Coolant Recovery System**, which is today a standard equipment in almost all vehicles manufactured by the advanced countries.

In 1970, Mr. Ramaswamy promoted M/s. American Auto Service, which was taken in 1992 by Roots Industries Limited, a Company promoted by Mr. Ramaswamy. This Company entered into technical collaboration with Robert Bosch, the world leaders in auto electrical to manufacture all the range of Bosch Horns. Mr. Ramaswamy had a very inquisitive and innovative temperament. This led to his having many firsts in his distinguished career.

**Servo brakes** were designed for the first time in India by Mr. Ramaswamy. He designed first high frequency Wind Tone type horn, which was smaller and lighter than conventional horns. Besides the other entire first, Mr. Ramaswamy introduced electronically controlled Musical Horns for the first time in the World.

The thirst for innovation and drive to move forward, led to the establishment of a die casting unit to meet the captive requirement of ROOTS. In 1987, Mr. Ramaswamy set up a full-fledged modern tool room equipped with the latest machines for the manufacture of precision tools and dies. He promoted Roots Multiclean Ltd., a joint venture in Technical-financial collaboration with M/s. Hako Wreke GMBH, Germany to manufacture world class Industrial Floor Care and Floor Cleaning Equipment. RMCL is successfully spreading the concept of Mechanized Cleaning in India and also exports its products to various countries like Australia, Britain, Germany, Japan, Singapore etc.

## **1.2 QUALITY POLICY**

They are Committed to provide World-Class product and services with due concern for the environment and safety of the society.

This will be achieved through total employee involvement, technology upgradation, cost reduction and continual improvement in

1. Quality of the product and services.
2. Quality Management System.
3. Compliance to AMS requirements.

Quality will reflect in everything they do and

1. Quality in behaviour
2. Quality in Governance
3. Quality in Human Relation

## **ENVIRONMENTAL POLICY**

With due concern towards maintaining and improving the quality of life, Roots is pollution and conserving resources.

This will be achieved through continual improvement in Environmental awareness of all employees and associate legal compliance and objective towards environmental protection.

### 1.3 GROWTH OF THE COMPANY

Quality Accomplishments and so does innovations, and this what happened in the case of establishment also. At each stage of their innovation, they complimented themselves and kept going on and on they went in search of even more new thoughts and ideas as a result today we see the Roots family as a tree with firm and deep roots.

#### MILESTONES

- 1970 Promotes American Auto Service for manufacture of Electric Horns.
- 1971 First to manufacture Servo Brakes for Light Motor Vehicles.
- 1984 Roots Auto Products Private Limited was established to manufacture Air Horns.  
Die Casting  
Unit commences commercial operations.
- 1988 Polycraft, a unit for Plastic Injection Moulding was established.
- 1990 Roots Industries Private Limited takes over Electric Horn business.
  - 1992 RMCL enters into Techno-Financial collaboration with M/s. Hako Werke GMBH, Germany.
- 1992 Roots Industries Private Limited obtains the National Certification-ISI mark of quality.
- 1994 Production of Floor Cleaning Equipment commences.  
Roots Industries Private Limited obtains the National Certification-ISI mark of quality.
- 1999 Becomes the first horn manufacturer in Asia to obtain QS 9000.
- 2000 Becomes the first horn manufacturer in Asia to obtain VDA 6.1 and the first in the world to win ISO/TS 1649
- 2000 Floats Roots Digital Engineering Services Private Limited to offer CAD/CAM Services.
- 2000 First to introduce digitally controlled air horns and low frequency, low decibel irritation free Jumbo Air Horns.
- 2003 Roots Industries Ltd., Horn Division is accredited with ISO 14001:1996.

- 2003 Roots Industries Ltd., upgraded its ISO/TS 1649 from 1999 version to 2002 version.
- 2004 Roots Industries Limited (RIL) opens its 100% exclusive Export Oriented Unit at their Horn Division, Thoppampatti, Coimbatore to cater the needs of Ford, North America.
- 2004 RIL's EOU commences its supplies to Ford, North America.
- 2004 Roots Multiclean Limited (RMCL) inaugurates its 100% EOU Plant at Kovilpalayam, Coimbatore.
- 2004 Roots Cast Private Limited (RCPL) inaugurates its Unit II at Arugampalayam, Coimbatore.
- 2004 RIL Successfully launches its Malaysian Plant.
- 2004 The group company American Auto Service is accredited with ISO 9001:2000
- 2005 Roots Industries Ltd., is certified with MS 9000, a pre-requisite for Q1 award for Suppliers Focus on Systems and Processes.
- 2005 Roots Metrology & Testing Laboratory has been accredited by National Accreditation Board for Testing & Collaboration in the field of Mechanical-Linear and Angular.
- 2005 Roots Industries Ltd., is awarded Q1 by Ford Motor Company.
- 2005 Roots Industries Ltd., Horn Division upgraded its ISO 14001 from 1996 version to 2004 Version.



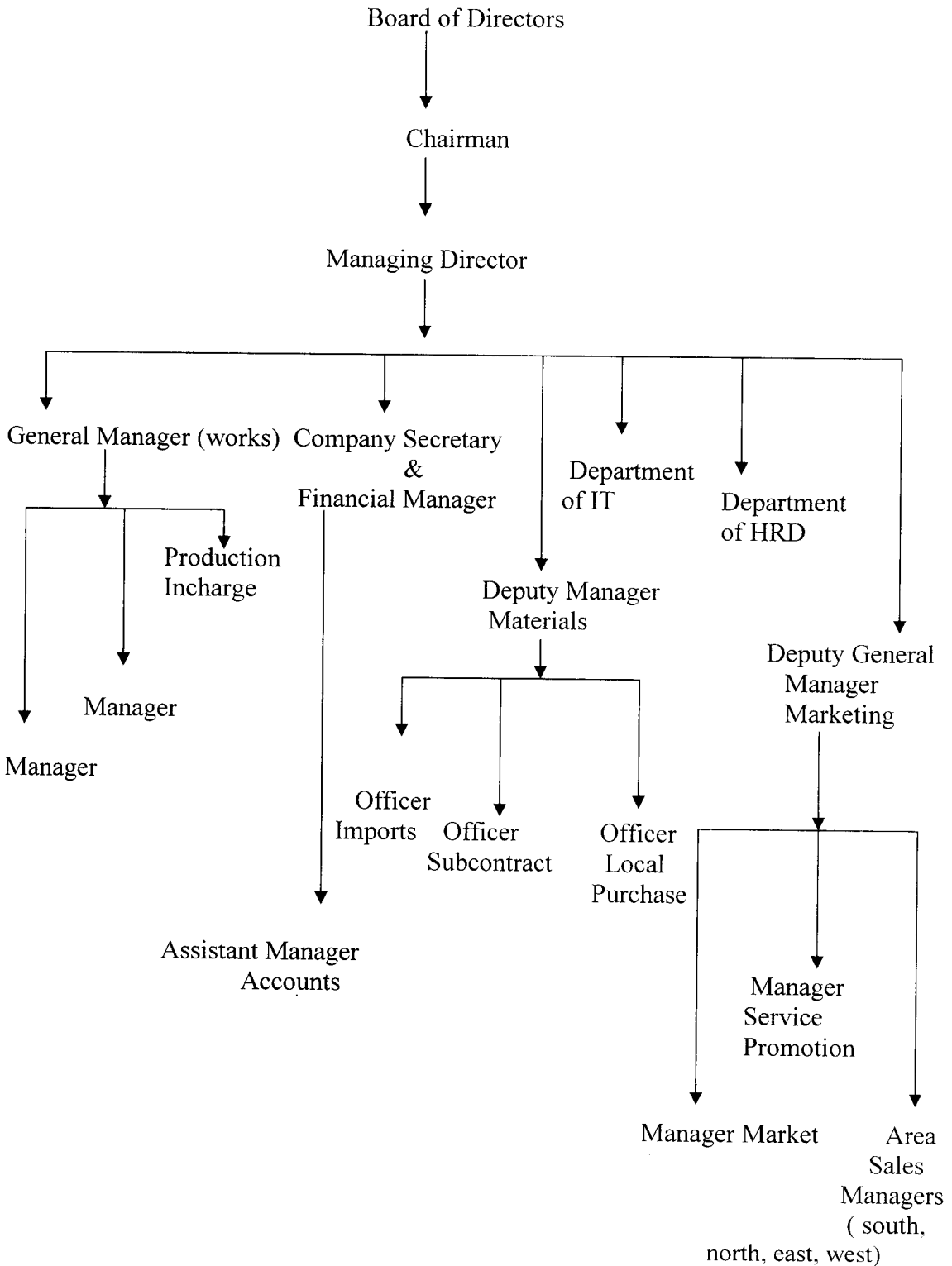
## 1.4 COMPANY PROFILE

Roots group of Companies is well known all over the world. They specialize in Manufacturing horns and major establishment stand as their customers. The Roots Industries have mainly two branches one of which is situated in Ganapathy and other in Thoppampatti. Apart from this the Roots family is a large concern with many divisions as follows:

- Roots Industries Limited
- Roots Auto Products Pvt Limited
- Roots Cast Pvt Limited
- Roots Precision Products
- Roots Polycraft
- Roots Digital Engineering Services Private Limited
- Roots Brake Systems Private Limited

Roots have strong people oriented work culture that can be seen and felt across all its member concern. They have a sense of belonging and they revel in an environment of openness and trust.

### 1.5 ORGANIZATION CHART



## 1.6 ROOTS COMPANIES

### ROOTS CAST Pvt LIMITED

The Roots Cast Pvt Ltd., (RCPL) was start in year 1985 to later to the captive Aluminium and Zinc pressure dye cast component requirement formally know as Aruna Auto Casting Pvt Ltd., (AAC). With its ever probing eye in the needs of the market, the company in the late 80's expanded its operations to manufacturing of High Pressure Die cast Aluminium and Zinc components to the needs of various customers in Automobile and Textile Industries with a high degree of quality and perfection.

Roots Casting Private Ltd., now has established itself as a major player on the Die cast component manufacturing thanks to the expertise built in the core activities like tool design, tool making and pressure die cast component manufacturing. Roots casting private Limited supplies machined castings and sub-assemblies as per customer requisitions. It has expanded its production capacity by coming with its Casting Machine and Fully Automated with Auto ladle Extractor and Sprayer.

In order to achieve the highest degree of customer satisfaction in quality and productivity combined with cost competitiveness its using a state-of-art, fully automatic strike Furnace and LPG as the fuel. It produces 920 tons per annum. It has also specialized services like ERC with CAD/CAM and other test facilities, in-house tool room and good quality system concepts. With customer service as the goal and commitment to quality as the means, it's marching forward with a dedicated team of professionals.

In the beginning, the plant capacity was 75 tons; Its extensive manufacture network is managed at 2 separate locations.

- Unit I at Ganapathy-CBE
- Unit II at Arugampalayam-CBE

An ISO 9001 Certificated Company, RCPL manufactures leak proof aluminum and zinc pressure casting catering to wide range industries like auto, textiles, etc.

- ❖ Home Appliances
- ❖ Medical
- ❖ Auto electrical parts
- ❖ Engine parts1
- ❖ Engine parts 2
- ❖ Handle bar leaves
- ❖ Textile parts 1
- ❖ Textile parts 2.

#### **Products of Roots Casting Private Ltd:**

- ❑ Pump Body and Pump Cover
- ❑ Heat-Sink for Alternator
- ❑ Ring Holder For Ring Frame
- ❑ Fixing Bracket For Car-Starter
- ❑ Steam and Dry Iron Sole Plates for Electric Iron
- ❑ Clamp Shell for Surgical interconnect System
- ❑ Pivot Housing for Wiper motor

#### **ROOTS INDUSTRIES LIMITED**

A Market leader in electronic horns has further diversified into products like high quality halogen lamps and reliable parking sensor, which make driving safer (xcitte parklite) another example of safety through quality.

- Roots 70
- Roots 80 deluxe

- Vibrosonic
- Spider
- Wind tone Trio
- S2
- H3
- H1
- H4



## **ROOTS AUTO PRODUCTS PRIVATE LIMITED**

Commercial Transportation plays a crucial role in the economic development of nations. Roots Air Horns ensures safe and smooth passage of thousands of heavy vehicles on the move.

Roots Auto Product Private Limited (RAPPL), the largest supplier of Air Horns in India caters to the needs of several OEMs: Ashok Leyland, Caterpillar India and JCB Escorts. Roots Air Horns also find a place of pride in passenger vehicles, Trucks, Earth Moving Equipment, etc.

Roots Air Horns are exported to countries in North America, Europe, Middle East, Africa and SAARC region. It's exporting countries having 25 numbers.

## **ROOTS MULTICLEAN LIMITED**

Roots Multiclean Ltd., pioneered the concept of mechanized cleaning in India in joint venture with M/s Hako Werke GMBH, Germany in the year 1992. Being the designers manufacturers, exporters, & importers of a varied maintenance equipment in India. The Company's range of products confirms to international standards as the company is highly conscious of delivering quality to its customers. The company produces a number of world class products having wide acceptance in developed Countries of the west in Japan & Australia.

RMCL Products range from simple manual scrubbers to heavy duty drive-on suction vacuum-care equipment, walk behind lawn movers and tractors, spray extractors

for upholstery and glass cleaning system making RMCL a “one stop shop for anything cleaning solution”

**RMCL also represents:**

M/s Soteco, Italy	- Wet & Dry Vacuums
M/s Deifin, Italy	- Heavy Duty Industrial
M/s Hayter, UK	- Range of Lawn Movers
M/s BEMA, Germany	- Versatile Sweeping Systems

The strategy of RMCL is to bring about a revolution in cleaning & house-keeping in India “**Concern for the environment arises from purity of thought**” – this is the secret behind RMCL success.

**Motto – “Operation India Clean”**

Pioneered the concept of mechanized industrial cleaning in India. The first manufacturer of industrial cleaning equipment in India to be awarded the ISO 9002 Certificate, RMCL offers total mechanized cleaning solution for a varied range of application with a wide range of modern cleaning equipment.

- Flipper
- EZE clean
- RE 43
- Wizzard
- Vegetable cutter
- RH 35

**Models**

- 24 N
- 24 T
- 34 N
- 34 P
- 44 T
- 44 P

## **ROOTS METROLOGY LABORATORY**

Roots state-of-the-art Metrology Laboratory is a comprehensive calibration center in South India that offers electrical, mechanical, pressure and vacuum calibration-all under one roof.

The Laboratory is equipped with advanced facilities traceable to international standards and trained personnel who are experts in dimensional measurements.

The laboratory offers on-site calibration facility and serves the industry to calibrate:

- pressure switches
- pressure gauges
- temperature gauges
- RTDs
- temperature scanners
- electronic transmitters
- pressure reducing valves, etc.

The expertise of the laboratory has attracted many renowned Public Private sector undertakings.

## **ROOTS PRECISION PRODUCTS**

### **Introduction**

This section of Roots introduces the manufacture of tools. The tools are mainly made of steel. The tools are manufactured here and exported to various countries.

- Initial Process
- Milling Machine
- Surface Grinding
- Lathe

**The process steps are as follows:**

- Phasing

- Cutting
- Grooving
- Outer turning
- Inner turning (top and bottom inner turning)

**Roots Precision products has the facility to conduct tool trail on:**

- Mechanical Press upto 250 tonnes
- Hydraulic Press upto 60 tonnes
- Pressure Die casting machine upto 250 tonnes
- Plastic Injection moulding machine upto 130 tonnes
- Ultrasonic welding (with horns supplied by customers) upto 25 mm square capacity

Each unit is run through stringent inspection and calibration at the full-fledged metrology laboratory, adhering to ISO 9002 standards.

The CNC and the EDM are used for manufacturing the 3D precision tools.

**Computer Numerical Control (CNC)**

This process is economical for high precision products and it can manufacture the product within 2 hours which can take 2 weeks when done manually. The whole system is controlled by software (as WITON) and the machine code produced by its controls the operation. Initially the profile is obtained from CAD drawing in DWG format. The design of the tool is created during the design process, which is a separate process. Later it is converted to DXF master format using CAM software. The input given to the software includes X, Y, Z parameters of the components in NCI format.



## **ROOTS POLYCRAFT**

Roots Polycraft (PC) was established in 1988 to manufacture precision plastic components. It is equipped with latest microprocessor injection moulding machines to maintain consistent process parameters.

Over the years, Polycraft has gained skills and unique technique to manufacture small and medium size components for automotive, pumps, textile and medical industries besides meeting the captive requirements of Roots Group. Being fully equipped to provide the best service, Polycraft has satisfied customers who have helped augment its technological advances.

Manufactures high precision plastic components. It has a good facility for Ultrasonic welding and assembly too. Since safety and quality are on integral aspect of the group, Polycraft is working towards ISO 9000 Certification.

- Tower holder
- Moulds
- Horn Trumpets
- Components
- Pole connectors.

**Products:**

Roots Polycraft, backed by a full-fledged Tool room and Design Centre, which is equipped with sophisticated CAD/CAM/CAE software, enables quick preparation of insert drawings and design of complex moulds, according to customer specifications. It also assists its customers in the product design stage to optimize the mould construction, to reduce the cost and complexity of the mould.

**Some Basic Raw Materials**

- ABS copolymer
- Polyamide
- Polycarbonate
- EVA
- PPO
- Polypropylene
- HIPS
- PBT
- PPS
- Polyacetal
- Polyethylene
- Polyurethane

**Facilities**

- Microprocessor based Injection moulding Machine
- Ultrasonic Welding Machine

## Process Flowcharts

Incoming material Inspection



Storage



Preheating of raw material



Injection moulding & Inspection



Deflashing



Final Inspection



Packing & Despatching

## **ROOTS DIGITAL ENGINEERING SERVICES Pvt LIMITED**

Was setup to provide CAD/CAM sentos use of the latest and advanced software further. Endorser the vision of the group. This has reiterated the strength and the capability of Roots in begin a leader, in design, development and prototyping and ensuring high quality of the products at the design stage it self.

- Tool development
- Solid Modeling

## **ROOTS BRAKE SYSTEM Pvt LIMITED**

Has been setup in a technical collaboration with M/s Chongqing Fanggykan Industries, china to manufacture innovative braking solutions for two wheels.

- Mechanical disc break assembly1
- Mechanical disc break assembly2

## **HORN ASSEMBLY**

The layout is of product flow type each line is given a different name for early identification like A, B, C etc. The assembly process for different horn is almost similar with some minor modifications in one or 2 stages. There are about twelve (12) different line H, J, K, L hydraulic likes G, K, J, T lines.

The Pneumatics screwdriver and pneumatic pressures for tightening and crimping operation. The lines that are automated with hydraulic press (E, F, I, J) are similar to that of lines A, B, C and D (with hydraulic presser). These include coil, locking, terminal point assembly, tightening/riveting crimping (prefinal) tuning etc.

The hydraulic presses consist of directional valves limit switches to adjust ram stoke means to measure oil pressure etc. Typical to a conversational hydraulic press. The hydraulic presses are filted with different type of dies, fixtures etc., to accommodate for different designs.

## **Types of Horns**

There are different types of horns are manufactured in the Roots Ltd., Company.

Here are some:

- Mega Sonic
- Vibrosonic
- Vibrosonic Deluxe
- Clear tone ultra
- FD4 Deluxe
- Smart tone
- FC4
- Wind stone Super Deluxe
- Vibromini
- Wind tone super classic
- Roots 90
- Wind tone super sealed

## **1.7 DEPARTMENTAL ACTIVITIES**

### **HUMAN RESOURCE DEPARTMENT**

Human Resources Department is a management function that helps the company to recruit, select, train and develop staffs. HR Department is concerned with the people's dimensions in organization. The functions and principles of HRD are applied to develop, maintain and compensate the employees in organization.

#### **HRD Practices in ROOTS Group**

##### **Focuses**

- Learning
- Knowledge
- Skill
- Positive attitude

##### **Change**

- Institutionalizing
- Proactive change

##### **Performance**

Performance = Skill \* Motivation \* Opportunity

##### **Approaches to HR**

- Accept & Appreciate
- Educate & Elevate
- Enrich the potential
- Balanced & Leadership
- MEND then SEND
- Accept noble failures Industrial – Responsible citizen

## **HR Objectives**

Customer Satisfaction

Concern for Society

### **Customer Satisfaction**

- Through employee satisfaction
- Development of skill and will
- Developing pro-customer approach
- People for future
- Future for people
- Development of staff
- Job enrichment
- Empowerment

### **Concern for society**

- Safety
- Health

### **HR Philosophy**

- Openness and Mutual trust
- Team Culture
- Customer first
- WIN WIN Strategy
- Empowerment

## HR Practices

### PRO Customer approach

- 'O' ppm Movement
- Supplier Development Programmes
- Empowerment

## Features

- ❑ Suggestion Scheme
- ❑ Quality Circle
- ❑ EMP
- ❑ ESOF
- ❑ Positive mental activity club
- ❑ Good Morning assembly (GMA)
- ❑ Monthly Motivational Talk (MMT)
- ❑ Thirukkural Mandram
- ❑ Motivation Service Award
- ❑ Attendance Award
- ❑ Performance reward scheme
- ❑ Roots Care Services Blood donation

## RISE (Roots Institute Skill Exchange)

### RISE focuses on

- Exchange
- Growth

## Philosophy

- ❖ WIN-WIN
- ❖ Strength to Strength
- ❖ Share to Shine



### **Institutions Under RISE**

- Avinashilingam
- Women's Polytechnic
- PSG
- VLB
- KCT

### **RISE Monitoring & Evaluation**

- Panel Evaluation
- Steering Committee
- Sub Committee

### **Welfare Scheme**

- ✓ Calculative for employees children
- ✓ Marriage Loan
- ✓ Group Insurance Scheme
- ✓ Super animation scheme

Roots have a strong people-oriented work culture that can be seen and felt across all its member concerns. Whether work in-group or in isolation their effort is well appreciated and achievement well rewarded. They have a sense of belonging and they revel in an environment of openness and trust cross-function teams function as one seamless whole and foster the true spirit of teamwork.

Roots learning organization systematically trains its employees at all levels conducted in house the training programmes equip them to meet new challenges head on employees are encouraged to voice their feelings, ideas & opinions. There is a successful suggestion scheme in operation and best suggestions are rewarded.

Lasting relationship will evolve only when people know that their work is valued and that they contribute meaningfully to the growth of the organization. At Roots people across the group company through interaction at workshops and seminars get to know each other individually share their common experiences and learn something about life.

## **Personal Culture**

The Management has been encouraging and promoting a very informal culture “Personal Touch” sense of belonging, enabling employees to become involved and contribute to the success of the company. The top management also conscientiously inculcates values in the people.

## **Work Environment**

Special and conscious efforts are directed towards house keeping of the highest order. Renovation and modernization of office premises and office support systems are carried out in an on going basis.

## **Training**

Roots believe in systematic training for employees at all levels. As a part of the organizational development efforts, training programs are being conducted in-house for employees at all levels I addition staffs are also sponsored for need bared training programs at leading management development institutes.

## **Total Quality Management**

Customer focus is not merely a busy word but it has become an important factor of everyday work and has got internationalized into the work environment. There is an equal emphasis on internal customer focus leading to greater team efforts and better cross-functional relationship.

## **Quality Circle Movement**

To ensure worker participate and teamwork on the shop- floor, RIL has a very effective quality circle movement in the organization. As on today RIL has there operating quality circles having 24 members and some of them have own awards at different conventions and competitions

Through interaction with workman in their sections a process of two-way communication has been initiated and valuable feedback has been received on worker feelings, perception, problems and attitudes. Simultaneously management has communicated the problems faced by them and the plans to overcome these problems.

## **Personnel Activities**

To see that discipline of coordinal industries relationship are maintained.

Incase of any disputed it is the duty of HR manager to see yeast the matter in settled amicably.

An HRD manager plays the role of liason officers between the management of the workers.

- Recruitment
- Induction training of placement
- Attendance and leave regulation
- Performance Appraisal

## **1.Selection Process**

- Paper advertisement
- Application Bank

## **2.Selection Criteria**

- ❖ Age
- ❖ Communication Skill
- ❖ Physical & Trainer
- ❖ Leadership Skill
- ❖ Social & Human Relation
- ❖ Technical Education
- ❖ Practical/Previous experience
- ❖ Social status

## **Methodology**

- Aptitude test
- Intelligence test
- Personal Interview
- Achievement Test
- Group Discussion
- Attitude Test

## **FINANCE DEPARTMENT**

Finance is the lifeblood of business. Finance is that business activities which is concerned with acquisition and conversion of capital funds in meeting the financial needs and overall objectives of business enterprises. The main function of this department is to provide finance to various departments. The finance department is controlled by the finance General Manager (Finance). There are 25 employees in finance department.

The turnover of the company in 2005 is Rs.6337 (in lacs). To run the organization the working capital needed is 8-9 crores. The export rate is about 15.20 % for calculating depreciation both straight line method and Written-down method is used for income-tax the depreciation is calculated using the Written-down method. In 1993 the advertising cost is 15%, now the advertisement cost is only 1%.

### **Software Used**

TATA EXE system (for accounts)

### **Bankers**

The banker of Roots are Citi Bank, State Bank of India, Canara Bank, Punjab National Bank, HDFC Bank, ICICI Bank is providing salary to the employees.

## **PURCHASE DEPARTMENT**

Purchasing procedure varies with different business firms but all of them follow a general pattern in the purchase and receipts of materials and payment obligations. The purchase department takes care of all cash and credit purchases. The materials are purchased placing orders based on indent raised from the stores. A ledger is maintained in the regard. The purchase order is send to the supplier.

The purchase orders shall contain a clear description of the products, drawing number, quality, rate, delivery, schedules, Terms payment, mode of dispatch and other relevant data.

The following steps are followed for purchasing of material:

1. The concerned department that is in need of a particular material will give a purchase requisition slips to the stores department.
2. The storekeeper of the material is available in stores they will cancel the purchase requisition and provide the material to the concerned department.
3. If it is not available in stores the storekeeper will forward the purchase requisition to the purchase manager in the purchase department.
4. In the purchase requisition slip the following things must be mentioned.

## **STORES DEPARTMENT**

In this department which places orders and receives raw materials on behalf of the manufactures the product are kept in stores department.

A storekeeper is appointed to look after the stores. His job is assigned to take care of the spares and to maintain the stores ledger.

The worker who is in need of spare parts may come and collect it at any time with the signature of the departmental heads. This book is known as Issue Order.

In the store they keep the account for what are all things stored in the stores. If any item comes into the store they will register it in the book called inward register. From this inward register they will make entry in the material inward receipt from this they pass it to the store ledger and they will equalize the goods issue and the accounts.

### **Functions of stores:**

- Identification of all material stores
- Receipt of incoming goods
- Inspection of all receipts
- Insurance Claims
- Storage Accounting
- Issues
- Materials Handling
- Packing and Dispatching
- Maintenance of stock records
- Stores Accounting
- Inventory Control
- Stock-Taking
- Disposal of scraps

## QUALITY DEPARTMENT

### Quality Control

The vision statement of Roots is “Vision of Roots is to become a model company providing value to our customers. It is imperative that we give more than what we take from our customers and the society. Our products must serve our customers beyond their expectations.”

### Quality Policy

One of the quality policies of the ROOTS stands as,

- Quality is respect for people
- Quality is constancy of purpose
- Quality is global entry
- Prosperity through Quality

The other Quality policy speaks as follows.

**“We are committed to provide world-class products and services with due concern for the environment and safety of the society”.** This will be achieved through:

- Continuous improvement
- Technology Upgradation
- Cost Reduction
- Total Employee Involvement



## IT DEPARTMENT

The organization uses the ERP (Enterprise Resource Planning) which all the different models are present and it's being customized. IT delicates in the concern.

There are different modules in the ERP. They include:

- PPC (Production Planning Control)
- Sales
- Purchase
- Manufacturing
- Inventory
- General Ledger
- Shop Floor Control
- Engineering Change Order
- Lot Tracking

➤ 65 clients are equipped with Pentium processors and other with 486 processors.

### Servers

- ✓ Database Server for the Accounts Department
- ✓ A Server for the Design Department
- ✓ A Server for Novel Netware
- ✓ Main Server

## **MARKETING DEPARTMENT**

Marketing is a human activity directed at satisfying needs and wants through an exchange process. The main aim of marketing is to make sales in order to earn reasonable profit. In Roots marketing is basically done for the cleaning products. General Manager Mr. Raja Gopal Heads this Department.

### **Sales Promotion Activities**

- Participate in International Marketing Exhibitions
- Direct domes in Industries
- Advertising

## **EXPORT DEPARTMENT**

The company has shown a tremendous growth in the export sector too, a the turnover has increased from 1 NR 4 million to 35 million in a span of 4 years due to its quality and performance coupled with cost efficiency. The firm has been participating in Auto Mechanika since 1992 and Auto Expo 1993 at New Delhi in order to expand there export division.

One of the joint moves, the company has tied up with British Company to produce inflatable jacks. The company has also acquired the European Homologation Approvals for its Horns for EC/ECE countries to enter in these markets. Roots have entered into a technical collaboration with Robert Bosch S.A. This move will help them increase their production capacity to 3 million horns per annum. M/s. J. Owawa & Co., Japan, one of the largest industrial groups in that country, has chosen Roots for their tie-up arrangement to manufacture their J-Horns for Japanese Market.

### **Export Procedures**

- ❖ Receipt of order
- ❖ Order acknowledge/Proforma invoice
- ❖ Approach Bank for pre-shipment credit (such as packing credit)
- ❖ Obtain ECGC Cover
- ❖ Prepare Post-shipment document
- ❖ Post shipment credit
- ❖ Liason with C&F agent for sailing details
- ❖ Assist customer to clear consignment at their end
- ❖ Identify C&F agent for completing shipment facilities
- ❖ Advice customer for insurance
- ❖ Apply for proof of export
- ❖ Bank realization certificate
- ❖ Apply for DEFB license with DGFT or follow up with customs for DBK.

## **1.8 GLOBAL ALLIANCES FOR COMPETITIVE ADVANTAGE**

Roots is leading Original Equipment Supplier to major vehicle manufacturers like Daimler Chrysler, Mitsubishi, Mahindra & Mahindra, Toyota, Fiat, TELCO, TVS, Kinetic etc. The technical collaboration with Robert Bosch S.A of Spain starting from 1995 has strengthened the R&D activities and increased Roots technical competence to International Standards.

Roots Multiclean Ltd., (RMCL) is a joint venture with Hako Werke GMBH & Co, Germany is one of the largest cleaning machine manufactures with global operations. RMCL is the sole representative in India and SAARC Countries for Hako Werke's entire range of cleaning equipment.

The quality of RMCL products is so well established that Hako buys back a major portion for their global market.

RMCL also represents several global manufacture of cleaning products and is gearing itself up to provide customized, total cleaning solution.

*CHAPTER – 2*  
*RESEARCH METHODOLOGY*

## 2.RESEARCH METHODOLOGY

### 2.1 INTRODUCTION

"Capital determines the value of the firm,  
Cost determines the capital of the firm"

#### MEANING-COST OF CAPITAL

The Cost of Capital is the rate of return given on the funds used by firm to run its business. A firm can achieve the objective of wealth maximization, by means of minimizing the firm's overall Cost of Capital and should earn a higher rate of return more than its Cost of Capital.

The basic aspects of Cost of Capital are:

- It is the 'HURDLE RATE' that a firm has to attain.
- It is calculated on the basis of actual Break even rate of the capital deployed or expected cost of different components of capital viz Debt / Equity.
- It has the following elements:

**Return at Zero risk level:** Zero risk refers to the expected rate of return when a project has no risk. There are two types of risk namely Business risk and Financial risk.

**Premium for Business risk:** Business risk refers to the fluctuation of the operating profit (EBIT) due to change in sales. If a project is operated with high risk of fluctuation in the return, then the Cost of Capital should be higher.

**Premium for Financial risk:** Financial risk refers to the risk on account of pattern of capital structure ( Debt-Equity mix). Higher the debt content, more will be the risk, because the firm requirement of higher operating profit to cover periodic interest payment and repayment of the principal at the time of maturity.

The above three elements of Cost of Capital may be put in the form of following equation.

$$K_o = r_o + b + f$$

Where,

$K_o$  = Overall Cost of Capital;

$r_o$  = Return at Zero risk level;

$b$  = Premium for Business risk;

$f$  = Premium for Financial risk.

$K_o$  is broken into  $K_d$  – Cost of Debt

$K_e$  – Cost of Equity.

The above concepts are used for the analysis of the project study. This aspect is discussed in the following pages.

## 2.2 OBJECTIVE OF THE STUDY

- ✓ To estimate the Cost of Debt ( $K_d$ ).
- ✓ To estimate the Cost of Equity ( $K_e$ )
- ✓ To calculate the Weighted Average Cost of Capital ( $K_o$ )
- ✓ To compare the Weighted Cost of Capital with Sales.
- ✓ To compare the Overall Cost of Capital with Gross / Net profits.
- ✓ To analyze 'Return On Assets' value using Du-pont model

## 2.3 LIMITATIONS OF THE STUDY

- ✓ Unlisting of the company's Equity shares acts as a curtail to calculate the accurate market value of the shares and value of the firm.
- ✓ Non-declaration of the dividend during the period of 1998-1999.
- ✓ This study is based on the data procured from the Annual Reports that have their own limitations.



## **2.4 RESERCH DESIGN**

The secondary data were collected from Annual reports and Balance sheet for the financial year 1999-2000 to 2004-2005. Some more details were collected from the company's website : [www.rootsworldwide.com](http://www.rootsworldwide.com)

## **TOOLS AND TECHNIQUES**

The datas so collected were analysed using

- Ratio – Analysis;
- Percentage – Analysis;

The detailed calculation are discussed in the following pages.

## COMPUTATION OF SPECIFIC COSTS

Cost of each specific source of finance, viz., Debt, Preference Capital and Equity Capital, can be determined as follows:

### COST OF DEBT

Debt may be issued at par, at Premium or Discount. It may be perpetual or redeemable. It is the explicit interest rate adjusted further for the tax liability of the company. It may be computed according to the following formula:

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

Where,

$K_d$  = Cost of Debt;

$I$  = Interest Rate;

$T$  = Income Tax Rate.

The tax is deducted out of the interest payable, because interest is treated as an expense while computing the firm's income for tax purposes.

### COST OF PREFERENCE CAPITAL

The computation of the cost of Preference Capital possesses some conceptual problems. In case of borrowings, there is a legal obligation on the firm to pay interest at fixed rates while in case of preference shares; there is no such legal obligation. The failure to pay dividend may be a matter of serious concern from the point of view of Equity shareholders. They may even lose control of the company because of the preference shareholders getting the legal right to participate in the general meetings of the company with Equity shareholders under certain conditions in the event of failure of the company to pay them their dividends. Moreover the accumulation of arrears of preference dividends may adversely affect the right of Equity shareholders to receive dividends.

This is because no dividend can be paid to them unless the arrears preference dividend are cleared.

$$K_p = D_p / NP$$

Where,

$K_p$  = Cost of preference Shares;

$D_p$  = Fixed preference dividend;

$NP$  = Net Proceeds of Preference shares.

It should be noted that the Cost of Preference capital is not adjusted for taxes, since dividend on preference capital is taken as an appropriation of profits and not a charge against profits. Thus the cost of preference capital is substantially greater than the cost of Debts.

## **COST OF EQUITY CAPITAL**

The Equity shareholders invest money in shares with the expectation of getting dividend from the company. The company also doesn't issue equity shares without having any intention to pay them dividends. The market price of equity shares, therefore, depends upon the return expected by the shareholders. The following are some of the approaches to calculate Cost of Equity:

### **DIVIDEND PRICE APPROACH**

The investor arrives at the market price of Equity share by capitalizing the set of expected Dividend payments. This approach rightly emphasizes the importance of dividends, but it ignores the fact the retained earnings have also an impact on the market price of the Equity shares.

$$K_e = D/NP$$

Where,

- $K_e$  = Cost of Equity;
- $D$  = Dividend per Equity share;
- $NP$  = Net Proceeds of an Equity Share.

### **DIVIDEND PRICE PLUS GROWTH APPROACH**

The Cost of Equity Capital is determined on the basis of the expected Dividend rate plus the growth rate in sales or dividends.

$$K_e = (D/NP)+g$$

Where,

- $K_e$  = Cost of Equity Capital;
- $D$  = Expected Dividend per share;
- $NP$  = Net Proceeds Per Share;
- $g$  = Growth rate.

### **EARNING PRICE APPROACH**

It is the earning per share which determines the market price of the shares. This is based on the assumption that the shareholders capitalize a stream of future earnings in order to evaluate their shareholds.

$$K_e = E/NP$$

Where,

- $K_e$  = Cost of Equity;
- $E$  = Earnings per share;
- $NP$  = Net Proceeds of an Equity share.

## **COST OF RETAINED EARNINGS**

The retained earnings are the profits that are set aside by the company without declaring as dividend for the shareholders. So this Retained Earnings finally reaches the hands of the Equity shareholders. Thus this is accumulated with the Equity shares for the Calculation of the cost of Equity.

## **WEIGHTED AVERAGE COST OF CAPITAL**

The Weighted Average/Overall Cost of Capital is an average on the weight given to the specific costs of capital like Debts, Preference Capital and Equity Capital. It indicates the company's performance by evaluating the projects. It is estimated as follows;

$$K_o = W_d K_d + W_p K_p + W_e K_e$$

Where,

$K_o$  =Overall Cost of Capital;

$W_d$  =Weight of Debt;

$K_d$  =Cost of Debt;

$W_p$  =Weight of Preference shares;

$K_p$  =Cost of Preference shares;

$W_e$  =Weight of equity shares;

$K_e$  =Cost of Equity shares.

## **DUPONT MODEL**

The DuPont Model is a technique that can be used to analyze the profitability of a company using traditional performance management tools. To enable this, the DuPont model integrates elements of the Income Statement with those of the Balance Sheet.

### **USE OF THE DUPONT FRAMEWORK.**

- The model can be used by the purchasing department or by the sales department to examine or demonstrate why a given Return on Assets was earned.
- Analyze changes over time.
- Teach people a basic understanding how they can have an impact on the company results.
- Show the impact of professionalizing the purchasing function.

### **STEPS IN THE DUPONT METHOD**

1. Collect the business numbers (from the finance department).
2. Calculate (use a spreadsheet).
3. Draw conclusions.
4. If the conclusions seem unrealistic, check the numbers and recalculate.

## **THE DU PONT MODEL**

Return on Assets = Net Profit Margin x Total Assets Turnover

The flow of data under Dupont Model is given in the figure 1.

# THE DU PONT MODEL

Return on Assets = Net Profit Margin x Total Assets Turnover

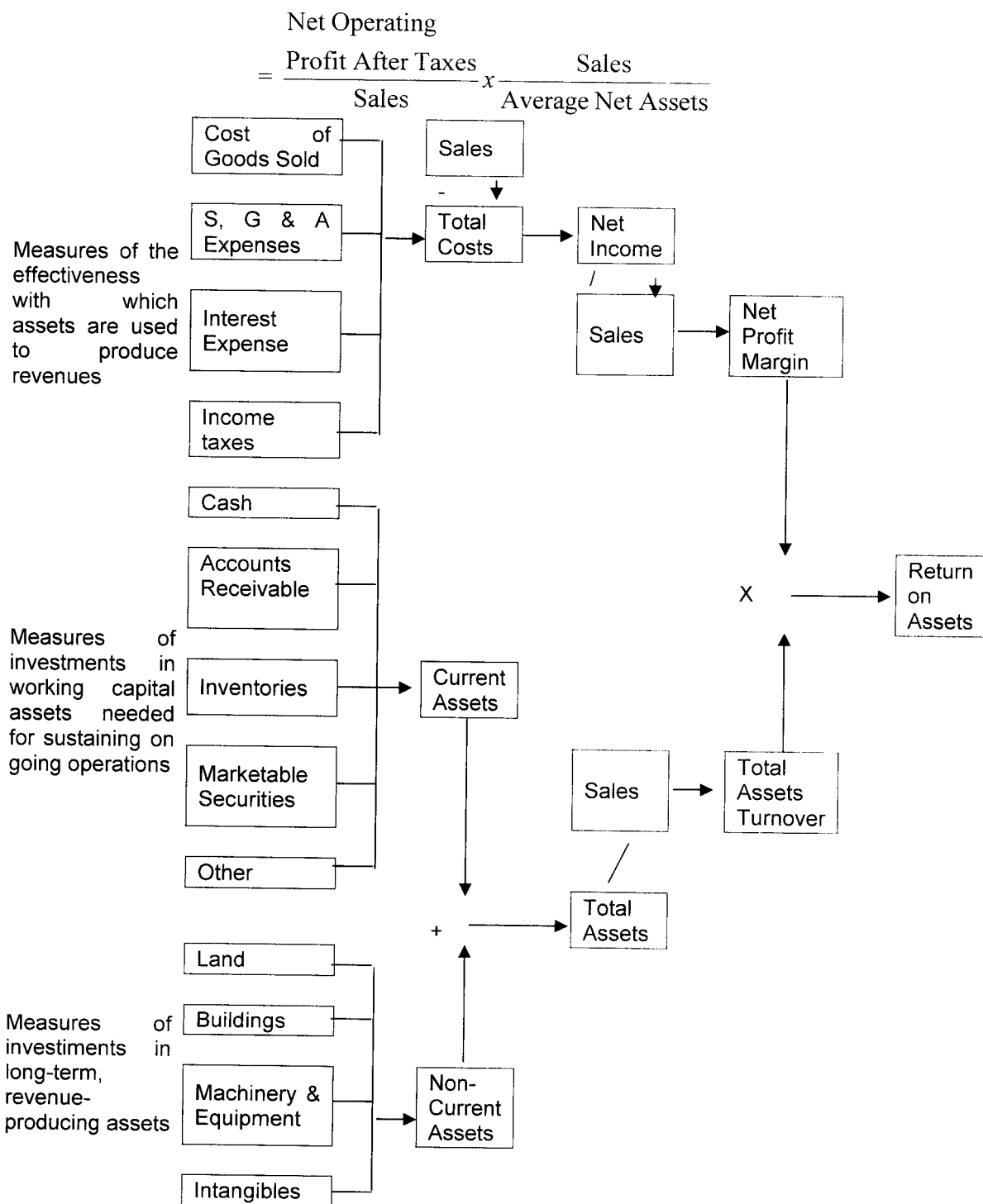


FIGURE : 2.1

*CHAPTER – 3*  
*ANALYSIS AND INTERPRETATION*



### **3. ANALYSIS AND INTERPRETATION**

#### **SOURCES OF BORROWINGS**

The company has acquired long-term loans from various sources i.e. Banks in order to meet its required capital other than issuing equity shares. The interest rate charges by different sources is constant and they are figured-out as:

#### **SOURCES OF BORROWINGS**

S.No.	SOURCES OF DEBT	INTEREST
1.	CITY BANK	8.75%
2.	SBI	8.75%
3.	PNB	10.25%

**Table 3.1..**

**EFFECTIVE INCOME – TAX RATE (T)**

The effective income-tax rate is a combination of income-tax rate with that of, surcharge rate on the income-tax rate of the respective years. The corporate income-tax rate is obtained from the Income-Tax Table from the assessment year from 1999-2000 to 2004-2005.

The formula to calculate the effective income-tax rate is as follows:

$$\mathbf{T = IT + (IT * S * E)}$$

Where,

EI = Effective Income – Tax Rate;

IT = Income – Tax Rate;

S = Surcharge Rate.

E = Education Cess

**EFFECTIVE,INCOME –TAX RATE**

Year	Income-tax rate (IT)	Surcharge Rate (S)	EDUCATION CESS (E)	Effective Income-tax rate (IT)
2000	35%	5%	NIL	36.75%
2001	35%	5%	NIL	36.75%
2002	30%	7.5%	NIL	32.25%
2003	30%	7.5%	2%	30.05%
2004	30%	10%	2%	30.06%
2005	30%	10%	2%	30.06%

**TABLE 3.2.**

## COST OF DEBT( $K_d$ )

The contractual / coupon rate of interest forms the basis for calculating the Cost of any form of debt. Since, the effective cost of debt is the tax – adjusted rate of interest, the before – tax cost of debt should be adjusted for the tax effect. And it is calculated as:

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

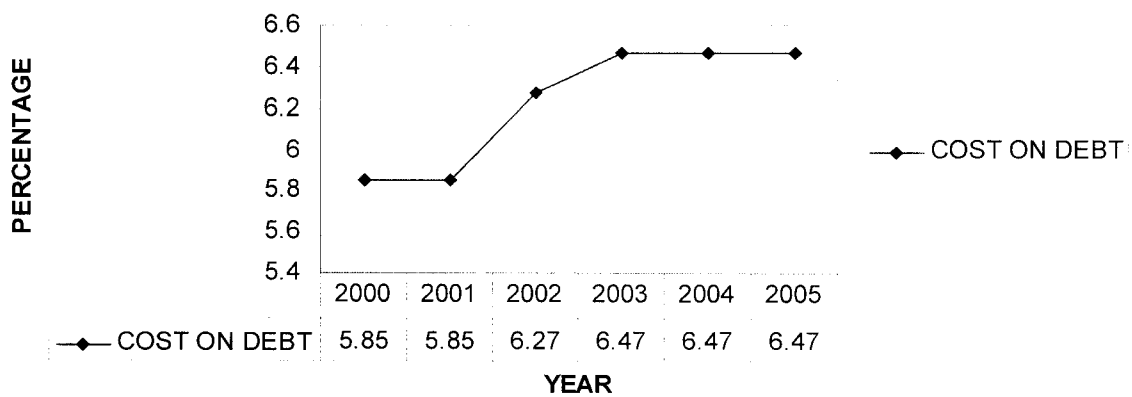
With foregoing information on interest and Income Tax , the effect interest is obtained.

### COST ON BORROWINGS

Year	Effective income-tax rate (T)	Cost of Debt ( $K_d$ )
2000	36.75%	5.85%
2001	36.75%	5.85%
2002	32.25%	6.27%
2003	30.05%	6.47%
2004	30.06%	6.47%
2005	30.06%	6.47%

**TABLE. 3.3**

From the above table 3.3, the Cost of Debt has escalated from 5.85 per cent in 2000 to 6.47 per cent in 2005 due to reduction in the Income – Tax Rate.

**COST OF DEBT****FIGURE : 3.1**

## **COST OF EQUITY AND FREE RESERVES ( $K_e$ )**

The Equity shares are issued externally where there is no definite commitment to pay dividends but the Equity shareholders are the real owners of the company. But rewarding the equity holders (especially public) is imperative for raising future equity resources.

The Free Reserves (Retained Earnings) implies in terms of dividends foregone by/withheld from the Equity shareholders. As it indirectly affects the Cost of Equity as such equity shares, it is combined with the Equity shares for calculating the Cost.

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

Where,

$K_e$  = Cost on Equity;

$D_1$  = Expected Dividend / Share;

$P_0$  = Intrinsic value/share;

$g$  = Growth Rate.

The succeeding components, aided in estimating the Cost of Equity:

## INTRINSIC VALUE OF SHARE (P<sub>0</sub>)

As the company understudy has not listed its equity shares, the market-price per share is estimated by the 'NET-WORTH RATIO' which is formulated as follows:

$$P_0 = \frac{\text{Equity Share} - \text{Capital} + \text{Free Reserves}}{\text{Number of paid-up Equity Shares}}$$

### INTRINSIC VALUE PER SHARE

Year	Equity share capital & free reserves (Rs.in crores)	Number of shares	Intrinsic value per share (P <sub>0</sub> ) (Rs.)
2000	8.70	16,00,000	54.37
2001	9.26	16,00,000	57.85
2002	9.44	16,00,000	58.98
2003	9.07	16,00,000	56.68
2004	11.16	16,00,000	69.73
2005	11.79	16,00,000	73.71

**TABLE 3.4**

From the above table 3.4, the intrinsic value per share is going upwards from Rs. 54.37 in 2000 to Rs. 73.71 in 2005.



## DIVIDEND PER SHARE ( $D_1$ )

Theoretically,  $D_1$  denotes the forthcoming / expected Dividend. As this study is carried for the years 2000-2005, the dividends paid for those years were

### DIVIDEND PER SHARE

Year	Dividend declared	Dividend per share ( $D_1$ ) (Rs.)
2000	15%	1.5
2001	20%	2
2002	20%	2
2003	20%	2
2004	20%	2
2005	20%	2

**TABLE. 3.5**

From the above table 3.5, the company maintain a constant dividend for the year 2001 to 2005 of Rs.2 per share. The company has not made public issue, and so it has not increased the dividend ratio.



## GROWTH RATE (g)

The growth rate of EPS of the company has been calculated for the periods 2000 to 2005 and is given in table 3.6 below. The compounded growth rate of EPS is calculated as  $g = (d_1 * d_2 * d_3 * d_4 * d_5 * d_6)^{(1/6)}$ . The value is obtained as 9.13%.

### GROWTH RATE

Year	Earnings Per Share (EPS) (Rs)
2000	4.04
2001	5.58
2002	3.32
2003	9.17
2004	14.79
2005	6.26

**TABLE. 3.6**

## COST OF EQUITY CAPITAL AND FREE RESERVES ( $K_e$ )

To calculate the Cost of Equity Capital and Free Reserves, the **DIVIDEND APPROACH** model is considered as the data available satisfies this model. It is formulated as:

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

### COST OF EQUITY

Year	Intrinsic Value Per Share ( $P_0$ ) (Rs.)	Dividend Per Share ( $D_1$ ) (Rs.)	Cost of Equity ( $K_e$ )
2000	54.37	1.5	11.89%
2001	57.85	2	12.59%
2002	58.98	2	12.52%
2003	56.68	2	12.64%
2004	69.73	2	11.99%
2005	73.71	2	11.84%

**TABLE 3.7.**

From the above table 3.7, the Cost of Equity has worked about 12% during the period of study. This is due to the maintenance of constant Value per Dividend per Share.

### **WEIGHTED AVERAGE COST OF CAPITAL (WACC) ( $K_0$ ):**

The term Cost of Capital means the overall weighted Cost of Capital with weights equal to proportion to the type of fund. It is calculated on the book value and not on the market values, as the company's shares are not listed. The following formula obviously explains this concept:

$$K_0 = K_e W_e + K_d W_d + K_p W_p$$

Where,

$K_0$  = Overall / Weighted Cost of Capital;

$K_e$  = Cost of Equity shares;

$W_e$  = Weight of Equity shares;

$K_d$  = Cost of Debt;

$W_d$  = Weight of Debt;

$K_p$  = Cost of Preference shares;

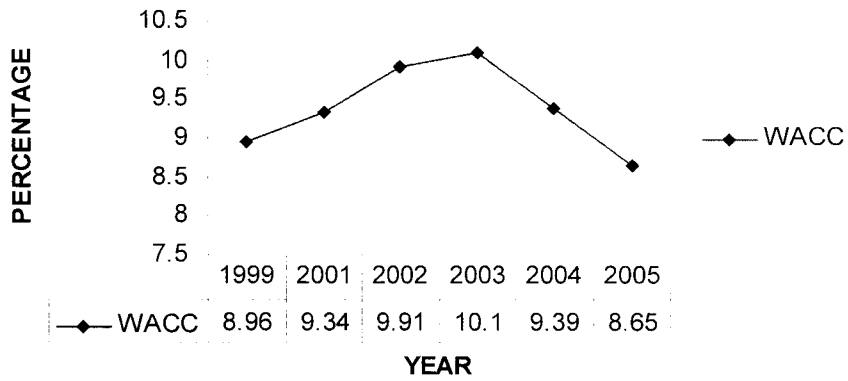
$W_p$  = Weight of Preference shares.

As the company deals only with the Debt and Equity shares, the Overall Cost of Capital is tabulated as follows:

### WEIGHTED AVERAGE COST OF CAPITAL (WACC)

Year	Sources	Amount (Rs. in lakhs)	Weight (%)	Cost (%)	WACC (%)
2000	* Equity	870	51.44	11.89	6.12
	* Debt	821	48.56	5.85	2.84
	<b>Total</b>	<b>1691</b>	<b>100.00</b>		<b>8.96</b>
2001	* Equity	926	51.84	12.59	6.52
	* Debt	860	48.16	5.85	2.82
	<b>Total</b>	<b>1786</b>	<b>100.00</b>		<b>9.34</b>
2002	* Equity	944	58.34	12.52	7.30
	* Debt	674	41.66	6.27	2.61
	<b>Total</b>	<b>1618</b>	<b>100.00</b>		<b>9.91</b>
2003	* Equity	907	58.81	12.64	7.43
	* Debt	635	41.19	6.47	2.66
	<b>Total</b>	<b>1542</b>	<b>100.00</b>		<b>10.09</b>
2004	* Equity	1,116	53.01	11.99	6.35
	* Debt	989	46.99	6.47	3.04
	<b>Total</b>	<b>2105</b>	<b>100.00</b>		<b>9.39</b>
2005	* Equity	1,179	40.61	11.84	4.81
	* Debt	1725	59.39	6.47	3.84
	<b>Total</b>	<b>2,904</b>	<b>100.00</b>		<b>8.65</b>

TABLE : 3.8.

**WEIGHTED AVERAGE COST OF CAPITAL****FIGURE : 3.2**

## DEBT-EQUITY RATIO

The Ideal Debt-Equity mix is attained when the Weighted Average Cost of Capital is low. to analyze and picturise the Ideal mix the following table is framed:

## DEBT-EQUITY MIX

Year	Equity Capital and Free Reserves (Rs. In lakhs)	Ratio of Equity (%)	Debt (Rs)	Ratio of Debt (%)	WACC (%)
2000	870	51.44%	821	48.56%	8.96%
2001	926	51.81%	860	48.19%	9.34%
2002	944	58.34%	674	41.66%	9.91%
2003	907	58.83%	635	41.17%	10.09%
2004	1,116	53.00%	989	47.00%	9.39%
2005	1,179	40.61%	1725	59.39%	8.65%

**Table : 3.9.**

From the above table 3.9, the Weighted Average Cost of Capital is calculated for the year 2005 at 8.65 percent when the company has the highest ratio of Debt at 59.39 percent with Equity at 40.61 percent.

## WEIGHTED AVERAGE COST OF CAPITAL (WACC) AND THE SPECIFIC COSTS:

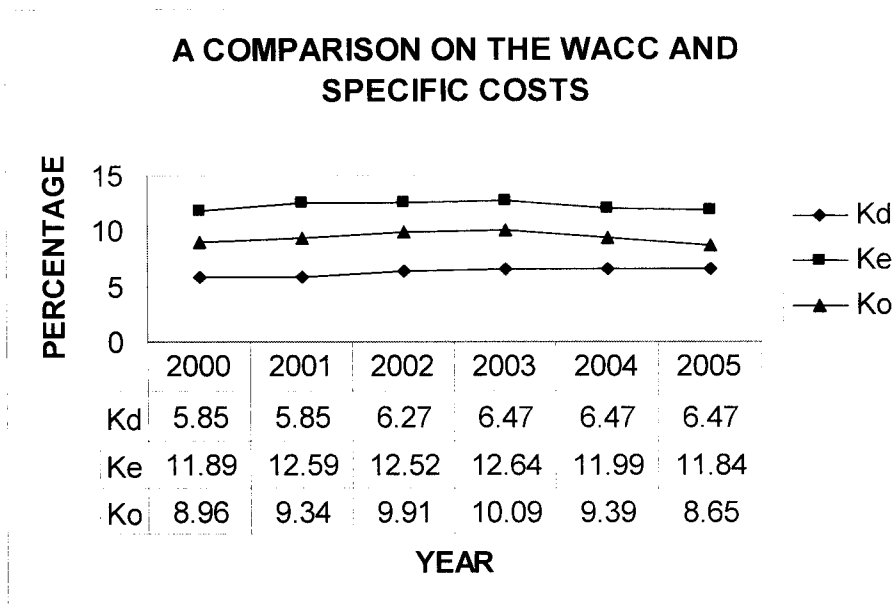
To compare the specific cost of various components and the overall cost of capital, the following extraction is carried-out:

### A COMPARISON ON THE WEIGHTED AVERAGE COST OF CAPITAL (WACC) AND THE SPECIFIC COSTS

Year	Cost of Debt ( $K_d$ )	Equity Capital ( $K_e$ )	WACC ( $K_0$ )
2000	5.85%	11.89%	8.96%
2001	5.85%	12.59%	9.34%
2002	6.27%	12.52%	9.91%
2003	6.47%	12.64%	10.09%
2004	6.47%	11.99%	9.39%
2005	6.47%	11.84%	8.65%

**TABLE: 3.10 :**

From the above table 3.10, the Weighted Average Cost of Capital is the lowest at 8.65 per cent in 2005, where at the company has made an optimal combination of Debt and Equity Share capital.



**FIGURE : 3.3**

Kd= COST OF DEBT

Ke=COST OF EQUITY

Ko=WEIGHTED AVERAGE COST OF CAPITAL



## WEIGHTED AVERAGE COST OF CAPITAL (WACC) AND SALES:

Sales is the indication of the development of a company. So a comparison is made on the Weighted Average Cost of Capital and Sales as follows:

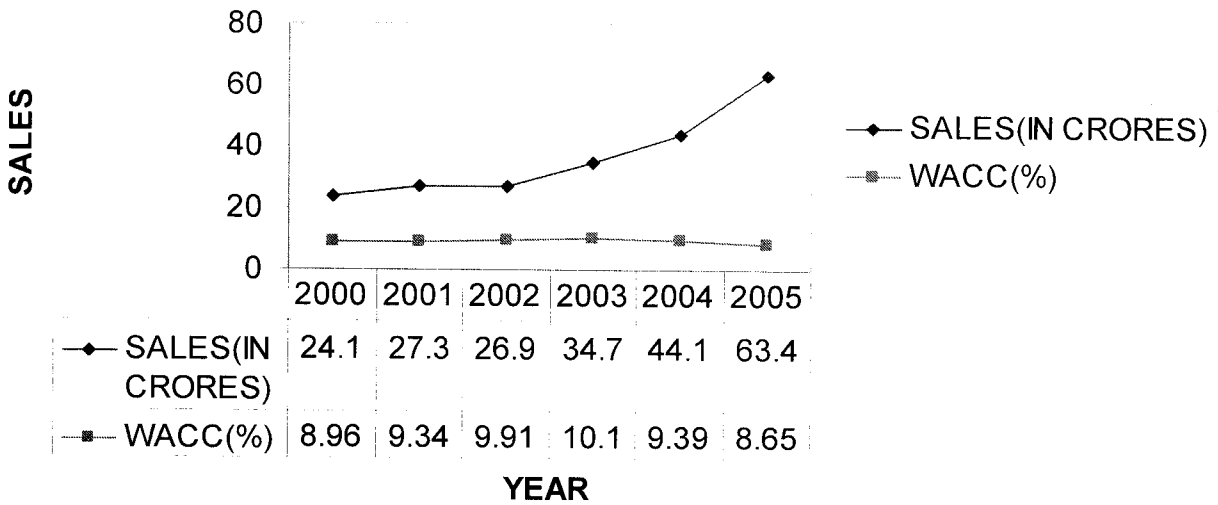
### A COMPARISON ON THE WEIGHTED AVERAGE COST OF CAPITAL (WACC) AND SALES

Year	Sales (Rs. In crores)	WACC (K <sub>0</sub> )
2000	24.10	8.96%
2001	27.30	9.34%
2002	26.85	9.91%
2003	34.68	10.09%
2004	44.13	9.39%
2005	63.36	8.65%

**TABLE : 3.11**

From the above table 3.11 and the graph, it is observed that the sales has increased from Rs.24.10Cr in 2000 to Rs.63.36Cr in 2005 on the contrary the Weighted Average Cost of Capital declined from 8.96 per cent in 2000 to 8.65 per cent in 2005. As the Weighted Average Cost of Capital falls to 8.65 percent in 2005, while the sales tend to decline and then increase to Rs.63,36,52,164 in 2000.

## A COMPARISON ON THE WEIGHTED AVERAGE COST OF CAPITAL AND SALES



**FIGURE : 3.4**

## WEIGHTED AVERAGE COST OF CAPITAL (WACC) AND PROFITABILITY

A comparison between the weighted average cost of capital and profitability is made and calculated as follows:

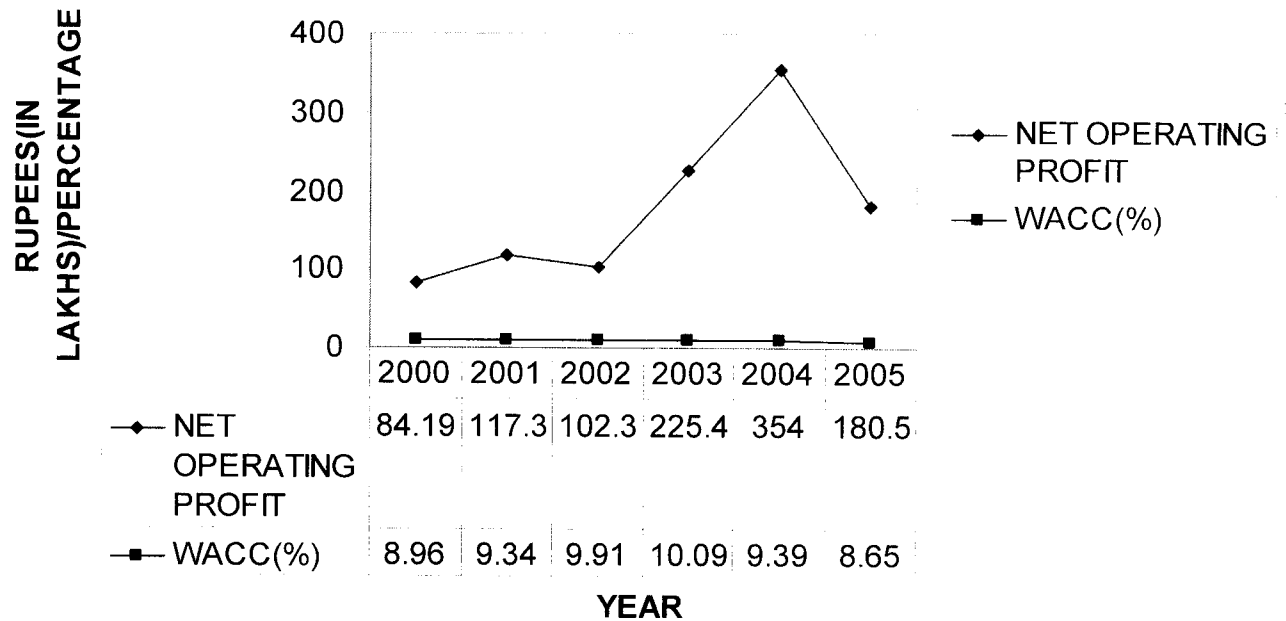
### A COMPARISON ON THE WEIGHTED AVERAGE COST OF CAPITAL (WACC) AND PROFITABILITY

Year	Profit for the year (Rs.In lakhs)	WACC (K <sub>0</sub> )
2000	84.19	8.96%
2001	117.33	9.34%
2002	102.30	9.91%
2003	225.44	10.09%
2004	354.03	9.39%
2005	180.50	8.65%

**TABLE : 3.12**

From the above table 3.12, it is inferred that the weighted average cost of capital is not related to the profitability.

**A COMPARISON ON THE WEIGHTED AVERAGE COST OF CAPITAL AND  
PROFITABILITY.**



**FIGURE : 3.5**

**APPLICATION OF DUPONT MODEL FOR MEASURING THE FINANCIAL  
PERFORMANCE FOR THE YEAR ENDING 31<sup>ST</sup> MARCH '00**

**TOTAL COST**

Total Cost = Cost of Goods Sold + Selling Expenses & Administrative Expenses  
+ Interest Expenses + Income Tax.

Cost of goods sold	=	9,61,50,449
Employee Remuneration	=	2,85,28,659
Manufacturing Expenses	=	5,81,02,559
Selling Expenses	=	3,20,62,192
Interest	=	1,08,91,336
Income Tax	=	11,00,000
Total Cost	=	22,68,35,194

Total cost = Rs. 22,68,35,194

**NET INCOME**

Net income = Sales – Total Cost

Sales	=	24,10,30,429
Total Cost	=	22,68,35,194
Net Income	=	24,10,30,429– 22,68,35,194

Net Income = Rs.1,41,95,235

**NET PROFIT MARGIN**

Net Profit Margin = Net Income / Sales

Net Income	=	1,41,95,235
Sales	=	24,10,30,429
Net Profit Margin	=	1,41,95,235/ 24,10,30,429

Net Profit Margin = 0.06

**CURRENT ASSETS**

Current assets = Cash + Inventories + Others

Cash	=	13,72,466
Inventories	=	3,12,28,281
Others (Sundry Debtors)	=	5,22,86,647
Loans & Advances	=	2,68,01,359
Current Assets	=	<u>11,16,88,753</u>

Current Assets = Rs. 11,16,88,753

**NON-CURRENT ASSETS**

Fixed Assets = Land + Buildings + Machinery & Equipments + Furniture & Fittings +  
Intangibles

Land	=	17,79,567
Buildings	=	1,06,74,472
Machinery	=	24,81,792
Furniture & Fittings	=	6,87,20,911

Non-Current Assets = Rs.8,36,56,742

**TOTAL ASSETS**

Total Assets = Current Assets + Non-Current Assets

Current Assets	=	11,16,88,753
Non-Current Assets	=	8,36,56,742
Total Assets	=	11,16,88,753+8,36,56,742

Total Assets = Rs.19,53,45,495

**TOTAL ASSET TURNOVER**

Total Asset Turnover = Sales / Total Assets

Sales	=	24,10,30,429
Total Asset	=	19,53,45,495
Total Asset Turnover	=	24,10,30,429/ 19,53,45,495

Total Asset Turnover = 1.23

**RETURN ON ASSETS**

Return on Assets = Net Profit Margin x Total Asset Turnover

Net Profit Margin	=	0.06
Total Asset Turnover	=	1.23
Return on Assets	=	0.06 x 1.29

Return on Assets = 0.07

Return on Assets in Percentage = 0.07 x 100

Return on Assets = 7%

Therefore the return on assets for the year ending 31<sup>st</sup> march 2000 is 7 %

**APPLICATION OF DUPONT MODEL FOR MEASURING THE FINANCIAL  
PERFORMANCE FOR THE YEAR ENDING 31<sup>st</sup> MARCH '01**

**TOTAL COST**

Total Cost = Cost of Goods Sold + Selling Expenses & Administrative Expenses  
+ Interest Expenses + Income Tax.

Cost of goods sold	=	11,57,78,226
Employee Remuneration	=	3,11,89,314
Manufacturing Expenses	=	6,70,06,554
Selling Expenses	=	2,95,96,242
Interest	=	97,38,387
Income Tax	=	28,00,000
Total Cost	=	25,61,08,723

Total cost = Rs. 25,61,08,723

**NET INCOME**

Net income = Sales – Total Cost

Sales	=	27,29,57,438
Total Cost	=	25,61,08,723
Net Income	=	27,29,57,438– 25,61,08,723

Net Income = Rs.1,68,48,715



**NET PROFIT MARGIN**

Net Profit Margin = Net Income / Sales

Net Income	=	1,68,48,715
Sales	=	27,29,57,438
Net Profit Margin	=	1,68,48,715/ 27,29,57,438

Net Profit Margin = 0.06

**CURRENT ASSETS**

Current assets = Cash + Inventories + Others

Cash	=	27,64,402
Inventories	=	3,60,27,875
Others (Sundry Debtors)	=	6,37,96,536
Loans & Advances	=	2,52,61,256
Current Assets	=	<u>12,78,50,069</u>

Current Assets = Rs. 12,78,50,069

**NON-CURRENT ASSETS**

Fixed Assets = Land + Buildings + Machinery & Equipments + Furniture & Fittings +  
Intangibles

Land	=	17,79,567
Buildings	=	1,02,68,933
Machinery	=	6,58,42,650
Furniture & Fittings	=	24,98,360

Non-Current Assets = Rs.8,03,89,510

**TOTAL ASSETS**

Total Assets = Current Assets + Non-Current Assets

Current Assets	=	12,78,50,069
Non-Current Assets	=	8,03,89,510
Total Assets	=	12,78,50,069+8,03,89,510

Total Assets = Rs.21,15,06,811

**TOTAL ASSET TURNOVER**

Total Asset Turnover = Sales / Total Assets

Sales	=	27,29,57,438
Total Asset	=	21,15,06,811
Total Asset Turnover	=	27,29,57,438/ 21,15,06,811

Total Asset Turnover = 1.29

**RETURN ON ASSETS**

Return on Assets = Net Profit Margin x Total Asset Turnover

Net Profit Margin	=	0.06
Total Asset Turnover	=	1.29
Return on Assets	=	0.06 x 1.29

Return on Assets = 0.07

Return on Assets in Percentage = 0.07 x 100

Return on Assets = 7%

Therefore the return on assets for the year ending 31<sup>st</sup> march 2001 is 7 %

## APPLICATION OF DUPONT MODEL FOR MEASURING THE FINANCIAL PERFORMANCE FOR THE YEAR ENDING 31<sup>st</sup> MARCH '02

### TOTAL COST

Total Cost = Cost of Goods Sold + Selling Expenses & Administrative Expenses  
+ Interest Expenses + Income Tax.

Cost of goods sold	=	10,06,06,644
Employee Remuneration	=	3,58,23,820
Manufacturing Expenses	=	7,53,69,827
Selling Expenses	=	3,07,78,195
Interest	=	83,23,341
Income Tax	=	35,00,000
 Total Cost	 =	 <u>33,13,20,379</u>

Total cost = Rs. 25,44,01,827

### NET INCOME

Net income = Sales – Total Cost

Sales	=	26,84,69,387
Total Cost	=	25,44,01,827
 Net Income	 =	 26,84,69,387– 25,44,01,827

Net Income = Rs.1,40,67,560

**NET PROFIT MARGIN**

Net Profit Margin = Net Income / Sales

Net Income	=	1,40,67,560
Sales	=	26,84,69,387
Net Profit Margin	=	1,40,67,560/ 26,84,69,387

Net Profit Margin = 0.05

**CURRENT ASSETS**

Current assets = Cash + Inventories + Others

Cash	=	43,34,886
Inventories	=	2,75,46,112
Others (Sundry Debtors)	=	6,35,30,849
Loans & Advances	=	2,23,99,369
Current Assets	=	<u>11,78,11,216</u>

Current Assets = Rs. 11,78,11,216

**NON-CURRENT ASSETS**

Fixed Assets = Land + Buildings + Machinery & Equipments + Furniture & Fittings +  
Intangibles

Land	=	17,79,567
Buildings	=	1,21,71,142
Machinery	=	6,31,99,838
Furniture & Fittings	=	24,96,516

Non-Current Assets = Rs.7,96,47,063

**TOTAL ASSETS**

Total Assets = Current Assets + Non-Current Assets

Current Assets	=	11,78,11,216
Non-Current Assets	=	7,96,47,063
Total Assets	=	11,78,11,216+7,96,47,063

Total Assets = Rs.19,74,58,279

**TOTAL ASSET TURNOVER**

Total Asset Turnover = Sales / Total Assets

Sales	=	26,84,69,387
Total Asset	=	19,74,58,279
Total Asset Turnover	=	26,84,69,387 / 19,74,58,279

Total Asset Turnover = 1.35

**RETURN ON ASSETS**

Return on Assets = Net Profit Margin x Total Asset Turnover

Net Profit Margin	=	0.05
Total Asset Turnover	=	1.35
Return on Assets	=	0.05 x 1.35

Return on Assets = 0.07

Return on Assets in Percentage = 0.07 x 100

Return on Assets = 7 %

Therefore the return on assets for the year ending 31<sup>st</sup> march 2002 is 7 %

**APPLICATION OF DUPONT MODEL FOR MEASURING THE FINANCIAL  
PERFORMANCE FOR THE YEAR ENDING 31<sup>st</sup> MARCH '03**

**TOTAL COST**

Total Cost = Cost of Goods Sold + Selling Expenses & Administrative Expenses  
+ Interest Expenses + Income Tax.

Cost of goods sold	=	14,77,75,655
Employee Remuneration	=	4,60,14,435
Manufacturing Expenses	=	9,14,70,784
Selling Expenses	=	3,81,79,128
Interest	=	38,80,377
Income Tax	=	40,00,000
Total Cost	=	33,13,20,379

Total cost = Rs. 33,13,20,379

**NET INCOME**

Net income = Sales – Total Cost

Sales	=	34,67,58,601
Total Cost	=	33,13,20,379
Net Income	=	34,67,58,601 – 33,13,20,379

Net Income = Rs.1,54,38,222

**NET PROFIT MARGIN**

Net Profit Margin = Net Income / Sales

Net Income	=	1,54,38,222
Sales	=	34,67,58,601
Net Profit Margin	=	1,54,38,222/ 34,67,58,601

Net Profit Margin = 0.04

**CURRENT ASSETS**

Current assets = Cash + Inventories + Others

Cash	=	70,46,272
Inventories	=	3,14,63,506
Others (Sundry Debtors)	=	7,86,10,850
Loans & Advances	=	2,05,77,394
Current Assets	=	<u>13,76,98,022</u>

Current Assets = Rs. 13,76,98,022

**NON-CURRENT ASSETS**

Fixed Assets = Land + Buildings + Machinery & Equipments + Furniture & Fittings +  
Intangibles

Land	=	17,79,567
Buildings	=	1,48,14,127
Machinery	=	6,87,73,058
Furniture & Fittings	=	25,88,81
Non-Current Assets	=	Rs.8,79,55,566

**TOTAL ASSETS**

Total Assets = Current Assets + Non-Current Assets

Current Assets	=	13,76,98,022
Non-Current Assets	=	8,79,55,566
Total Assets	=	13,76,98,022+8,79,55,566

Total Assets = Rs.22,56,53,588

**TOTAL ASSET TURNOVER**

Total Asset Turnover = Sales / Total Assets

Sales	=	34,67,58,601
Total Asset	=	22,56,53,588
Total Asset Turnover	=	34,67,58,601 / 22,56,53,588

Total Asset Turnover = 1.53

**RETURN ON ASSETS**

Return on Assets = Net Profit Margin x Total Asset Turnover

Net Profit Margin	=	0.04
Total Asset Turnover	=	1.53
Return on Assets	=	0.04 x 1.53

Return on Assets = 0.06

Return on Assets in Percentage = 0.06 x 100

Return on Assets = 6 %

Therefore the return on assets for the year ending 31<sup>st</sup> march 2003 is 6 %



**APPLICATION OF DUPONT MODEL FOR MEASURING THE FINANCIAL  
PERFORMANCE FOR THE YEAR ENDING 31<sup>st</sup> MARCH '04**

**TOTAL COST (IN Rs)**

Total Cost = Cost of Goods Sold + Selling Expenses & Administrative Expenses  
+ Interest Expenses + Income Tax.

Cost of goods sold	=	19,51,50,032
Employee Remuneration	=	5,58,21,193
Manufacturing Expenses	=	12,19,63,584
Selling Expenses	=	4,18,84,368
Interest	=	37,77,279
Income Tax	=	77,00,000
Total Cost	=	42,62,96,456

Total cost = Rs.42,62,96,456

**NET INCOME**

Net income = Sales – Total Cost

Sales	=	44,12,93,508
Total Cost	=	42,62,96,456
Net Income	=	44,12,93,508 – 42,62,96,456

Net Income = Rs.1,49,97,052

**NET PROFIT MARGIN**

Net Profit Margin = Net Income / Sales

Net Income	=	1,49,97,052
Sales	=	44,12,93,508
Net Profit Margin	=	1,49,97,052 / 44,12,93,508

Net Profit Margin = 0.03

**CURRENT ASSETS**

Current assets = Cash + Inventories + Others

Cash	=	44,42,704
Inventories	=	4,97,80,471
Others (Sundry Debtors)	=	7,64,88,272
Loans & Advances	=	2,75,39,667
Current Assets	=	<u>15,82,51,114</u>

Current Assets = Rs.15,82,51,114

**NON-CURRENT ASSETS**

Fixed Assets = Land + Buildings + Machinery & Equipments + Furniture & Fittings +  
Intangibles

Land	=	18,57,542
Buildings	=	1,42,26,530
Machinery	=	10,61,39,014
Furniture & Fittings	=	54,01,074

Non-Current Assets = Rs.12,76,24,160

**TOTAL ASSETS**

Total Assets = Current Assets + Non-Current Assets

Current Assets	=	15,82,51,114
Non-Current Assets	=	12,76,24,160
Total Assets	=	15,82,51,114 + 12,76,24,160

Total Assets = Rs.28,58,75,274

**TOTAL ASSET TURNOVER**

Total Asset Turnover = Sales / Total Assets

Sales	=	44,12,93,508
Total Asset	=	28,58,75,274
Total Asset Turnover	=	44,12,93,508 / 28,58,75,274

Total Asset Turnover = 1.54

**RETURN ON ASSETS**

Return on Assets = Net Profit Margin x Total Asset Turnover

Net Profit Margin	=	0.03
Total Asset Turnover	=	1.54
Return on Assets	=	0.03 x 1.54

Return on Assets = 0.04

Return on Assets in Percentage = 0.04 x 100

Return on Assets = 4 %

Therefore the return on assets for the year ending 31<sup>st</sup> march 2004 is 4 %

**APPLICATION OF DUPONT MODEL FOR MEASURING THE FINANCIAL  
PERFORMANCE FOR THE YEAR ENDING 31<sup>st</sup> MARCH '05**

**TOTAL COST**

Total Cost = Cost of Goods Sold + Selling Expenses & Administrative Expenses  
+ Interest Expenses + Income Tax.

Cost of goods sold	=	29,83,69,949
Employee Remuneration	=	6,95,94,563
Manufacturing Expenses	=	18,61,85,275
Selling Expenses	=	5,97,47,817
Interest	=	1,06,22,235
Income Tax	=	12,50,000
Total Cost	=	62,57,69,859

Total cost = Rs.62,57,69,859

**NET INCOME**

Net income = Sales – Total Cost

Sales	=	63,36,52,464
Total Cost	=	62,57,69,859
Net Income	=	63,36,52,464 – 62,57,69,859

Net Income = Rs.78,82,605

**NET PROFIT MARGIN**

Net Profit Margin = Net Income / Sales

Net Income	=	78,82,605
Sales	=	63,36,52,464
Net Profit Margin	=	78,82,605 / 63,36,52,464

Net Profit Margin = 0.01

**CURRENT ASSETS**

Current assets = Cash + Inventories + Others

Cash	=	85,08,617
Inventories	=	8,08,27,464
Others (Sundry Debtors)	=	10,98,65,075
Loans & Advances	=	2,94,78,987
Current Assets	=	<u>22,86,80,143</u>

Current Assets = Rs.22,86,80,143

**NON-CURRENT ASSETS**

Fixed Assets = Land + Buildings + Machinery & Equipments + Furniture & Fittings +  
Intangibles

Land	=	18,57,542
Buildings	=	2,94,00,421
Machinery	=	12,57,93,726
Furniture & Fittings	=	61,17,412

Non-Current Assets = Rs.16,31,69,101

**TOTAL ASSETS**

Total Assets = Current Assets + Non-Current Assets

Current Assets	=	22,86,80,143
Non-Current Assets	=	16,31,69,101
Total Assets	=	22,86,80,143 + 16,31,69,101
Total Assets = Rs.39,18,49,244		

**TOTAL ASSET TURNOVER**

Total Asset Turnover = Sales / Total Assets

Sales	=	63,36,52,464
Total Asset	=	39,18,49,244
Total Asset Turnover	=	63,36,52,464 / 39,18,49,244

Total Asset Turnover = 1.61

**RETURN ON ASSETS**

Return on Assets = Net Profit Margin x Total Asset Turnover

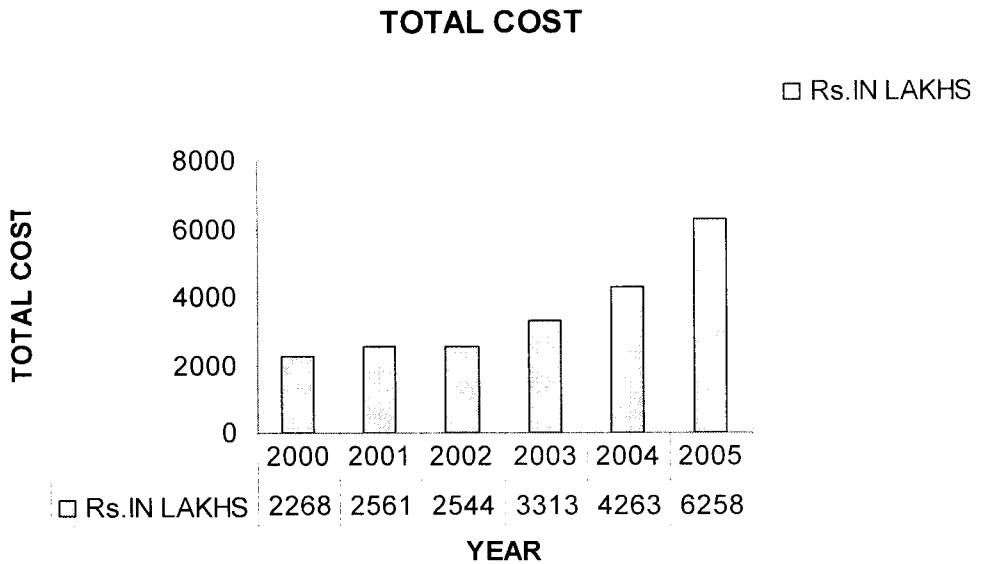
Net Profit Margin	=	0.01
Total Asset Turnover	=	1.61
Return on Assets	=	0.01 x 1.61

Return on Assets = 0.01

Return on Assets in Percentage = 0.01 x 100

Return on Assets = 1 %

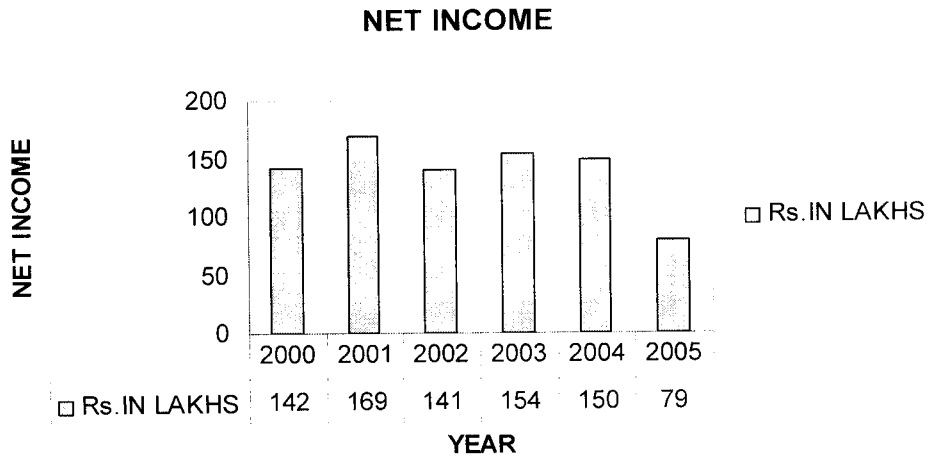
Therefore the return on assets for the year ending 31<sup>st</sup> march 2005 is 1 %



**FIGURE : 3.6**

**INFERENCE:**

The chart depicts that the total cost of the firm shows a dual trend phenomena. For the period 2000 to 2002 , the profits shows a mild increasing trend. Therefore for the period 2003 to 2005 the profits go sharply. During 2000 to 2002 , the profits range between Rs.2268 lakhs to Rs.2544 lakhs from the year 2000(121% growth) This is due to the increase in the cost of materials and increase in the Interest Expenses while compared to the early years.

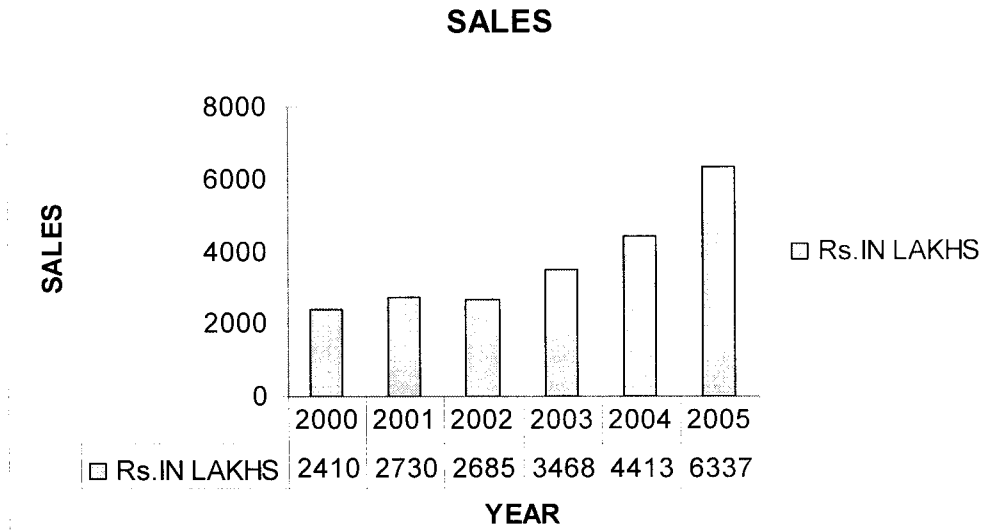


**FIGURE : 3.7**

**INFERENCE:**

The chart depicts that the Net income of the concern shows a fluctuating trend from the year 2000 to 2005.

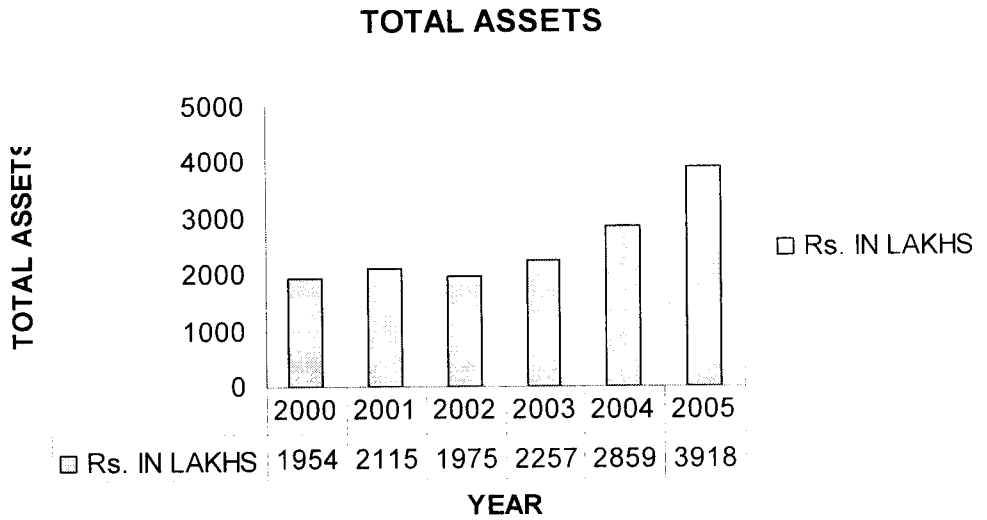




**FIGURE : 3.8**

**INFERENCE:**

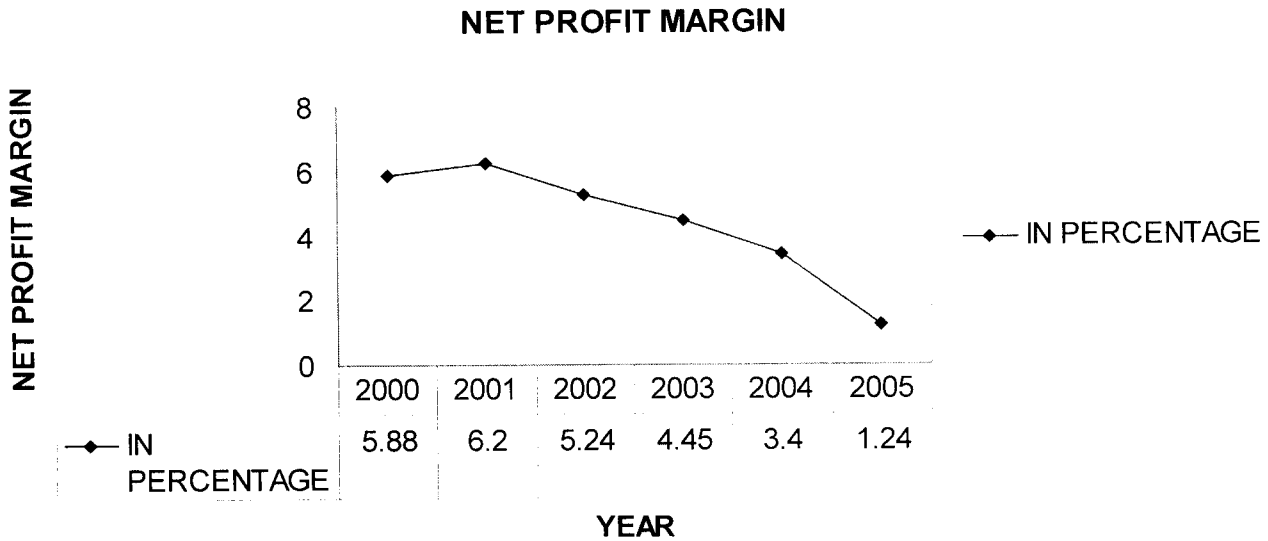
The chart visualized that the sales of the concern shows an increasing trend between the years 2000 to 2005 except in the year 2002.



**FIGURE : 3.9**

**INFERENCE:**

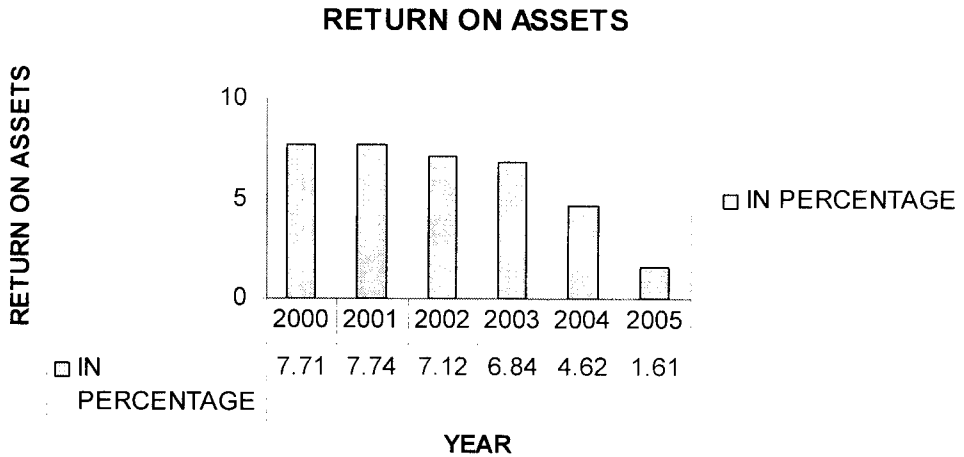
The chart exhibits that the Total Assets of the concern increased gradually from the year 2000 to 2005 except in the year 2002. The total assets of the concern in the year 2000 was Rs.1954 Lakhs. After that it was gradually increased in the following years.



**FIGURE : 3.10**

**INFERENCE:**

The net profit margin of the firm indicates that there is a decreasing trend from the year 2001 to 2005. The net profit margin of the year 2001 is 6.20, the profit was falling gradually, eventually in the year 2005 it is at the level of 1.24. This is due to the huge increase in the cost of interest on Debt in the year 2005.



**FIGURE : 3.11**

**INFERENCE:**

The above chart reveals the Return On Assets of the concern was high in the year 2001(7.74%). In the following three years it fell down. It declined to 7.12%, 6.84 % and 4.63% in the years 2002, 2003, 2004 respectively. In the last year it met with a rapid fall down to 2.01%. This was due to decrease in the Net Profit Margin caused by high cost of interest on Debt.

*CHAPTER – 4*  
*CONCLUSIONS*

## 4. CONCLUSIONS

### 4.1 RESULTS AND DISCUSSIONS:

- The effective Cost of Debt increased for the period 2000 to 2005 due reduction in Tax-Shield against Income Tax effectively. So the compant could not avail.
- The intrinsic value of the shares have been going upwards, because the company retains the Free Reserves by maintaining the Dividend rate.
- Presently , the EPS growth rate is estimated to be 9.13 %.
- The Cost of Equity is more or less constant which is due to the policy of the company to declare dividends at constant.
- The Weighted Average Cost of Capital was at 8.96 percent during 2000 and picked up its growth to 10.09 percent till 2003 and later it gradually slipped down to 8.65 percent during 2005.
- The Net Profit of the firm shows a decreasing trend from the year 2000 to 2005. The Net Profit of the year 2000 was 5.88% there after it was falling gradually. But in the year 2005 it touched the extreme level 1.24% . This is due to the high increase in the total cost during the year 2005.
- The Return on Assets of the firm was high in the year 2001(7.74%). In the next three years it met unexpected fall down. It declined to 7.12% in the year 2002. 6.84% in the year 2003 and 4.62% in the year 2004. In the last year (2005) it rapidly fell down to 1.61%. This was due to the decrease in the Net Profit Margin.

## 4.2 CONSIDERED RECOMMENDATIONS

- The effective Cost of Debt for the periods under study ranges from 5.85 percent to 6.47 percent where as the Cost of Equity ranges from 11.89 percent to 12.59 percent. It is an evident that the Debt is cheaper than equity. But presently , the annual reports show that the Debt is 59.39 percent and Equity is at 40.61 percent. Hence the company is suggested to go for increasing Equity capital to reduce interest payments.
  
- DuPont analysis of the concern clearly exhibits the concern's return on assets was in a declining trend. The total cost of the firm showed an increasing trend which was more than that of sales. The Total Assets was also in an increasing trend. But the Return on Total Assets was not increased. So the concern take effective measures to control its Total Cost. The interest expenses of the concern was very high in the year 2005 compared to 2004.It shows the company borrowed more funds from outsiders. The overall financial position of the company is stable and securable. The concern may adopt new strategies in the days to come to increase the profit base.

*CHAPTER-5*  
*BIBLIOGRAPHY*



## **5. BIBLIOGRAPHY**

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- Financial management by M.Y.Khan and Jain

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