A STUDY ON LEVERAGE ANALYSIS WITH SPECIAL REFERENCE TO ROOTS INDUSTRIES INDIA LIMITED, COIMBATORE

A PROJECT REPORT

Submitted

by

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Reg. No. 0720400016

in partial fulfillment of the requirements of

Anna University-Coimbatore

(Kumaraguru College of Technology – Autonomous)

for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

DEPARTMENT OF MANAGEMENT STUDIES

KUMARAGURU COLLEGE OF TECHNOLOGY

SEPTEMBER 2008

BONAFIDE CERTIFICATE

ROOTS INDUSTRIES INDIA LIMITED

RIL/HRD/2816/08

26.09.2008

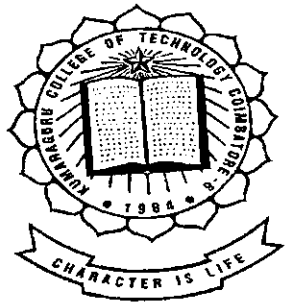
PROJECT CERTIFICATE

This is to certify that **Mr.K.Karthik, II MBA** student of **Kumaraguru College of Technology** has done a Project Work on **"A Study on Leverage Analysis "** in our organisation from **18.06.08** to **18.07.08.**

For **ROOTS INDUSTRIES INDIA LIMITED**

(KAVIDASAN)
DIRECTOR

ACKNOWLEDGEMENT



DEPARTMENT OF MANAGEMENT STUDIES
KUMARAGURU COLLEGE OF TECHNOLOGY (AUTONOMOUS)
COIMBATORE

BONAFIDE CERTIFICATE

Certified that this project titled **"A STUDY ON LEVERAGE ANALYSIS WITH SPECIAL REFERENCE TO ROOTS INDUSTRIES INDIA LIMITED, COIMBATORE"** is the bonafide work of Mr. **K.KARTHIK** who carried out this project under my supervision. Certified further, that to the best of my knowledge the work reported herein does not from 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.

Mr.A.Senthil Kumar
Faculty Guide

Prof. Dr.S.V.Devanathan
Director

Evaluated and viva-voce conducted on 1.11.08

Examiner I

Examiner II

DECLARATION

I hereby declare that the dissertation entitled **"A STUDY ON LEVERAGE ANALYSIS WITH SPECIAL REFERENCE TO ROOTS INDUSTRIES INDIA LIMITED, COIMBATORE"** submitted for the **MASTER OF BUSINESS ADMINISTRATION** degree is my original work and the dissertation has not formed the basis for the reward of any Degree, Associate ship, Fellowship or any other similar titles.

K.KARTHIK. 29/9/10

ACKNOWLEDGEMENT

I thank the GOD, Almighty for his blessings bestowed upon me, which gave strength, confidence and health for completing this project.

I express my sincere gratitude to our beloved correspondent **Mr.M.Balasubramaniam, M.Com, MBA(U.S.A),** the prime guiding spirit of Kumaraguru College of Technology.

I wish to express my deep sense of gratitude to our principal **Prof. Joseph V.Thanikal, M.E, Ph.D, PDF, CEPIT,** for his guidance and encouragement to complete my project work.

I wish to express my sincere thanks to Prof. **Dr.S.V.Devanathan,Ph.D,** Director, KCT Business School, for his continuous encouragement throughout my project.

I wish to express deep sense of obligation to **Mr.A.Senthil Kumar, MBA, PGDCA, M.Phil,** Lecturer, KCT Business School, for his intensive guidance throughout my project.

I am greatly indebted to thank all other faculty members of KCT Business School for their kind patronage.

I thank all my friends for their help, and moral support of need.

I thank Mr.G.Balasubramaniam Company Secretary ROOTS Multi Clean Ltd for his valuable guidance throughout my project.

EXECUTIVE SUMMARY

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Traditional methods of measuring the corporate performance are many. Some of the most commonly used are Return on Investment (ROI), Net Profit Margin, Operating Profit Margin, Return on Net worth (RONW), Economic Value Addition (EVA), Earnings Per Share (EPS), etc... But among these ROI and EPS plays a major role in measuring any organizations performance in the existing market. But often many times these traditional measures fail to depict the real time situation of the company. Hence Leverage Analysis has emerged as a new tool to measure the corporate performance.

Leverage Analysis will be used to predict the operating risk which a organization undergoes while functioning. This is predicted or affected by the capital structure of the company. Hence if proper capital structure is maintained by the organization while operating the business the risk faced by the organization can be reduced significantly. This will also ensure a high level of individual investor of the company. If the investors are not getting a good return from their investments then this will decrease the value of the company among the investors and the external public. At times this may also reduce the business opportunities and may finally end up with insolvency.

An analytical research design was framed to conduct leverage analysis at ROOTS INDUSTRIES INDIA limited, coimbatore. The study used the financial data found in the 5 year annual reports of 2002-03 to 2006-07. By and large ratio tool is used to analyze the leverage position, focusing on the operating, financial and combined aspects. The study infers that the company have undergone a down trend in 2004&2005 due to the improper capital structure. But later it restructured its capital and got back its earlier momentum. As every year passes after 2005 the earnings earned by the investors and the operating business pressure was favorable to the organization. And now risk faced by the company during its operation is reduced considerably due to the change that was made by the finance department particularly in deciding the efficient capital structure.

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INTRODUCTION

1.1 BACKGROUND:

OPERATING LEVERAGE

Operating leverage results from the existence of fixed operating expenses in the firm's income stream. The operating costs of the firm fall into three categories

(i) fixed costs which may be defined as those which do not vary with sales volume ; they are function of time and they are typically contractual; they must be paid regardless of the amount of revenues available;

(ii) variable costs that vary directly with sales volume ;and

(iii) semi-variable or semi fixed costs are those which are partly variable .

They are fixed over a range of sales volume and increase to higher levels for higher sales volume. Since the last category of costs can be broken down into fixed and variable components, the costs of a firm, in operational terms can be divided into

(a) Fixed and

(b) variable

The operating leverage may be defined as the firm's ability to use fixed operating costs to magnify the effects of changes in sales on its earnings before interest and taxes. Operating leverage occurs any time a firm has fixed costs that must be met regardless of volume. We employ assets with fixed costs in the hope that volume will produce revenues more than sufficient to cover all fixed and variable costs. In other words, with fixed costs, the percentage

change in profits accompanying a change in volume is greater than the percentage change in volume. This occurrence is known as operating leverage.

DOL = % change in EBIT
% change in sales
WHERE

DOL = Degree of Operating Leverage
EBIT = Earnings before Interest and Tax

FINANCIAL LEVERAGE

Financial leverage relates to the financing activities of the firm. The sources from which funds can be generated by a firm, from the point of view of the costs/charges, can be categorised into

(i) Those which carry a fixed financial charge, and

(ii) Those which do not involve any fixed charge.

The source of funds in the first category consists of various types of long-term debt, including bonds, debentures and preference shares. Long- term debts carry a fixed interest rate which is contractual obligation for the firm. Although the dividends on preference shares are not a contractual obligation, it is a fixed charge and must be paid before anything is paid to the ordinary shareholders. The equity share holders are entitled to the reminder of the operating profits of the firm after all the prior obligations are met.

Financial leverage results from the presence of fixed financial charges in the firms income stream. These fixed charges do not vary with the earnings before interest and taxes (EBIT) or operating profits. They are paid to be regardless of the amount of EBIT available to pay them. After paying them, the operating profits (EBIT) belong to the ordinary shareholders. Financial leverage is concerned with the effects of changes in EBIT on the earnings available to equity holders .

Hence **financial leverage** is defined as the ability of a firm to use fixed financial charges to magnify the effects of changes in EBIT on the earnings per share. In other words, financial leverage involves the use of funds obtained at a fixed cost in the hope of increasing the return to the shareholders.

$$DFL = \frac{\%\ \text{change in EPS}}{\%\ \text{change in EBIT}}$$

WHERE
DFL = Degree of Financial Leverage
EPS = Earnings per Share

COMBINED LEVERAGE

The operating leverage has its effect on operating risk and is measured by the percentage change in EBIT due to changes in sales. The financial leverage has its effect on financial risk and is measured by the percentage change in EPS due to percentage change in EBIT. Since both these leverages are closely concerned with ascertaining the ability to cover fixed charges(fixed –operating costs in the case of operating leverage and fixed-financial cost in terms of financial leverage), if they are combined , the result is combined leverage or total leverage and the risk associated with the combined leverage is called total risk.

Thus DCL (degree of combined leverage) measures the percentage change in EPS due to percentage change in sales. If the degree of operating leverage of a firm is 6 and the financial leverage is 2.5 , the combined leverage of the firm would be 15(6*2.5). That is ,1 percent change in sales would bring about 15 percent change in EPS in the direction of change in sales. The combined leverage will work in either direction. It will be favorable if sales increase and unfavorable when sales decrease because changes in sales will result in more than proportionate returns in the form of EPS.

DCL = DOL * DFL

WHERE

DCL = Degree of Combined Leverage

1.2 ABSTRACT OF REVIEW OF LITERATURE

Li, Rong-Jen Henderson Jr, Glenn V,[1] observed the firm's degree of leverage is commonly considered to be the product of degrees of operating and financial leverage. They explained about the importance of Theoretical argumentation with the simulations and their comparison in measuring the conventional stock leverage.[1]

Huffman, Lucy1 (1983),[2] Their investigation stress upon the combined leverage effect of a fixed capacity decision (fixed cost) plus debt on the risk of equity returns. They argued that the traditional DOL-DFL calculation is incorrect. A correct calculation was given, using the fact that the capacity decision is endogenous to the firm's decision process. [2]His analysis reveals that the capacity decision partially offsets the effect on equity risk of increasing business risk or debt. However, this ability was lost at high levels of debt.

Hultman, Jon1 (2008),[3] looks at the importance of understanding the power of leverage and how it can work to the benefit or demise of a medical practice. They cited some tactics that provided a practice with financial leverage similar to that achieved by raising fees. They

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[1] *Li, Rong-Jen Henderson Jr, Glenn V* "Combined leverage and stock risk." ,Quarterly Journal of Business & Economics; Winter91, Vol. 30 Issue 1, p18, 22p,

[2] *Huffman, Lucy1 (1983),* " operating leverage, financial leverage, and equity", Journal of Banking & Finance; 1983, Vol. 7 Issue 2, p197-212, 16p,

[3] *Hultman, Jon1 (2008),* "Understanding Leverage", Podiatry Management; Aug2008, Vol. 27 Issue 6, p233-234, 2p

provided an example which demonstrates the leverage that an increase in volume can have on a high, fixed-cost business such as medicine. They noted that a merger of two practices is one strategy that provided immediate dramatic leverage through both increased volume and improved efficiency

De Jong, Kabir, Nguyen,(2008),[4], They analyzed the importance of firm-specific and country-specific factors in the leverage choice of firms from 42 countries around the world. Their analysis yielded two new results. First, they found that firm-specific determinants of leverage differ across countries, while prior studies implicitly assume equal impact of these determinants. Second, although they concurred with the conventional direct impact of country-specific factors on the capital structure of firms, they showed that there was an indirect impact because country-specific factors also influence the roles of firm-specific determinants of leverage.[3]

Robins, Marc,(2003),[5], In this article, authors focus upon the financial leverage. In simpler sense, leverage means doubling up bets with borrowed money so that wins pay off bigger. Balance sheets are not the only way to lever a company. One can have operating leverage. This comes from high fixed costs that magnify small percentage changes in revenues into large percentage changes in net income. One can have what might be called Wall Street leverage. A profit increase will have a magnified impact on a company's valuation if it attracts more attention

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[4] *De Jong, Kabir, Nguyen,(2008)* ,"Capital structure around the world: The roles of firm- and country-specific determinants", Journal of Banking & Finance; Sep2008, Vol. 32 Issue 9, p1954-1969, 16p

[5] *Robins, Marc,(2003),* "The Virtue of Leverage", Forbes; 8/11/2003, Vol. 172 Issue 3, p110-110, 1p,

[6] *Nicolau, Juan L, (2005),* "Leveraging profit from the fixed-variable cost ratio", Tourism Management; Feb2005, Vol. 26 Issue 1, p105-111, 7p

to the stock and causes a run-up in the price/earnings ratio. This article presents different kinds of good leverage, illustrated by small-capitalization stocks.

Nicolau, Juan L,(2005),[6], detected the variations in the risk of a hotel chain's performance derived from opening a new lodging establishment. Authors also found investments requiring huge fixed costs have a direct effect on the operating leverage of a firm; consequently, the analysis of the changes in the operating leverage derived from strategic decisions is a crucial aspect since it allows to shed some light on the degree of sensitivity of the firm to variations in demand. In order to operationalise the assessment of the risk, the volatility of returns is used.

Harrison, Jeffrey S.1 Oler, Derek2 (2008),[7], The authors view about prevailing perspective is that higher debt levels should positively influence acquisition performance because debt disciplines managers by limiting their ability to allocate financial resources to unproductive uses and by motivating them to work harder. However, an alternative perspective, based on the availability of critical resources and management risk balancing, suggests a negative relationship. He developed this alternative perspective and tested it with a very large sample of acquisitions over a long time frame. They found that the pre-announcement acquirer leverage and post-acquisition change in combined leverage are both detrimental to post-acquisition performance. [4]

Kuah, Adrian T. H.1 (2008),[8],Here the author applies the Diamond to a major services cluster and finds that it is an effective framework to tease out the characteristics that result in many

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[7] *Harrison, Jeffrey S.1 Oler, Derek2 (2008),* " The Influence Of Debt On Acquisition Performance", Academy of Management Proceedings; 2008, p1-6, 6p

[8] *Kuah, Adrian T. H.1 (2008),"* Leveraging the Competitive Advantage of the London Financial Centre", Singapore Management Review; 2008 2nd Half, Vol. 30 Issue 2, p1-17, 17p.

tangible and intangible benefits of the location. This case will reveal how financial clustering influences the development of the City of London as a pre-eminent financial centre, how the Diamond conditions are defined in a service cluster, and whether there could be a generalization of the concept. Hence the author concluded with the strategic and managerial implications and suggested the three golden rules of a location that will help firms optimize on these benefits.

Romi Thapal, Hoyos (2006),[9], In this section the author presents news briefly related to leveraged finance. They explained about the entire process where Sole book runner BNP Paribas won the mandate to arrange the loan supporting CDC Capital's buy-out of 57.42% of Quick Restaurants. Also they focused their views on Bank Austria, Banca Intesa and ING which would soon be launching the debt backing the buy-out of producer and supplier of sport shooting equipment Falcon. They expressed their views about Eu130 million loan supporting the buy-out of Aksys is in the market via Dresdner Kleinwort.

[5]*Curtis, Carol E.*(1984),[10], Here the author shares the information about the state of investors who bought income partnerships from Petro-Lewis. Petro-Lewis investors bore a heavy burden. Their partnerships combined leverage with top-of- the-market prices, and Nearly 200,000 investors bought income partnerships from Petro-Lewis. But now they're not getting much income. The brokers and the lawyers, however, are chuckling all the way to the bank. the odds were stacked against them because of commissions and management fees. This scheme would work only in an inflationary environment-but Petro-Lewis seethed blind to economic reality.

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[9] *Romi Thapal, Hoyos (2006),* "Leveraged Finance", Euro week; 11/3/2006 Issue 978, p58-59, 2p

[10] *Curtis, Carol E.*(1984), "The final insult.", Forbes; 9/10/84, Vol. 134 Issue 6, p38-39, 2p

1.3 STATEMENT OF THE PROBLEM:

- Every investor evaluates an organization based on the operating and financial risk faced by the organization.
- Thus Leverage Analysis helps the organization to form the optimum capital structure in order to maximize their shareholders wealth.
- Hence Leverage Analysis is focused by the researcher as a problem to be studied.

1.4 OBJECTIVES OF THE STUDY:

- To examine the existing operating, financial and combined leverage of ROOTS Industries India Limited.
- To analyze the EPS and Debt–Equity Ratio for the period of study.

1.5 SCOPE OF THE STUDY:

Every investor evaluates an organization based on the operating and financial risk faced by the organization. Leverage Analysis thus helps the organization to find a optimal capital structure in order to reduce its business and financial risks. If a combination of Debt and Equity funds is ideal in the capital structure, then earnings of the shares will be favourable for the investors.

This study helps the company to find a optimal capital structure to reduce its operating and financial risk.

1.6 RESEARCH METHODOLOGY:

1.6.1 TYPE OF STUDY:

There are three types of research design they are:

- Exploratory research,
- Descriptive,
- Analytical research design.

This study comes under analytical research.

Meaning:

Under this type of research, the researcher enters the research with a specific topic about which he have not made any kind of conclusions. Finally at the end of the research the researcher will

contribute his own thoughts regarding the selected topic in the academic discussion and draws some conclusions about the topic he has chosen. Hence this study comes under analytical research.

1.6.2 METHOD OF DATA COLLECTION:

Data can be collected in two ways, they are:

- Primary data collection method:

Primary data are collected through direct interview with the interviewee etc...

- Secondary data collection method:

Secondary data are collected through websites, news papers, annual reports etc...

For this study, secondary data were collected from the 5 year annual reports of the company during 2002-03 to 2006-07.

1.6.3 TOOLS FOR ANALYSIS:

- Ratio Analysis

The ratios are calculated using the formulas for the respective years.

1.6.4 VARIABLES FOR THE STUDY:

- Total sales
- EBIT
- EPS
- Debt capital
- Equity capital

1.7 LIMITATIONS:

Though this research is done with utmost care, it is liable to certain limitations ,viz

- This study is made using secondary data only.
- The period of study focuses for only five financial years(2002-2007).
- This study is applicable only to ROOTS Industries Limited.

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 the history of **ROOTS INDUSTRIES INDIA LIMITED.,** highlights the origin and development, objectives and production, product summary and environmental policy, ROOTS group of companies and milestones achieved by the company.

The THIRD CHAPTER gives macro and micro aspects with respect to the Auto Parts industry.

The FOURTH CHAPTER presents the data analysis and presentation

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

CHAPTER 2

ORGANIZATION PROFILE

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ORGANIZATION PROFILE

2.1 HISTORY OF THE ORGANIZATION:

It all started with just a honk. Encouraged by the response, they kept on moving ahead. In the beginning, they did not realize that they would make such an impact. Slowly but surely, the reverberations were felt far and wide. Indian automobile market responded to their call. Soon the global market too followed suit. Roots horns, in a very short span of time, got a place of pride in millions of vehicles across the globe.

What more could they ask for? But they did ask more. They indeed made a sound beginning but they could not rest on their laurels. The journey has to go on. There are more miles to ROOTS Industries India Ltd. is a leading manufacturer of **HORNS** in India and the 11th largest Horn Manufacturing Company in the world. Headquartered in Coimbatore - India, ROOTS has been a dominant player in the manufacture of Horns and other products like **Castings** and **Industrial Cleaning Machines**.

Since its establishment in 1970, ROOTS has had a vision and commitment to produce and deliver quality products adhering to International Standards and more challenging territories to explore. Mr.K.Ramaswamy, a master degree holder in Automobile Engineering from Lincoln Technical Institute, promoted the Roots group. Its corporate office is at Coimbatore extending the philosophy of quality to all spheres of its activity, this group becomes the market leader in India for its flagship product viz. AUTOMOBILE HORNS.

The company diversified to manufacture the indigenously developed high frequency wind tone horns and later started the promotion of various pneumatic and electrical horns since 1973. Start from 3,600 horns sales in 1978-1979, the sales have touched 2 million horns recently.

2.2 MANAGEMENT

ROOTS Industries India Ltd., is managed by an excellent team of path-breakers, chief among them being the Chairman, Mr. K. Ramaswamy, a Master's Degree Holder in Automobile Engineering from Lincoln Technical Institute, USA.

VISION

The vision as quoted by their company site,

"We will stand technologically ahead of others to deliver world-class innovative products useful to our customers. We will rather lose our business than our customers' satisfaction. It is our aim that the customer should get the best value for his money".

"Every member of our company will have decent living standards. We care deeply for our families, for our environment and our society. We promise to pay back in full measure to the society by way of selfless and unstinted service".

QUALITY POLICY

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 total employee involvement, technology upgradation, cost reduction and continual improvement in

* Quality of the products and service
* Quality Management system
* Compliance to QMS requirements
* Quality will reflect in everything we do and think
* Quality in behaviour
* Quality in governance
* Quality in human relation

Roots are committed to manufacture customer-centric and technology-driven products on par with international quality standards. For example, the horns manufactured undergo a rigorous life-cycle test and are subjected to an endurance of over 200,000 cycles of performance while the industry norm requires only 100,000.

With a strong innovative base and commitment to Quality, Roots Industries India Limited has occupied a key position in both international and domestic market as suppliers to leading OEMs and after market. Similar to products, Roots has leading edge over competitors on strong quality system base. Now, RIL is the first Indian Company and first horn manufacturing company in the world to get ISO/TS 16949 certification based on effective implementation of QS 9000 and VDA 6.1 system requirement earlier. RIL has entered into technical collaboration with Robert Bosch, SA to further enhance the technical competence. Roots' vision is to become a world class company manufacturing world class product, excelling in human relation.

ENVIRONMENTAL POLICY

With due concern towards maintaining and improving the Quality of Life, Roots is committed for sustainable development by minimizing pollution and conserving resources.

This will be achieved through continual improvement in Environmental Awareness of all employees & associates, Legal Compliance and Objective towards Environmental Protection.

2.3 PRODUCTS SUMMARY

Products:

Roots Industries specializes in the manufacture of a wide range and line-up of automobile horns. Roots is a leading supplier to all the major vehicle manufacturers like Ford, Daimler Chrysler, Mitsubishi Lancer, Mahindra & Mahindra, Toyota, Tata Motors, Fiat Uno and Siena, TELCO, TVS Motor Company, Kinetic Honda, etc.

Product range:

1.Windtone , 2.Vibrosonic , 3.Cleartone , 4.Bosch Range , 5.Roots 90 , 6.Megasonic , 7.Smartone , 8.Spider , 9.FSA2 , 10.R 70 , 11.Sensors.

Roots Industries Limited places a premium on original technology and innovation. Its technical collaboration with Robert Bosch S.S of Spain in 1995 has helped it to further strengthen its R & D activities and technical competence. This collaboration along with Roots' indigenous talent has kicked off a spree of growth unmatched in the history of automobile OE manufacturers.

GLOBAL ALLIANCES FOR COMPETITIVE ADVANTAGE

Roots is a leading Original Equipment supplier to major vehicle manufacturers like Mercedes Benz, 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, one of the largest cleaning machine manufacturers 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 manufacturers of cleaning products and is gearing itself up to provide customized, total cleaning solutions.

ENGINEERING RESEARCH CENTRE

The Engineering Research Centre (ERC) is involved in the continuous improvement and enhancement of design to increase performance and reliability. The ERC functioning under three distinct heads cater to the needs of Roots Industries, Roots Multiclean and Roots Auto Products.

Though there is a three-pronged operational ethos, the ERC is integrated and meshed seamlessly with one single objective: that of design research and performance monitoring. Through extensive product engineering, the ERC cell of ROOTS achieves the following:

- Designing and developing new products with customer focus.
- Conducting required tests to ensure product reliability.
- Initiating necessary corrective and preventive action for ensuring peak performance
- Fine-tuning products with available components to satisfy customer requirements

The ERC consists of the best talent that includes engineering graduates, ITI brains and design engineers. The team works with top-notch tools like

- Proe2000i2 - for solid modelling
- AutoCAD 2000 - for Drafting
- CorelDraw V 8.0 - for Graphical Applications

Human resource department

People - the valuable asset

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

Roots as a learning organization systematically train 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 and 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 companies, through interactions 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 on an on going basis.

Training

Roots believe in systematic training for employees at all levels. As a part of the Organizational Development efforts, training programmes are being conducted in-house, for employees at all levels. In addition, staff are also sponsored for need based training programmes at leading Management Development Institutes.

Total Quality Management

Customer Focus is not merely a buzzword but it has become an important factor of every day work and has got internalized 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 participation and team work on the shop-floor, Roots Industries Limited has a very effective Quality Circle Movement in the organization. As on today Roots Industries Limited has 3 operating Quality Circles having 24 members and some of them have won awards at different conventions and competitions.

Through interaction with workmen in these sessions, a process of 2-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.

Good Morning Assembly

The management aims in operator's mental & physical fitness and it is ensured through the GMA.

The operators and shift supervisor, assemble before the I shift beginning and do occupation of fitness exercise, discuss about the Quality Safety & Production aspects of the Previous shifts and take Quality / Safety oath.

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2.4 ROOTS GROUP OF COMPANIES:

The following are the group of companies of ROOTS industries limited. They are as follows,

Roots Auto Products 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, Material Handling equipment, etc.

Roots Air Horns are exported to countries in North America, Europe, Middle East, Africa and SAARC region.

Roots Cast Pvt. Ltd., (RCPL) (formerly known as Aruna Auto Castings Private Limited) was established in 1984 to meet the captive requirements of the Roots group. With its ever probing eye on the needs of the market, the company in the late 80s expanded its operations to manufacture High Pressure Die Cast Aluminium and Zinc components to the exacting needs of various customers in Automobile and Textile Industries with a high degree of Quality and Perfection.

RCPL now has established itself as a major player in 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.

The genesis of **Roots Multiclean Ltd., (RMCL)** is due to the vision of the promoter of Roots group of company about the requirement of sophisticated cleaning equipment in the country following globalization of business and entry of Multi Nationals who have very high standard of house keeping. RMCL, situated in the suburbs of Coimbatore, is a Joint Venture with Hako Werke Gmbh & Co., Germany.

It commenced manufacture of cleaning equipment in early 90s at its modern factory located amidst natural greenery. RMCL is the sole representative of Hako Werke Gmbh & Company's entire range of cleaning equipment for India and SAARC countries. To improvise and facilitate a better service to its customers, RMCL has established Regional offices in all Metros and a huge dealer network in bigger Cities and States.

Roots Precision Products was established in 1987 to address the in-house tooling needs of the diverse industries in Roots group. Owing to continuous improvement and investment into better resources, the company has become self-sufficient. It is catering to the needs of various industries. RPP acts as a one-stop solution for tooling and precision machining.

Specialized in design and manufacture of:

. Press tools
. Injection moulds
. Die-casting dies
. Jigs and fixtures

2.5 MILESTONES ACHIEVED BY ROOTS INDUSTRIES LIMITED

- RIL was the first to manufacture Servo Brakes for Light Motor Vehicles IN 1972.
- Roots Auto Products Private Limited was established to manufacture Air Horns. Die Casting Unit commences commercial operations in 1984.
- Polycraft, a unit for Plastic Injection Moulding was established in 1988.
- Roots Industries Private Limited takes over Electric Horn business in 1990.

- RMCL enters into Techno-Financial collaboration with M/s. Hako Werke GmbH, Germany in 1992.

- Roots Industries Private Limited obtains the National Certification - ISI mark of quality in 1992.

- Roots Industries Private Limited wins American International Quality Award in 1994.

- Becomes the first horn manufacturer in Asia to obtain QS 9000 in 1999.

- Becomes the first horn manufacturer in Asia to obtain VDA 6.1 and the first in the world to win ISO / TS 16949 in 2000.

- The first to introduce digitally controlled air horns and low frequency, low decibel irritation free Jumbo Air Horns in 2000.

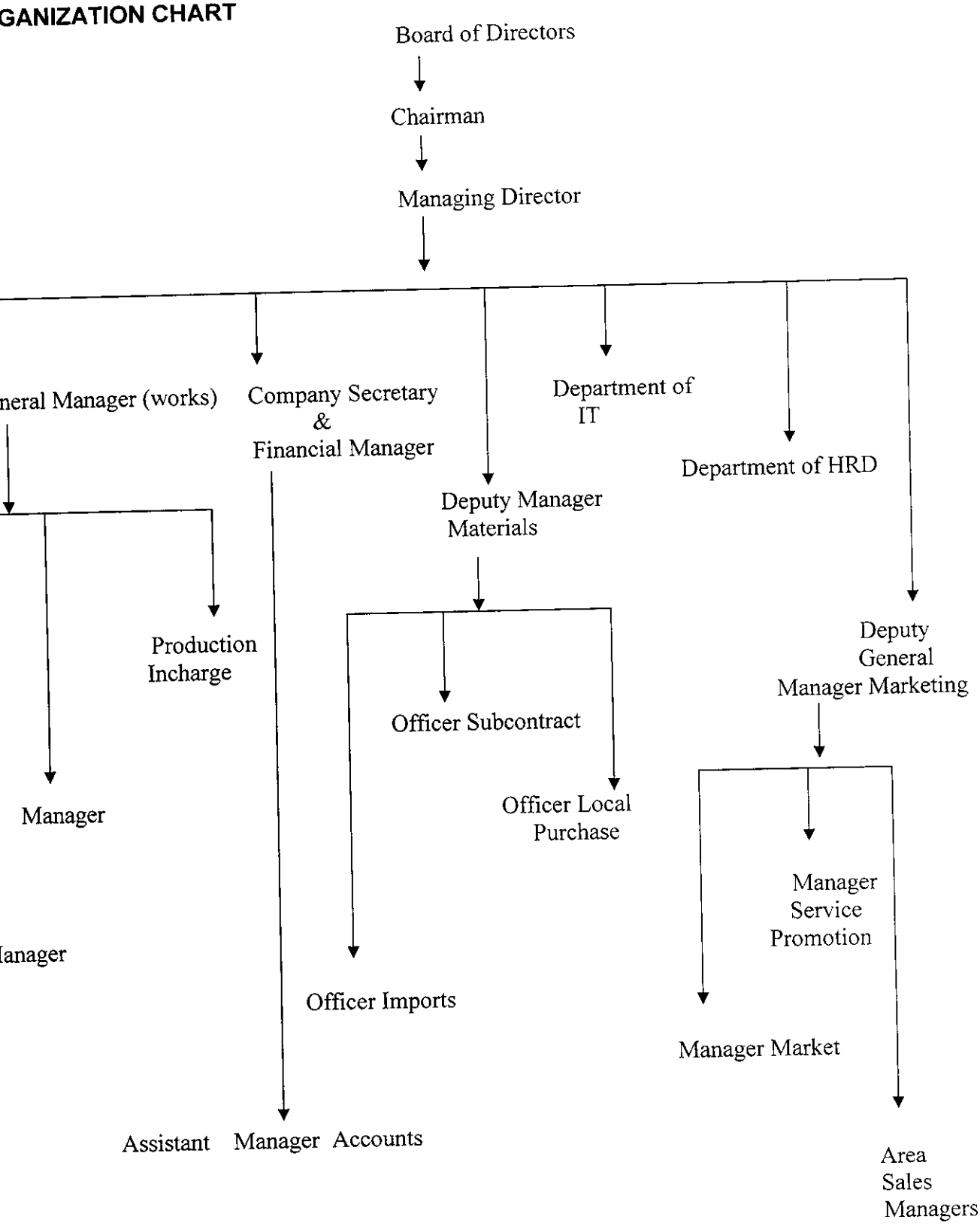
- Roots Industries Ltd., Horn Division is accredited with ISO 14001: 1996 in 2003.

- Roots Industries Ltd., upgraded its ISO / TS 16949 from 1999 version to 2002 version in 2003.

OOTS BEYOND BORDERS

Roots products have successfully made their presence heard loud and clear in th obal market. Roots horns are exported to over 15 countries worldwide. A major share of the exports goe USA, Japan, Middle East and South America. Roots is the only Indian company that meets th emanding standards of the Japanese markets. Roots cleaning equipment and die cast parts, etc. ar xported to USA, Europe, Australia, Japan, Far East, South America and several other advance ountries.

GANIZATION CHART



CHAPTER 3

MACRO MICRO ANALYSIS

CHAPTER 3

MACRO MICRO ANALYSIS

e Macro & Micro analysis of auto parts industries in economic growth, competitive strength, caree
wth, opportunities in domestic and foreign countries.

e brief discussion is given below;

acro Analysis

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

ne U.S. auto parts industry has experienced strong job growth. In 1996, the auto parts industry accounte
r 9 percent of all U.S. jobs producing durable goods, the highest level since 1979. Auto parts productio
orkers earned compensation totaling $13.4 billion-nearly 50 percent increase since 1990- and equal to 1
ercent of the total paid by all manufacturers of durable goods. Sales of U.S. auto parts to Americans ar
xpected to remain near the same level in the future, with about 1 to 2 percent growth per year, whi
reign markets are expanding at rates that are two, three, and even ten times faster. Because exports w
e essential to expanding the auto and auto parts industries, U.S. trade officials have negotiated trad
greements such as memorandum of understanding with Korea (1993), the North American Free Trad
greement(NAFTA,1994), and the U.S.-Japan Automotive Framework Agreement (1995).These and oth
greements have increased auto parts and other exports to Japan, Mexico, and Korea many times over.

n 1994, the United States successfully promoted the Uruguay Round of the General Agreement on Tari

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

cro Analysis

ia is the largest Three Wheeler Market in the world, 2nd largest two Wheeler Market in the World, 4th gest passenger Vehicle market in Asia, 4th Largest Tractor Market in the World, and 5th Larges mmercial Vehicle Market in the World. Hence demand for horns and casting like High Pressure Die Cas uminum and Zinc components is high among various customers in Automobile industry.

ture Macro Economic Drivers

- High GDP growth rate
- Increasing infrastructure development
- Cheap and easy financing schemes
- India's huge geographic spread –mass transport system
- Increasing disposable income with the service/manufacturing sectors
- Increased usage of second hand vehicle in both rural and urban areas
- Graduating from motor cycles to passenger vehicles

pportunity to source from India

dia has become an Auto Manufacturing hub like (A large domestic market, growing significance xports, and Developed components and materials base among the best in labor economics).

tanding tall

he auto component sector is on a trajectory as is evident by the fact that auto components have bee esignated as a "Thrust Sector" by the Government of India under the EXIM policy.

he Indian Department of Commerce is now set to aggressively promote export of auto componer rough a specific sectoral strategy.

he size of the global auto component industry is $1.2 trillion with most of it located in high cost countrie

al purchases of components by international vehicle manufacturers are currently estimated to be $45
n. However, the role of outsourcing is constantly increasing.

nermore, the problem of high rejection rates which plagued the domestic auto ancillary industry has
overcome. This is reflected in the number of overseas deals concluded by the domestic industry
lst stiff competition from other Asian countries.

Government has extended various fiscal incentives and policy measures which too has helped the
stry.

nds of Automobile Components

cally, outsourcing of automobile components that have relatively high engineering and design content
suppliers in low cost countries like India, is rapidly gaining momentum. It is estimated that in the next
years the auto components industry will reach $33-40billion.

ng by the current trends in the domestic automotive industry and as stated above, it is expected that the
genous demand for auto components will also reach $13-15 billion in the next 10 years and about
D20-25 billion would be exported. To meet the combined demand from domestic and international
tomers the industry will have to make significant incremental investment.

nce, the Indian auto component industry is poised to achieve a prominent position in the global market
will in all probability be a major driver of growth and employment in the domestic economy.

nsidering the recent figures, whereby domestic demand is increasing by about 15 percent over the
vious year and exports by over 25 percent, the above estimates, while undoubtedly challenging, appear
ievable.

portunity to source from India[11]

- High growing demand for auto components
- Indigenous demand :$13-15 billion
- Export Demand :$20-25 billion
- Total production :Approx $6.73 billion

SOURCE: IMD COMPETITIVENESS YEAR BOOK 2005

- Exports :Approx $1.4 billion (CAGR of 19%- last 6 years)
- In the next 10 years the auto components industry will reach $33-40 billion(Estimate)

onclude, the auto-components sector in India appears well revived up to speed on from here on the ess –track.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4.1 Calculation of Degree of Operating leverage

Year	Sales(Rs in lakhs)	EBIT(Rs in lakhs)	% change in Sales	% change in EBIT	DOL
2002	2685	301	0.291	0.289	0.993
2003	3468	388	0.272	0.273	1.003
2004	4413	494	0.435	(0.048)	(0.110)
2005	6337	470	0.114	0.495	4.342
2006	7065	703	0.192	0.165	0.859
2007	8425	819	-	-	-

$$DOL = \frac{\%\ \text{change in EBIT}}{\%\ \text{change in sales}}$$

WHERE

DOL= Degree of Operating Leverage

EBIT= Earnings before Interest and Tax

Interpretation

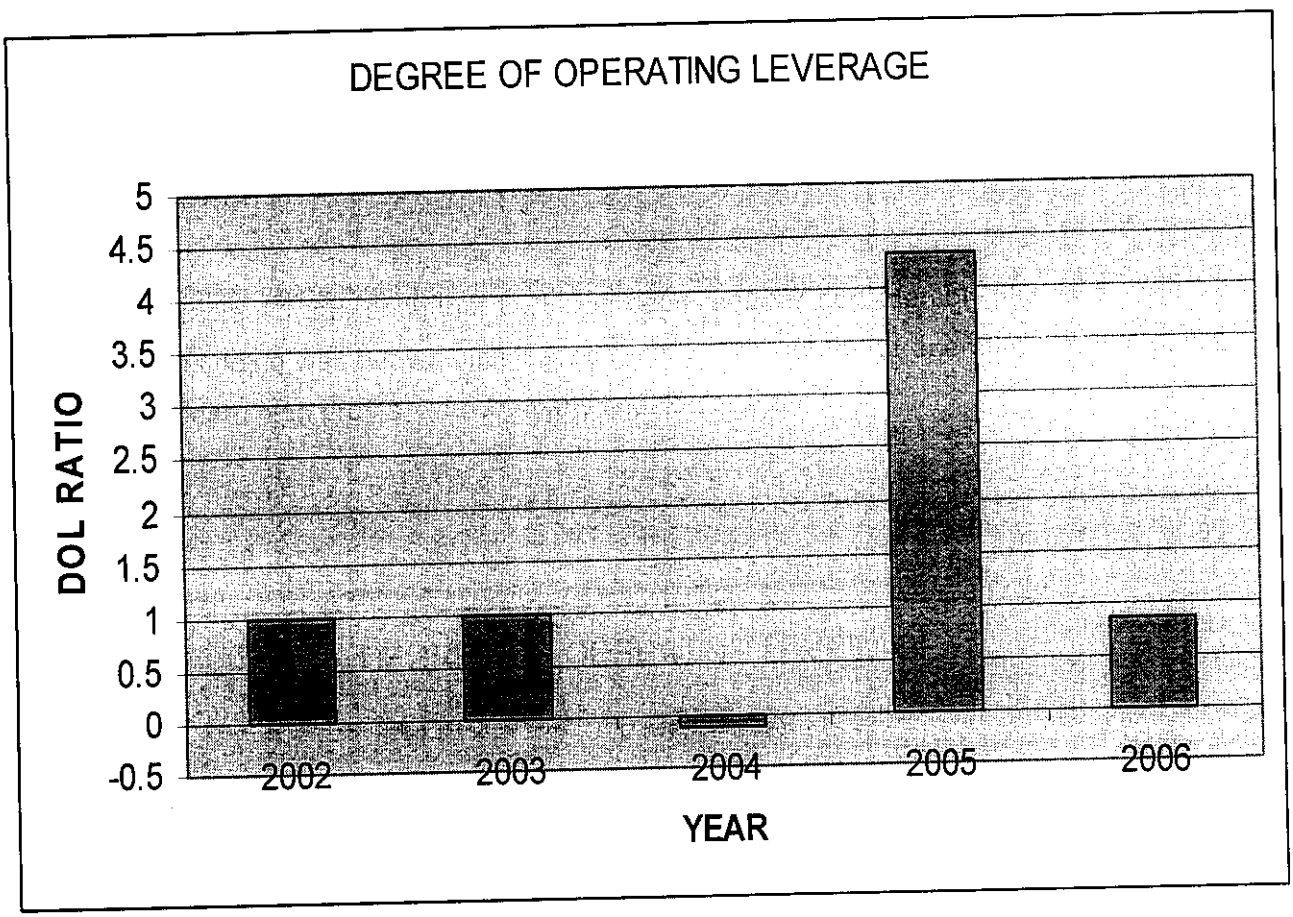
Operating leverage refers to the firm's cost structure particularly on fixed cost. During demand declination if percentages of fixed costs do not decrease then this increases the company's business risk.

Degree of Operating leverage refers to the level of business risk that a company faces. In the above table 4.1 DOL is very less for the year 2004 .Infact it is negative. Hence the level of business risk in 2004 is very less for the period of study 2002 to 2007. Also the level of business risk is very high in 2005 when compared to other years.

Inference

In the above table 4.1 inference that DOL has been reduced considerably, this is a good sign that company is doing well but was fluctuating greatly. The degree of operating profit should be low in order to earn high profits, and company should consider it.

CHART 4.1



.2 Calculation of Degree of Financial leverage

Year	EBIT(Rs in lakhs)	EPS(Rs)	% change in EBIT	% change in EPS	DFL
2002	301	3.32	0.289	1.76	6.08
2003	388	9.17	0.273	0.612	2.24
2004	494	14.79	(0.048)	(0.576)	12
2005	470	6.26	0.495	1.74	3.51
2006	703	17.16	0.165	0.136	0.825
2007	819	19.5	-	-	-

WHERE

DFL = Degree Of Financial Leverage

EPS = Earnings per share

$$DFL = \frac{\%\ \text{change n EPS}}{\%\ \text{change in EBIT}}$$

Interpretation

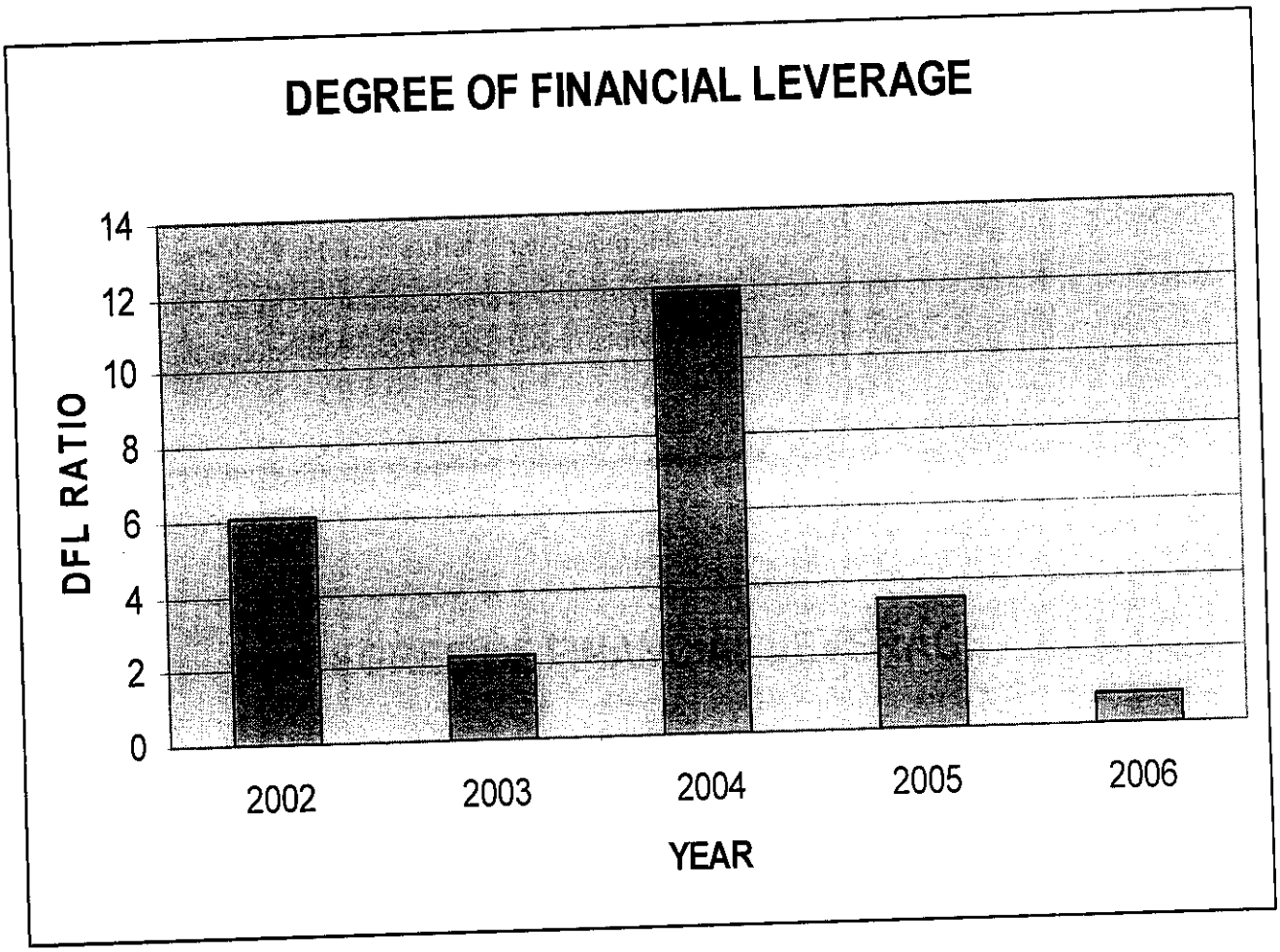
Financial leverage will mainly reflect the amount of debt used in the capital structure of the firm. Because debt carries affixed obligation of interest payments, we have the opportunity to greatly magnify our results at various levels of operation. Like operating leverage, higher levels of risks are attached with to higher degrees of financial risk. High fixed financial cost increase the financial leverage and, thus, financial risk. The financial risk refers to the firm not being able to cover its fixed financial costs.

the table 4.2 financial risk is very high for the year 2004-2005. Hence the pressure on firm to arn more profit was too high in 2004 -2005. But the financial is very low for the year 2006-007. Hence the level of financial risk is less during 2006-2007.

nference

n the above table 4.2 inference that, that during the later period of study the financial risk is very less. But it was fluctuating greatly in the earlier and later period of study. The company should reduce the debt funds in the capital structure, which will improve the profit margins of the company.

CHART 4.2



.3 Calculation of Degree of Combined leverage

Year	DOL	DFL	DCL
2002	0.993	6.08	6.037
2003	1.003	2.24	2.246
2004	(0.110)	12	(1.32)
2005	4.342	3.51	15.240
2006	0.859	0.825	0.708

DCL = DOL * DFL

WHERE

DCL = Degree Of Combined Leverage

Interpretation

Combined leverage is the product of operating leverage and financial leverage.

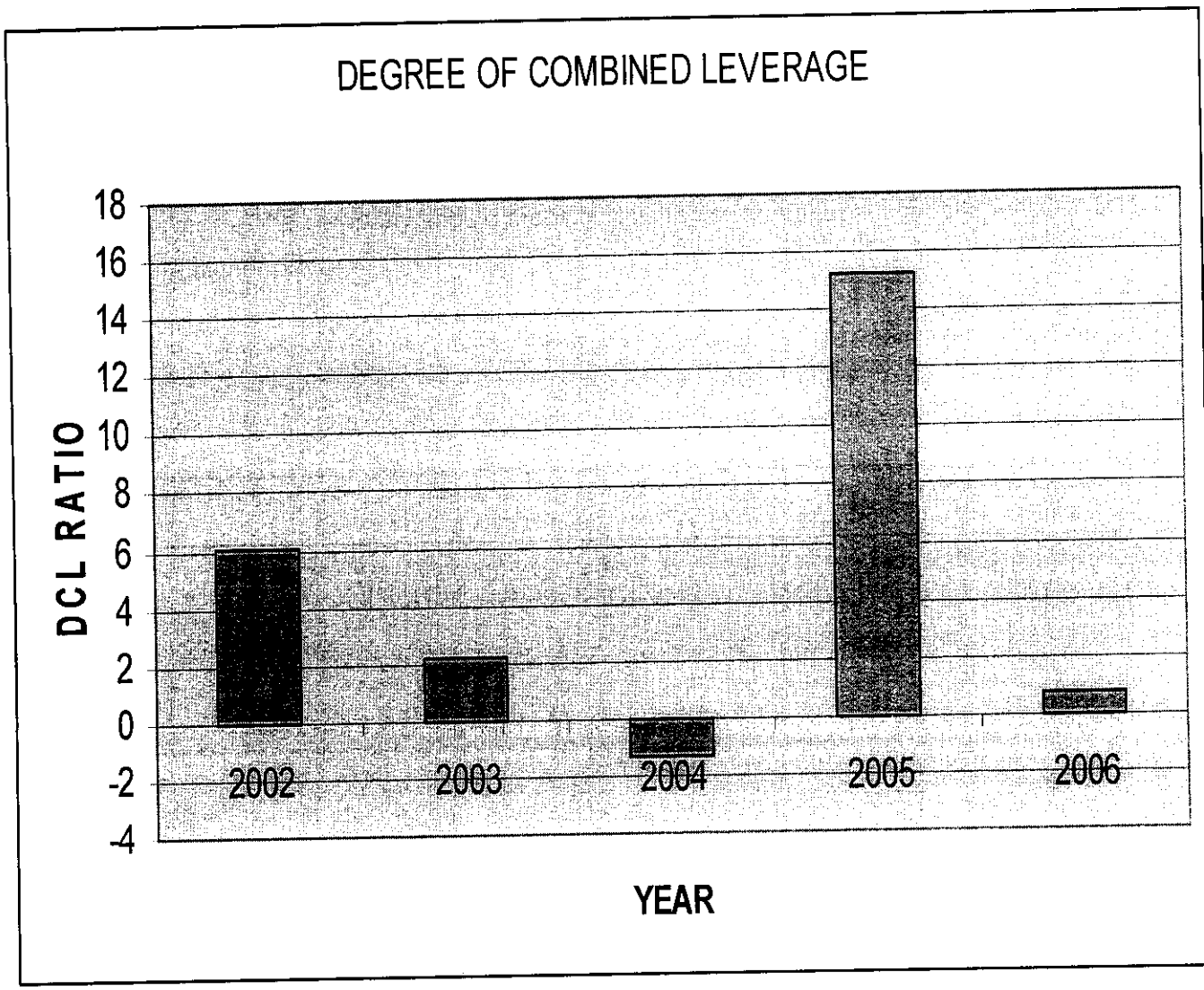
Both operating and financial leverages are closely concerned with ascertaining the ability to cover fixed charges (fixed- operating cost in case of operating leverage and fixed- financial costs in the case of financial leverage), if they are combined , the result is total leverage (or) combined leverage and the risk associated with combined leverage is known as total risk.

In the table 4.3 the total risk of the firm for the year 2005 was very high. Hence the firm must have faced a immense pressure while operating in the year 2005. Also the total risk of the firm was very low during the year 2004 . Infact it was negative, which must have reduced the operating pressure for the firm.

nference

n the above table 4.3 inference that the total risk of the company was reduced significantly in he later period of study and this was achieved due to less financial and business risk during he respective years. The company should focus on this factor and should control effectively in rder to achieve higher profits.

CHART 4.3



.4 Calculation of Debt Equity Ratio

'ear	Total Debt Capital(in Rs)	Total Equity Capital(in Rs)	D/E Ratio
2003	6,34,47,283	9,06,79,244	0.70
2004	9,89,13,144	11,15,60,772	0.89
2005	17,24,96,493	11,79,32,869	1.46
2006	14,24,89,409	14,08,23,060	1.01
2007	15,02,50,088	16,73,46,702	0.90

D/E = Total Debt Capital
Total Equity Capital

Interpretation

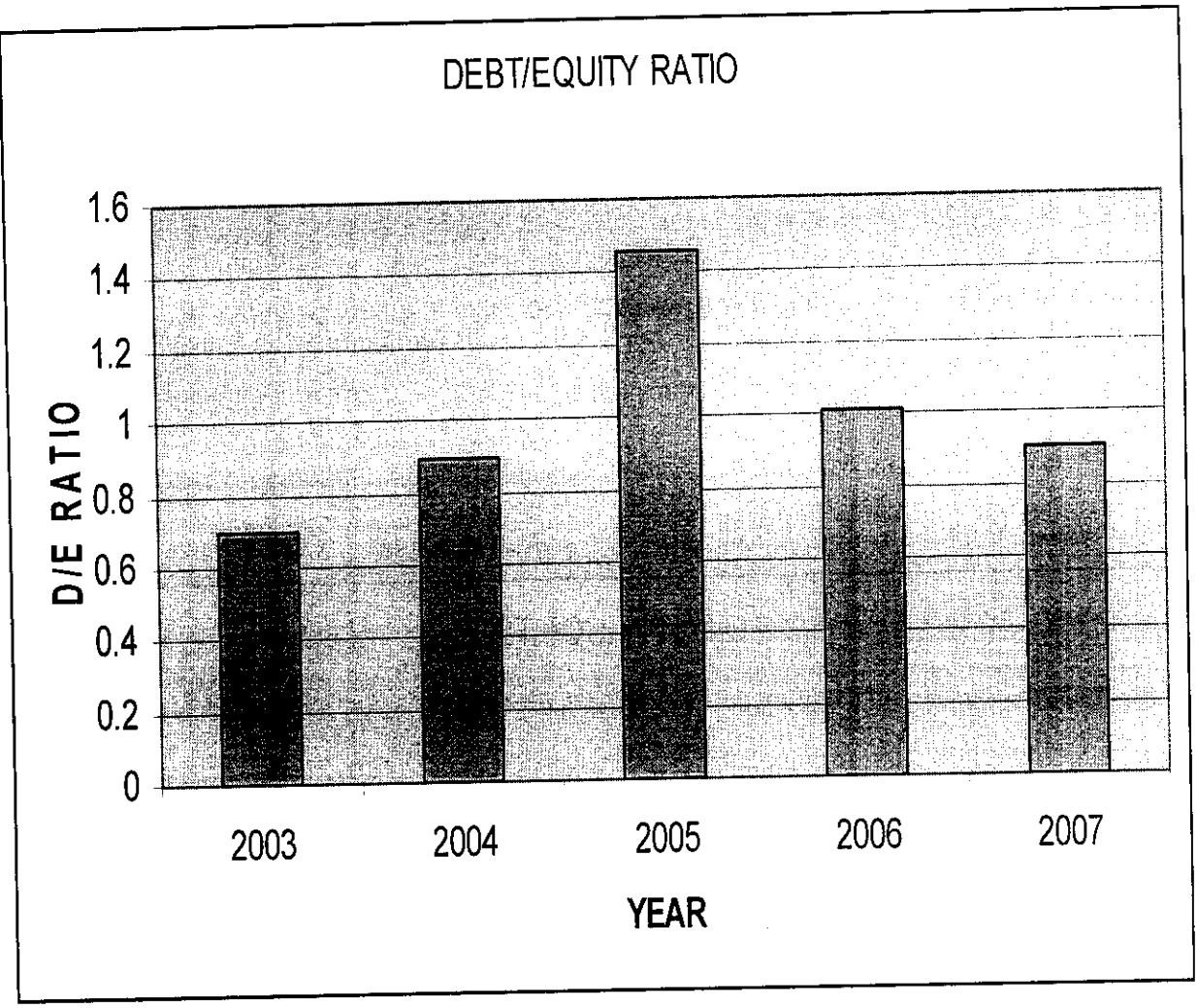
Debt Equity ratio refers to the ratio of debt and equity funds in the capital structure of the firm. Every firm's profit margins and success level will depend upon its capital structure. Hence this ratio will help us to find the proportion of debt component to equity.

In the above table 4.4 the proportion of debt in capital structure was very low during 2003. Also the proportion of debt in capital structure was greater than the equity during 2005. Hence during 2005 the financial risk was high.

Inference

In the above table 4.4 inference that, the proportion of debt funds in the capital structure was varying for every year. Also it was less during initial and later part of the study. The company should concentrate more in forming the ideal capital structure which will improve the profit level of the firm.

Chart 4.4


DEBT/EQUITY RATIO
D/E RATIO
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2003
2004
2005
2006
2007
YEAR

4.5 Calculation of EPS

Year	Net Profit Available for Equity Share Holders(Rs in lakhs)	Total No. Of Equity Shares	EPS(in Rs)
2003	147	1,60,00,000	9.17
2004	237	1,60,00,000	14.79
2005	100	1,60,00,000	6.26
2006	274	1,60,00,000	17.16
2007	312	1,60,00,000	19.5

EPS = Net Profit Available for Equity Share Holders
Total No of Equity Shares

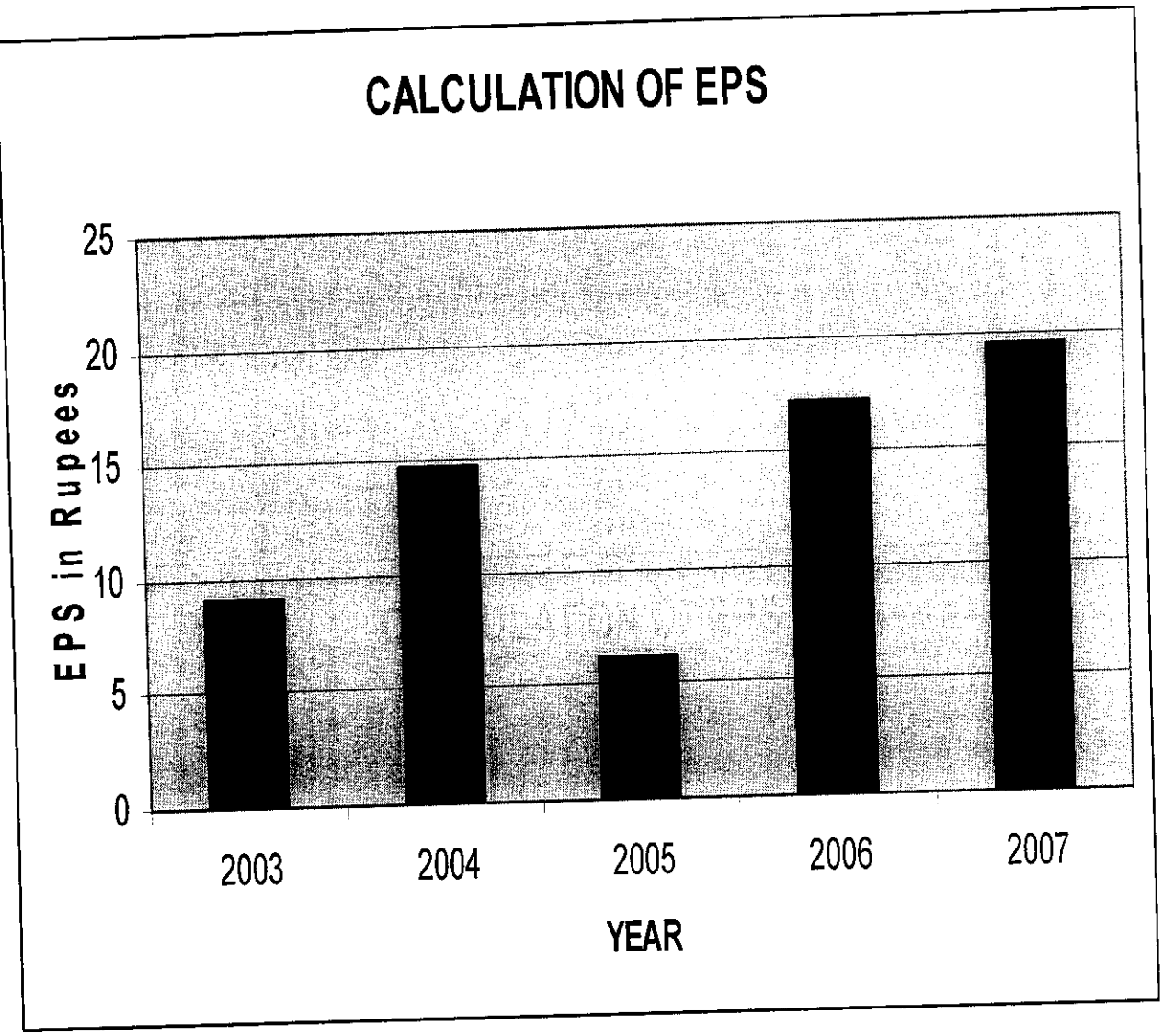
Interpretation

In the above table 4.5 due to high debt equity ratio and financial leverage, the EPS was very low in 2005. Also due to less financial and operating leverage, and favourable debt equity ratio the EPS was high during 2007.

Inference

In the above table 4.5 inference that, the EPS was less in the center part of the study. This was mainly due to unfavorable D/E ratio and the combined leverage. But during the later part of study as the capital structure was revised the EPS was high and was very much favorable for the investors. The company should realize that, the value of the firm is closely related with the EPS and should take necessary steps to improve their value among the investors.

Chart 4.5


CALCULATION OF EPS
EPS in Rupees
25
20
15
10
5
0
2003
2004
2005
2006
2007
YEAR

CHAPTER 5

FINDINGS SUGGESTIONS AND CONCLUSION

CHAPTER 5

FINDINGS SUGGESTIONS AND CONCLUSION

5.1 FINDINGS:

The objectives of the study are (1) To examine the existing operating, financial and combined leverage of ROOTS Industries Limited. (2) To analyze the EPS and Debt–Equity Ratio for the period of study. Based on these objectives operating, financial and combined leverage is calculated and following has been found out:

1) Operating leverage was very high during 2005 and low in all other years'. Hence except 2005 the business risk of the company was very less. This was favorable for the organization.
2) Financial leverage was very high during 2004n and it was low in all other years. Hence except 2004 the financial risk of the company was less. This was favorable for the organization.
3) Combined leverage was also very high during 2005 and it was low for all other years. Particularly it was negative during 2004. Hence except 2004 the total risk of the company was less. This was favorable for the organization.
4) The debt/equity ratio was very high during 2005 and it was moderate for the other years. Therefore except 2005 the fixed cost of debt was less. This was favorable for the organization
5) The EPS of company was very low during 2005. This was due to high combined risk and more amount of debt funds in the capital structure. But except 2005 favorable debt equity ratio and low risk the EPS received by the investors was quite large particularly in 2007.

From the above findings it is clear that the amount of debt funds contributed towards the capital structure determines the operating, financial and combined risk of the company. It has also affected the EPS of the investors. This should be treated seriously in order to reduce the risk of the business which will also reduce the earning pressure of the company.

5.2 FROM THE FINDINGS THE FOLLOWING SUGGESTIONS ARE MADE:

1) The amount of debt funds should be reduced in the capital structure,

2) Ideal capital structure should be formulated which in turn must reduce operating pressure of the organization and the investors of the company should get maximum return from the investment.

Every investor evaluates an organization based on the returns he gets out of his investment in a particular company over a period of time. Hence the financing decisions taken in formulating the capital structure of the company should fulfill the needs and wants of the investors.

5.3 CONCLUSION:

This study deals with the various aspects of leverage analysis with special reference to ROOTS Industries Limited. From the above study it is found that the company have undergone a down trend in 2004&2005 due to the improper capital structure. But later it restructured its capital and got back its earlier momentum. As every year passes after 2005 the earnings earned by the investors and the operating business pressure was favorable to the organization. And now risk faced by the company during its operation is reduced considerably due to the change that was made my the finance department particularly in deciding the efficient capital structure.

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