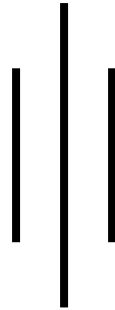


**FINANCIAL EVALUATION  
OF  
JANAK EDUCATIONAL MATERIAL CENTER**



**A Thesis**

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**Submitted to:**

**Office of the Dean**

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**Tribhuvan University**

**Kathmandu, Nepal**

***In the Partial Fulfillment of the Requirement for  
Master's Degree of Business Studies (MBS)***

Putalisadak, Kathmandu

April, 2011

# VIVA- VOCE SHEET

We have conducted the viva-voce examination of the thesis

**Submitted by:**  
**Pradeep Shrestha**

**Entitled**  
**“Financial Evaluation of Janak Educational Material Center”**

and found the thesis to be the original work of the student written in accordance with the prescribed format. We recommend the Thesis to be accepted as partial fulfillment of the requirement for Master’s Degree of Business Studies (MBS).

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# RECOMMENDATION

This is to certify that the thesis

**Submitted by:**  
**Pradeep Shrestha**

**Entitled**  
**“Financial Evaluation of Janak Educational Material Center”**

has been prepared as approved by this department in the prescribed format of Faculty of Management. This thesis is forwarded for examination.

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# DECLARATION

I hereby, declare that the work reported in this thesis entitled “**Financial Evaluation of Janak Educational Material Center**” submitted to Research Department of Shanker Dev Campus, Putalisadak, T.U., is my original work done in the form of partial fulfillment of the requirements for the Masters of Business Studies (MBS) under the supervision of Lecturer **Mrs. Meera Gautam and Lecturer Mrs. Rita Maskey** of Nepal Commerce Campus, Minbhaban Kathmandu.

**Pradeep Shrestha**

**Date:.....**

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I have tried to cover all the possible matters that I felt, important to sum up the **“Financial Evaluation of Janak Educational Material Center”**. I am hopeful that this task will be helpful to the students of business studies & to those who want to make further researchers under this topic.

Pradeep Shrestha  
Shanker Dev Campus

## TABLE OF CONTENTS

<b>CHAPTER ONE: INTRODUCTION</b>	<b>1-15</b>
1.1 General Background	1
1.2 Public Enterprise in Nepal	2
1.3 Janak Education Material Center Ltd. (JEMC): A Profile	3
1.4 Organizational Structure and Management System of JEMC	4
1.4.1 Printing Process of JEMC	8
1.5 Statement of the Problem	9
1.6 Objectives of the Study	11
1.7 Significance of the Study	11
1.8 Limitations of the Study	13
1.9 Organization of the Study	14
<b>CHAPTER TWO: REVIEW OF LITERATURE</b>	<b>16-47</b>
2.1 Introduction	16
2.2 Conceptual Frame Work	16
2.2.1 Working Capital	16
2.2.1.1 Concepts of Working Capital	17
2.2.1.2 Determinants of Working Capital	19
2.2.1.3 Working Capital Policies	21
2.2.1.4 Working Capital Cycle	22
2.2.2 Funds Flow Statement	24
2.2.2.1 Importance of Funds Flow	25
<b>2.2.2.2 Analysis of funds flow</b>	<b>26</b>
2.2.3 Important and Advantage of Costing	27
2.2.3.1 Methods of Costing	28
2.2.3.2 Classification / Elements of Costing	31
2.2.4 Pricing	33
2.2.4.1 Objective of Pricing Policy	33
2.2.4.2 Pricing Method	34
2.2.5 Production/Operations System	36
2.2.5.1 Types of Production System	37
2.3 Review of Related Books	38

2.3.1 Working Capital Management	38
2.3.2 Funds Flow Statement	39
2.3.3 Ratio Analysis	40
2.3.4 Costing	41
2.3.5 Pricing	41
2.4 Review of Related Articles	42
2.5 Review of Related Thesis	46

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Chapter Three: Research Methodology 48-64

### **3.1 Introduction**

**48**

3.2 Research Design	48
3.3 Population and Sample	49

### **3.4 Sources and Nature of Data**

**49**

### **3.5 Data Collection Techniques**

**49**

3.6 Method of Presentation and Analysis	50
3.7 Tool of analysis	50

#### **3.7.1 Financial Tools**

**50**

3.7.1.1 Ratio Analysis	51
3.7.1.2 Working Capital Management	58
3.7.1.3 Funds Flow Analysis	60
3.7.1.4 Costing	60
3.7.1.5 Pricing	61
3.7.1.6 Break Even Analysis	61

#### **3.7.2 Statistical Tool**

**63**

## **3.7.2.1 Average (Mean)**

**63**

3.7.2.2 Correlation Analysis 63

3.7.2.3 Graph 64

### **CHAPTER FOUR: ANALYSIS AND PRESENTATION OF DATA 65-100**

4.1 Introduction 65

4.2 Ratio Analysis 66

4.2 Liquidity Ratios 66

#### **4.2.1 Current Ratio (CR)**

**66**

#### **4.2.2 Quick Ratio**

**68**

4.2.3 Inventory to Working Capital Ratio 71

4.3 Turnover Ratio 72

4.3.1 Inventory Turnover Ratio 73

4.3.2 Fixed Assets Turnover Ratio (FATOR) 75

4.3.3 Total Assets Turnover Ratio (TOTOR) 78

**4.3.4 Average Collection Period (ACP) and Debtor Turnover Ratio (DTR) 79**

4.4 Profitability Ratio 82

**4.4.1 Net Profit to Net Worth (Return on Investment) 83**

4.4.2 Net Profit to Sales 85

4.5 Leverage Ratio 87

**4.5.1 Debt-equity Ratio (Fixed assets to Net Worth) 87**

**4.5.2 Total Debt Ratio (Current Liabilities to Net Worth) 90**

4.6 Funds Flow Statement 91

4.7 Cost Analysis 93

4.8 Pricing of Textbook in JEMC 95

4.9 Break Even Analysis 95

4.10 Correlation Analysis 96

4.10.1 Correlation between Total Inventories to Working Capital	97
4.10.2 Correlation between Total Receivables to Total Sales	97
4.10.3 Correlation between Net Profits to Total Sales	98
4.10.4 Correlation between Current Liabilities to Net Worth	99
4.10.5 Correlation between Net Profits to Net Worth	99
<u>Chapter Five: Summary, Conclusions and Recommendations</u>	<u>101-108</u>
5.1 Introduction	101
5.2 Summary	101
5.3 Conclusions	103
5.4 Recommendations	106

## LIST OF TABLES

Table: 4.1 Current Ratio of JEMC	67
Table: 4.2 Quick Ratio of JEMC	69
Table: 4.3 Inventory to Working Capital Ratio	71
Table: 4.4 Inventories Turnover Ratio	74
Table: 4.5 Fixed Assts Turnover Ratio	76
Table: 4.6 Total Assets Turnover Ratio	77
Table: 4.7 Average Collection Period and Debtor's Turnover Ratio	80
Table: 4.8 Net Profit to Net Worth Ratio	84
Table: 4.9 Net Profit to Sales Ratio	86
Table: 4.10 Fixed Assets to Net Worth Ratio	88
Table: 4.11 Current liabilities to Net Worth Ratio	90
Table: 4.12 Break Even Analysis	95

## LIST OF FIGURES

Chart: 1.1 Organizational Structure of JEMC	5
Figure: 2.1 Working Capital Cycle	23
Figure: 2.2 Funds Flow Analysis	24
<b>FIGURE: 2.3 ELEMENT OF COST</b>	<b>31</b>
Figure: 3.1 Graphical Representation of Break Even Analysis	62
Figure: 4.1 Current Assets and Current Liabilities	68
Figure: 4.2 Quick Assets and Current Liabilities	70
Figure: 4.3 Inventories and Working Capital	72
Figure: 4.4 Total Inventories and Sales	75
Figure: 4.5 Fixed Assts and Sales	77
Figure: 4.6 Total Assets and Sales	79
Figure: 4.7 Collection Period in days	82
Figure: 4.8 Net Profits and Net Worth	85
Figure: 4.9 Net Profit and Sales	87
Figure: 4.10 Fixed Assets and Net Worth	89
Figure: 4.11 Current liabilities and Net Worth	91

# ABBREVIATIONS

A.D.	Anno Dominy
B.S.	Bikram Sambat
BEA	Break Even Analysis
CDC	Curriculum Development Center
CRC	Camera Ready Copy
Co.	Company
e.g.	Exempli Gretia
EBIT	Earning Before Interest and Tax
Etc.	Etcetera
i.e.	That is
JEMC	Janak Education Material Center
Ltd.	Limited
NBPS	Nepal Bhasha Prakashan Samiti
P.E.S.	Public Enterprises
R&D	Research And Development
TU	Tribhuvan University

# CHAPTER ONE

## Introduction

### 1.1 General Background

**Nepal is situated in the lap of Himalaya. It is located in between the latitude 26° 22' North to 30° 27' South and Longitude 80° 4' East to 88° 12' West and Elevation range from 90 to 8848 meters. The average length being 885 km east to west and average breath is about 193km north to south. The country is bordering between the most populous countries of the world. India in the south, west and east and China in the north. Nepal is land locked country and home place of natural beauty with trace of artefacts.**

**Development is growth or continuous process, which don't have last destiny. Human wants are unlimited, they never satisfied with what they have, they always tries for new and change. Unsatisfied nature of human being gives continuity for the development. There are mainly two aspects of development, both the aspects are two wheel of the cart, one cannot move in the absence of other. A country will be in progress and prosperity only if it is sound in economy.**

**Business is basically an economic activity. Its aim is to satisfy the unlimited wants of men living in society, which involves all the activities of production, distribution and exchange**

**performed to produce goods and services with an equitable adjustment of profit and public welfare. Business is a combination of Industry and commerce. Commerce is concerned with buying, selling and distribution of goods and services, which are produced by industry. It signifies a process of exchange, which is the foundation of modern economic life. Industry refers the conversion of raw material into finished goods and created form utility.**

## **1.2 Public Enterprise in Nepal**

Public Enterprise plays significant role in almost every country of the world, yet there have so far been no standard definition of its own. Different agencies of government suit their own respective situation has defined the term “Public Enterprise (PE)” in their own way.

UN had defined PE as “those organization namely governmental enterprises and public corporations, which are entirely or mainly owned and/or controlled by the public authorities consisting of establishment which by virtue of their kind of activities, technology and mode of operation are classified as industries”

According to Laxmi Narayan “PEs is autonomous bodies which are owned and managed by the government and which provide goods and services for a price. The ownership with the government should be 51% or more to make an entity PE”.

Public enterprise plays a vital role in most developing countries. The role of PEs differs from country to country basically due to political philosophy of

existing governments. Public enterprise plays a major role in achieving the twin objectives of social and economical development imagined in the national policy. PEs in Nepal constitutes a vital instrument of the socio-economic development of the Country. It enjoys a strategic and crucial position in our mixed economy. They are supposed to help in reducing regional imbalance, generating more revenue and fulfilling the people requirement. It can be concluded that PEs are established in many sectors for the overall development of the country with different goals and objectives.

Public Enterprises are the state owned entities and are finally autonomous and legally distinct entities. They are owned and controlled by government. The ownership with the government should be 51% and or more to make entity public enterprises. Public Enterprises are usually autonomously organised by the government providing the initial capital. They are government creations with certain missions and objectives.

Nepal started to plan economic development in 1956 with the launching of 1<sup>st</sup> five-year plan. Since then the numbers of PEs has increased substantially in the various field of national economy. PEs of Nepal can be categorised as

- 1) Statutory Corporation
- 2) Government Companies
- 3) Department Undertakings

There were 63 PEs before the privatization program of Nepal Government and now there are 43 PEs. Among 43 existing PEs, some PEs regarding service sector are Cultural Corporation, Gorkhaptra Sansthan, Janak Education Material Centre Ltd., and Nepal Television, Rural Housing Co. Ltd. etc

### **1.3 Janak Education Material Centre Ltd. (JEMC): A Profile**

Education is the backbone of national development. Although the plantation of public education was done in 1990 B.S, The history of textbook publication in Nepal is not very long. In 1960 B.S, Gorkha Bhasa Prakashan samiti was established for educational & literature development which was changed into Nepali Bhasa Prakashan Samiti (NBPS) in 1996 B.S. Nepali Bhasa Prakashan Samiti (NBPS) kept in assisting the school in meeting their textbooks needs. It was the initial phase of institutional development in the field of textbook preparation. After the successful democratic revolution in 2007 B.S, Government realise the need of education for the sustainability of democracy and give priority for the establishment of schools. The skeletal format of what JEMC is today was established with the motive of publication of effective teacher's training materials. The press was operated as Bureau of Publication under college of education since 2013 B.S. with integration of Bureau of Publication with Educational Materials Centre (Est. 2018 B.S) paying tribute to the historic national personality, King Janak of Mithila, the centre was given the name Janak Education Material Centre and was inaugurated by the Late King Mahendra later on 2028 B.S. With inclusion of New Education Policy, the centre was given the responsibility of publication and distribution of all school level books and educational materials. In 2035 B.S., the centre was registered as limited under Company Act 2021 B.S. and till date it is distributing the school level books throughout the country.

JEMC is serving the students, teachers, and guardians and in turn the whole nation. It was established as a small printing press, now owns number of modern printing machines and is capable of publishing more than 225, 00,000 books per year. Since the number of students depending on JEMC for textbooks is increasing every year. The centre will have to increase its publication rate every year. The centre is desperate to fulfill the objectives of "Education for all" by means of efficient distribution of textbooks and educational materials throughout the country.

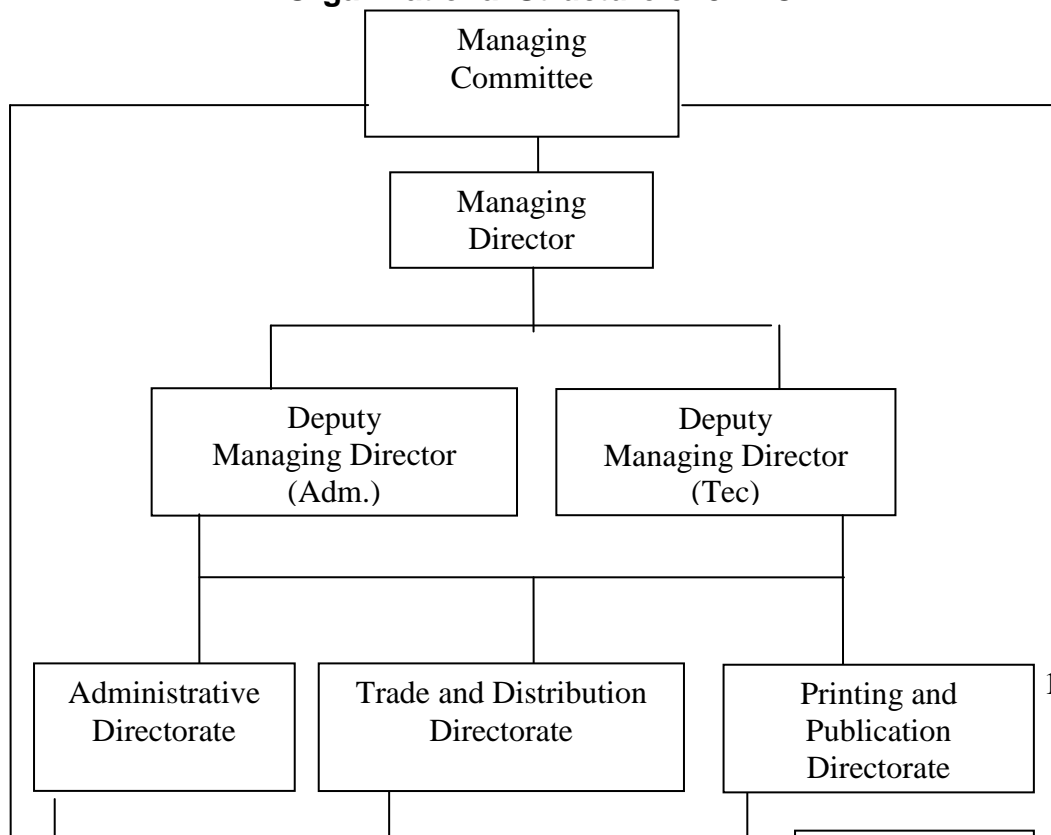
#### **1.4.1 Organizational Structure and Management System of JEMC**

**The organizational structure and management system of JEMC is under the provision of company Act 2021. JMEC is organized on functional lines. The managing committee was formed of representatives of various ministries and organizations. The committee is responsible for policy formulation of the Centre. Managing director heads the organization, he is assisted by two deputy managing directors, one is related with administration and another from technical field. Deputy managing director of administration is directly related to the Department of internal Auditor. Currently JEMC have three**

**directorates namely Administration, Trade and Distribution and Printing and Publication. Such three directorates are again sub divided into nine divisions at central level and six regional offices in offices in five development regions (e.g. Janakpur, Biratnagar, Bharatpur, Pokhara, NepalJung, Dhangadi). The organizational structure of JEMC is depicted in the Chart:**

Chart: 1.1

Organizational Structure of JEMC



The functions and authorities of the departments of each of the directorates are presented below.

A) **Administrative Directorate:**

1) Administration Department:

**This department is responsible for the human resource management. So, the main functions of this department are recruitment, placement/promotion, Personal records, training & development and Quality improvement etc.**

2) Department of General Administration:

**The main task of this department is to provide logistic support to other department of their normal functioning. The main functions of this department are procurement, security and fire extinguishing, property management,**

## **general facilitation, energy and transport.**

3) Planning Department:

**This department is responsible for corporate planning. Besides this, it also looks into the standard of quality products especially printed textbooks and artifice them for distribution. The main functions of the department is to prepare the short and long term plan, to do the quality control activities, to manage library and documents, to take care of sewerage, to manage garden, to repair and maintain buildings.**

**B) Trade & distribution directorate:**

4) Finance Control Department:

This department consist namely budgeting, revenue, stores and cost accounting sections. This department is entrusted with the task to maintain adequate financial records, to establish and maintain appropriate policies and procedures for costing, cost control, budgets and budgetary control activities.

This department is also responsible for maintaining up and maintaining effective control on capital expenditure.

5) Marketing Department:

This division performs four types of functions namely: warehousing, sales, distribution and demand forecasting, market research. Under this division, it has five regional offices in five development regions. They are responsible for storing the books and handover to the Sajha Prakashan, a sole distributor.

6) Education material preparation department:

**This department is responsible to produce the other education materials like copy, ink, register, notes book etc. It prepares the education materials as per the market demand, and opportunities.**

C) Printing and Publication Directorate:

7) Technical Service and maintenance Department:

The main function of this department is to undertake repair and maintenance of machinery and equipment as well as to regulate the electricity supply in the centre.

8) Textbook publication:

This is one of the core departments of JEMC. The main function of this department is to prepare photographs for the books, to print the manuscript in

its real size, to fold, stitch and gather printing copy for the binding. Besides these functions it also performs planning and scheduling of publication.

9) External materials printing department:

This department is responsible to print the external material except textbooks and other educational material. The department prints other materials and publications as per the need of the government, other institutions and the JEMC itself.

## **1.4.2 Printing Process of JEMC**

The production system can be expressed as the mechanism of converting of raw material into desired finished products through the mutual interaction of different components in any productive organization. The component of the production system can be made break down input, process and output.

Inputs are the basic needs of resources of system. They are converted into desired output.

The task of getting the textbook written is the responsibility of Curriculum Development Centre, a wing of Ministry of Education and Sports. This centre receives the book either in the form of camera-ready copy (CRC) or manuscript. If received typed form, Computer Section of this centre processes the text. Illustrations, layout, design and paste-up are done by the staff of Product design and Preparation Department. Once the CRC is ready, it is then sent to Publication Department for printing. First the CRC is shot by process camera. The film is then stripped and arranged according to the page order. The arranged pages which is also called "Flat" is placed above the printing plate and then exposed to strong light which transfers the image of the film to the plate. The plate after being treated chemically is mounted in the printing machine and then printing starts. These printed sheets are folded, collated, stitched, glued to the cover and finally trimmed on three sides. With all these processes completed the book appears in its final shape. Paper is the principal raw material for a printing industry followed by ink, chemicals as auxiliary ones. Paper constitutes sixty-seventy percent of the total cost of production of a book. Paper had to be imported from outside in the past. After the establishment of two paper factories in the country, locally manufactured paper is also in use. Remaining raw materials are imported. The annual consumption of paper and inks is 3000 and 10 metric tons respectively for the production of 15.5 million books. Every year the inputs are increasing significantly as the demand of book rises.

## **1.5 Statement of the Problem**

Organization exists for specific purpose, mission and goals. It can progress and fulfil its objective, only if the overall aspect of management is properly planned and executed. For the execution of the planned management, there should be well-trained executives and personnel's (manpower). Similarly, production and distribution of the organization can also be treated as good asset rather than liability. This is a most neglected aspect of the Nepalese PEs. Like personnel management, financial management has also a vital role in the growth of an organization. A success or failure of an organization is measured in financial terms. Managers of all levels must be conscious of financial implications of their actions and all decisions must be evaluated in terms of the cost involved. JEMC is also one of the largest and well-known manufacturing public enterprises in Nepal. It is distributing its textbooks all over the country at fair price, in proper time and in proper place. Its publication is very nominal which just meets the production cost and the price of the textbooks is same as the sale price in the sales counter at JEMC, SanoThimi. JEMC gets the highest potential to further growth and expansion as it is enjoying monopoly power in publishing school level text books. Though, it has monopoly power its product price is controlled by ministry of education and it is unable to be price-leader.

Nepalese public enterprises are unable to implement the efficient tools of financial management. Most PE's is running at losses. The management of the JEMC don't have proper costing and pricing procedures. Once it fixed its price it will be same for three years. It is not applying the proper method of cost volume profit analysis. With the increasing emphasis on the market economy, the existing pricing system is gradually become out of date.

Since there is no cost centres, it cannot be said as having proper cost system. Without proper costing system with financial accounts, actual cost is not compared with the standard cost. In the absence of proper costing and pricing system productions and sales budget cannot be calculated properly, without proper cost sales records (i.e. amount to be invested in raw materials, stocks, inventories and receivables) will be very difficult to estimate.

Working capital is very much essential to run the organization smoothly. Working capital requirement varies from enterprise to enterprise depending upon the nature of business. For JEMC, amount of working capital for stocks is very much high because of seasonal business nature. The textbook produced in JEMC is sold only in three month in a year and has to hold finished goods stock and raw material for nine months. So the major portion of company's current assets is invested in stocks. Due to the above fact working capital has to be properly arranged and if not it will be at stake (at risk). Therefore working capital management needs a serious consideration in the part of general management.

Nepalese manufacturing PEs is seriously suffering from production management. JEMC is also not free from this problem. It is not fulfilling its production target. Most of its existing machines are outdated and are not maintenance in time due to the lack of spare parts. It is also facing a problem of trained technician for qualitative product. During the process of production raw material may be the major content of the finished product. It differ form the nature of the manufacturing company. Regarding JEMC, paper is the main raw material followed by ink and chemicals. Paper constitutes sixty-seven percent of total cost of production of the book. Thus, qualitative paper should be purchased to minimise the waste.

In this context the study of JEMC primarily focuses on financial aspect and confines the problems of financial operation and management. The present study will make a modest attempt to have an insight over the problem of financial management of JEMC as well as to recommend some concrete

suggestions for the improvement in over all financial performance through financial analysis.

The following particular research questions are tried to answer in this study.

1. Is the cost of production of JEMC is appropriate for its existence?
2. How reasonable the sales price of text book of JEMC is, in comparison to other publishers?
3. How does the JEMC manage the working capital?
4. Is JEMC collecting the credit in time?
5. Does its production fulfil the market demand of textbook?
6. How does the management control the quality of product?
7. How much JEMC is contributing to the nation?
8. Does the performance of JEMC satisfactory?

## **1.6 Objectives of the Study**

The main objective of this thesis is to make an in-depth study of financial evaluation of JEMC. The specific objectives of this study are as follows:

### **1) To Study the growth of the company (i.e. production, sales and financial position) for the fiscal year 2056/2057 – 2065/2066.**

- 2) To evaluate the financial analysis (working capital management).
- 3) To examine costing procedure and pricing policy.
- 4) To examine production procedure and capacity utilisation of the existing machines.

- 5) To give suggestions, ideas and recommendations based on the analysis of the data.

### 1.7 Significance of the Study

**Analysis of financial position and statement is a crucial part of financial decision making. The profitability and stability of the business depends upon its financial management. So it is essential to major the financial position of the enterprise periodically in order to ensure smooth functioning of an enterprise. JEMC is sole printing and publishing of school level textbook. Thus, this study focuses on the evaluation of the financial position of JEMC**

In Nepal, the printing monopoly power of school level text books is entrusted to JEMC was registered under Co. Act 2021 as an non profit making

organization as a Ltd. Co. for printing and distribution of school level text books in Nepal. It has a great burden and responsibility of educational materials. With a view to enhance the efficiency of distribution, five regional offices were opened at five development regions of the country. For these regional offices, books are handed over to Sajha Publication, a sole distributor of this centre.

Since it is supplying school level textbooks, it should be financially sound and its operation too, if not, it will interrupt in the education system all over the nation. Thus, its financial position has a significant impact on its production and distribution. Thus being a service sector concerned, it should be service oriented but it should earn certain profit for the sake of repairing and maintenance and to meet the production cost as well.

Since JEMC is a non-profit oriented organization the books published and the educational materials produced are so reasonable that maximum number of students is benefit. Thus, it is clear that the devotion and commitment of JEMC is adding brick in the educational development of the country.

This study will be significant to provide information and to draw the attention of JEMC management regarding what can be done for further strengthening the financial position of JEMC. This study is important to identify an actual trend of financial position of JEMC and it tries to provide some appropriate measure to solve financial problems of JEMC.

## **1.8 Limitations of the Study**

**For the lack of sufficient time, enough economic research and the rigorous**

**time schedule, the researcher is compelled to limit the study in the following ways.**

- 1) The study is based on the secondary data.
- 2) The study is based on the financial statements (Balance sheet , Profit & loss) of JEMC.
- 3) The study is based on the annual publications of JEMC and Curriculum Development Centre.
- 4) The study covers a period of ten fiscal years terms from 2056 to 2066
- 5) The study is focused mainly on financial analysis (working capital Management, costing procedure, pricing policy, production procedure, capacity utilization and collection of credit etc) of textbook produce in JEMC.

### **1.9 Organization of the Study**

**The aim of the dissertation is to explain the financial position of JEMC. The study has been divided into five chapters. Each chapter will devote to some aspects of the study. The major chapter of the study are as follows:**

## Chapter- 1

The first chapter entitled 'Introduction' introduces the subject, presents the research problems with the objectives of the study, along with the significance of the study and limitations. Organizational structure and production system of JEMC is also present in this chapter.

## Chapter- 2

**The second chapter deals with review of the literature. It reviews available literature regarding finding and recommendation of previous research work made in respect of JEMC**

## Chapter- 3

The chapter third explains research methodology used in this study. It will include the research design, population and sampling procedures, sources of data and their collection procedure, tools for analysis and methods of analysis.

## Chapter- 4

The fourth chapter focuses on presentation and analysis of data. This chapter will concern with the application of defined research method on the collected data and information. The generated results after the application of research method on data will be analyzed and interpreted in this chapter.

## **Chapter- 5**

This fifth chapter presents summary conclusion and recommendations of the study. This fifth chapter presents summary, conclusion and recommendations of the study based on the facts found from observations and analysis of data's presented in the fourth chapter.

Finally, the bibliography, with reference to materials used in the study is added to the end of this research study.

## **Chapter TWO**

### **REVIEW OF LITERATURE**

#### **2.1 Introduction**

Review of literature is to find out what works have been done in the area of the research problem and what have to be done in the field of the research study being undertaken. In order to get a better understanding of the subject, it is essential and helpful to survey the literature and studies, relevant and related to it. The related studies provide the researcher in making the problem more realistic, precise, researchable and meaningful. Mostly, review of literature begins with a search for a suitable topic & continues through the duration of the research work.

This chapter attempts to build strong theoretical background through the help of which further search of solutions of the research problems would be easier.

#### **2.2 Conceptual Frame Work**

In this section conceptual and theoretical review of working capital, funds flow statement; costing, pricing and production and operation system etc. are presented.

##### **2.2.1 Working Capital**

Working capital actually refers to that part of total capital, which is available and used for carrying out the routine or regular business operations. Thus, the capital required for purchasing raw materials, payment of direct and indirect expenses, carrying out production, investment in stocks and stores, receivables and to be maintained in the form of cash is generally known as

Working Capital. In short, it is the capital, with which the business is worked over.

Working capital is just like the heart of business. Just as circulation of blood is very necessary in the human body to maintain life, smooth flow of funds is very necessary to operate an enterprise. If it becomes weak, the business can hardly prosper and survive. Sooner or later it will topple down. Its proper calculation provides the business the right amount of cash to maintain regular flow of its operations. If proper cash balance is maintained, the business can gain cash discount facilities offered to it by suppliers. Moreover, it also enhances the credit of the concern. It also provides funds for unforeseen emergencies so that business can successfully go through the periods of crisis too. ( Pandey IM, 1979 A.D.)

### **2.2.1.1 Concepts of Working Capital**

#### **a) Gross Working Capital**

It refers the firm's investment in current assets. Investment in the current assets should be just adequate, not more-not less, to the need of the business firm. Excessive investment in the current assents should be avoided because it hampers the firm's profitability, as idle investment earns nothing. On the other hand, inadequate amount of working capital can threaten solvency of the firm, if it fails to meet its current obligations. Firm's decision about the level of investment in current assets involves a trade off between risk and return. Since the financing of any assets is concerned with two major factors, cost and risk. When firm invests more in current assets, it reduces the risk of liquidity loses in terms of profitability since the opportunity cost of earning from the excess investment in current assets is lost. The firm therefore, is required to strike a right balance.(Pandey IM,1979 A.D. )

#### **b) Net Working Capital**

It refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders, which are expected to mature for payment within an accounting year and include creditors, bills payable, bank overdraft and outstanding expenses. Net working capital can be positive or negative. A positive working capital will arise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets. Current assets should be sufficiently in excess of current liabilities to constitute a margin or buffer for maturing obligations within the ordinary operating cycle of a business. In order to protect their interest, the short-term creditors always like a company to maintain current assets at a higher level than current liabilities. It is a conventional rule to maintain the level of current assets should be considered in determining the level of current assets vis-à-vis current liabilities. A weak liquidity position poses a threat to the solvency of the company and makes it unsafe and unsound. A negative working capital means a negative liquidity and is disastrous for the company. Excessive liquidity is also bad. It may ensue to mismanagement of current assets. Therefore, prompt and timely action should be taken by management to improve and correct the imbalance in the liquidity position of firm. Therefore, there should be minimum amount of net working capital on the permanent basis. A portion of the working capital should be financed with the permanent sources of funds such as owners' capital, debentures, long-term debt, preference capital or retained earnings ( Pandey IM, 1979 A.D.)

### **2.2.1.2 Determinants of Working Capital**

Manufacturing enterprises need higher volume of working capital as compared to public utility enterprises. But quantitative amounts of working capital needed to such enterprises can broadly be set due to the following environment that effect working capital needs of particular enterprises.

a) **Nature & Size of business:**

Working capital requirement of a firm are basically influenced by the nature of its business. Trading & financial firm's have a very less investment in fixed assets but require a large sum of money to be invested in working capital. In contrast, Public utilities have very much limited need for working capital & have invested abundantly in fixed assets. Moreover, the size of business also has an important impact in working capital need.

b) **Manufacturing Cycle**

**It starts with the purchase and use of raw materials and completes with the production of finished goods. Longer the manufacturing cycle, larger will be the firm's working capital management. An extended manufacturing time span means a larger tie-up of funds in inventories. Thus, if there are alternative ways of manufacturing a product, the process with the shortest manufacturing cycle should be chosen. Once a manufacturing process has been selected, it should ensured that manufacturing cycle is completed within the specific period. This need proper planning and co-ordination at all level of activities.**

c) **Business Fluctuation**

**The situation whether an enterprise is operating in the boom or recession and depreciation period also determines the working capital needs of the enterprise.**

d) Production Policy

**The policy whether to follow uniform and level production plan or varying production plan determines the working capital needs of the individual enterprises. Naturally, a firm following uniform production policy requires higher amount of working capital and vice versa.**

e) Credit Policy and Availability of Credit

**If funds are readily available from banks or credit facilities or it follows conservation sales policy than such firm needs lesser amount of working capital and vice versa.**

f) Growth and Expansion Activities

**The volume of assets or sales as well as expansion activities of the enterprises has direct bearing upon the needs of working capital. The higher the volume and expansion activities, the higher will be the needs of working capital and vice versa.**

g) Turnover of Circulating Capital

**How frequently and rapidly the working assets are converted into cash also determines the need of working capital. And such turnover is determined by demand and sales policy of the particular enterprises.**

h) Competitive Conditions

**An enterprises dominating in the market without having keen competition may be in a favourable situation for keeping less amount of working capital.**

i) Price Level Change

**Generally rising price levels will required a firm to maintain higher amount of working capital. Some level of current assets will need increased investment when price increase.**

j) Operating Efficiency

Higher the operating efficiency lower will be working capital and vice versa.

k) Others

**Factors such as coordination between production and distribution activities, conservation divided policy as well as**

## **liberal depreciation policy strengthen working capital position of the enterprises.**

### **2.2.1.3 Working Capital Policies**

Working capital policy refers to the firm's basic policies regarding target levels for each category of current assets and how current assets will be financed. There are three working capital policies regarding the total amount of current assets carried. Each policy differs in that different amounts of current assets are carried to support a given level of sales. ( Adhikari, Bhattarai, Thapa. 2005 A.D.) They are as follows:

#### **a) Conservative Policy**

**Conservative policy carries a high level of current assets (cash, marketable securities, receivables and inventories) to sales. It uses more long-term debt and less short-term debt for financing current assets. Therefore conservative policy lowers the risk and return. This policy is also known as relaxed policy.**

#### **b) Aggressive Policy**

**Aggressive policy carries a low level of current assets (marketable securities, inventories, receivables and cash) to sales. It uses shorter-term debt and less long-term**

**debt for financing current Assets. This policy is also known as tight policy.**

c) Moderate policy

**Moderate policy carries a moderate level (average level) of current assets (marketable securities, inventories, receivables and cash) to sales. It uses mid range of short term and long term debt of the two policies. Therefore, the moderate current asset policy results in mid range risk and profitability.**

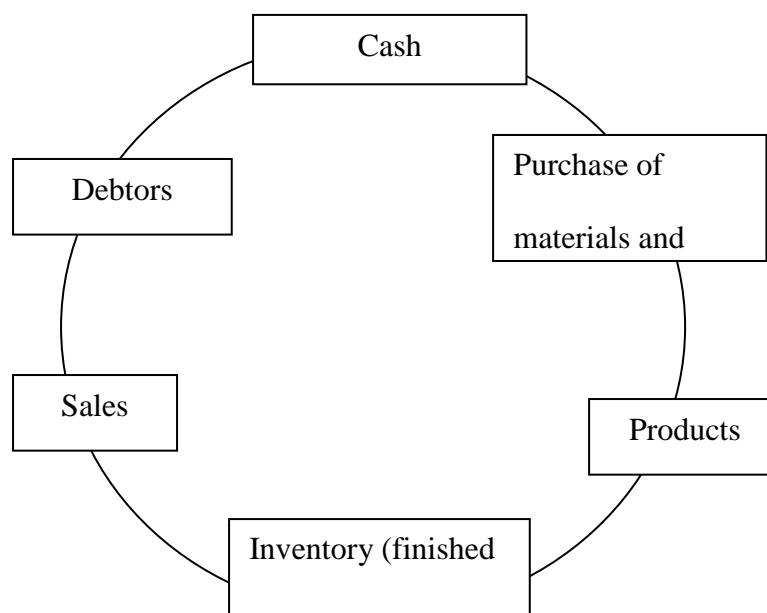
Generally, the decision of current assets levels involves a risk/return trade off. The conservative policy minimizes risk, but it also has the lowest expected return. On the other hand the aggressive policy offers the highest expected return coupled with the highest risk.

#### **2.2.1.4 Working Capital Cycle**

Working capital is taken either as the total current asset or as the excess of current assets over current liabilities. Working capital, in the first sense, is known as gross working capital and in the second sense, is known as net working capital. Both the net and gross concepts of working capital are important. Gross working capital focuses attention on the efficient management of individual current assets in the day-to-day operations of the business. But for having a long-term view of working capital, it is essential to concentrate on the net concept of working capital because long term, funds are to be arranged for financing net working capital. Thus working capital can be defined as the excess of current assets over current liabilities. (Jain, 1993 A.D.)

Figure: 2.1

### Working Capital Cycle



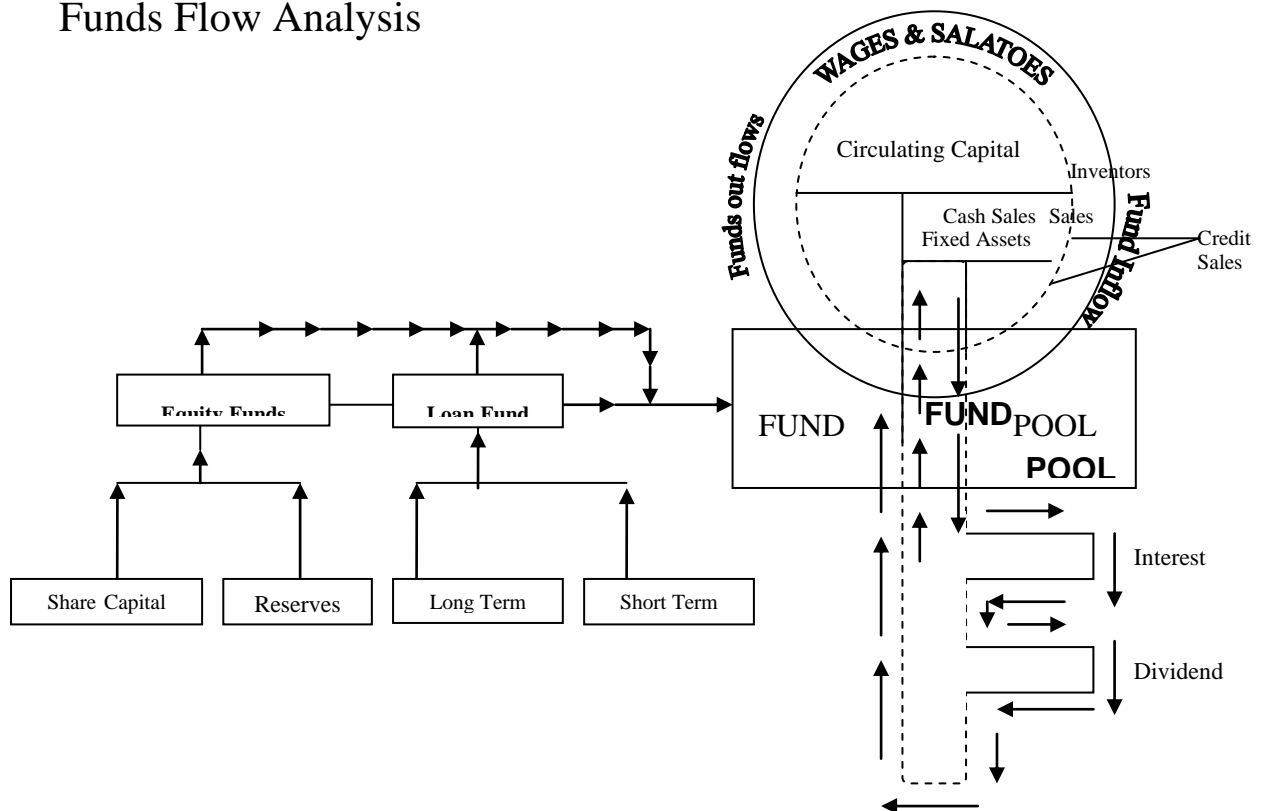
So, nature and interrelationship of working capital can be best understood by the operating cycle of the firm. A firm begins with cash, which is use for purchase of raw materials and bough in components. Materials and other operating supplies can also be purchase on credit which in turn generates accounts payable further cash is expected to pay the labour and other manufacturing cost and further trade which are eventually sold an credit giving rise to accounts receivable. The collection of receivables brings cash into the firm and creditors are paid. The average time, which elapses between the acquisition of materials or services entering into the manufacturing process, and the final cash realisation, constitutes an operation cycle. The operation cycle can be depicted as above figure. In order to reduce the requirement of working capital, the management should try to reduce the period of the operation cycle. This underlines the importance of managing key variables affecting working capital so as to get the optimal result.

### 2.2.2 Funds Flow Statement

The Study of Funds Flow statement shows how the firm's liquid cash and credit fund (resources) have been employed. On the commencement of business the funds obtained or invested by the promoter will be used in acquiring fixed or current assets according to the nature of business. In the course of the business activities funds will circulate at a necessary rate from one point of another and complete the cycle and repeat it again like cash to raw material, raw material to stock, stock to finished goods inventory, inventory to receivables and receivables to cash etc. Such circulation of funds is known as funds inflows and funds outflow. The process of bringing funds by stream forms a regular circular path around fund pool, which is shown in a figure: 2.2 below. (Kulshrestha, 1970 A.D.)

Figure: 2.2

### Funds Flow Analysis



**Two current streams touch the Fund Pool. One brings funds and is known as funds Inflow and the other uses funds and is known as Funds Outflow. The process if**

**bringing funds by streams and using of funds by another stream forms a regular circular path around Fund Pool, which is the flow of funds.**

Since the funds are called circulating or working capital of the business. It circulates as above as per the nature of business. If the funds of the organization does not circulate and interrupted or retained in one sector for a long-term organization will not generate further wealth. Consequently the business organization may be collapsed.

#### **2.2.2.1 Importance of Funds Flow**

**A Fund statement is of primary importance to the financial management. A prudent finance officer is interested to see that the liquidity needs are evidenced by the requirements of the circulating assets are amply satisfied so that the risk of insolvency is reduced to the lowest level. This calls for an uninterrupted circular movement of funds into the business operations. Just as the circulation of blood is very necessary for the human body circulation of funds is equally necessary for the existence of the corporation. A slight interruption may call for insolvency in which case the consequence will be either liquidation of the**

**company or finding out fresh sources of finance. Therefore with the help of fund statement of finance office can ensure that the company will have funds when they are wanted and will utilize effectively when available. It is an essential tool of financial analysis. In fact it is the major instrument used for analysing the financial problems and determining the long-range financial policies of the business enterprises.**

#### **2.2.2.2 Analysis of funds flow**

**Funds movements in the business enterprise are analyzed and studied with the help of fund statements. These statements are source and use of funds statement as they depict the sources from which funds are obtained and the uses to which they are being put. They bring into light the underlying financial movements and reflect the changes in the financial position or working capital position in two different dates. These statements are variously called as statement of funds, statement of financial operations statement of changes in working capital, statement of sources and application of funds and “where got and**

## **where gone statement” (Anthony, 1960 A.D.)**

For the preparation such statements we have trace the various sources and uses of funds. The principal source of funds is the net income from operations. To it we will add funds available by increasing short-term and long term liabilities, reduction of assets by sale, and issue of additional stocks.

Occasionally funds may flow in the windfalls, gifts and donations. Funds thus obtained may be used for the payment of liabilities, purchases of assets for expansion and growth, drawing, reduction of capital, outright donations and sheer losses from operations. The fund statement shows the sources of funds and their application in such a way as both as equal, the statement of balance sheet changes is shown below. (Helfert, 1997 A.D.)

The process of fixing costs of activity is defined as costing. The activity refers to manufacture products/article, service rendered, or function performed. The procedure applied to ascertain unit cost of product or service is costing. So, costing comprises of collection, classification and analysis of cost for ascertaining unit cost of product and service as well as to analyze profitable and non profitable operations, to plan and control of cost and to assess the performance of a worker, section, department, unit and a plant from time to time.

### **2.2.3.1 Importance and Advantages of Costing**

#### **a) Product Price Fixation**

**Cost accounting summarized cost to fix the price of product and also helps to estimate tender or quotation price.**

b) Improving Unprofitable Operations

**Cost accounting provides management with cost information to judge profitable and unprofitable operations. Thus, helps the management to improve unprofitable operations.**

c) Select Profitable Alternative

**Cost accounting provides such cost data and information that helps management to choose from among profitable alternatives.**

d) Formulation of Production Policy

**Cost accounting provides information to prepare schedule for production. It also provides necessary information like production capacity needed for formulating production and inventory policies.**

e) Optimum Utilization of Resources

**Cost accounting provides cost data and information so as to apply cost saving**

## **schemes to achieve optimum utilization of resources.**

f) Identify Wastage and Leakage in Production Processes:

**Cost accounting also provides cost data to identify any wastage and leakage occurring in any production process so that the cost of output can be reduced.**

### **2.2.3.2 Methods of Costing**

Methods of costing are the techniques of ascertaining costs of output, process or operation. Since the nature of industry differs from one another, the methods of costing also differ. Some important methods of costing are as follows.

a) Job Order Costing

**This method gathers and accumulates costs for each job order or work order from customer separately. Since each job or order is specific and terminated after it is completed all costs that incurs in the job or order are accumulated after its termination. A job card is prepared for each job for cost accumulation. It is a popular method in industries such as printing, machine tool manufacturing, laundry and furniture.**

b) Unit / output / single costing

**This method is applied in industries like mines, quarries, oil drilling etc. One common feature of such industries is that there is only one single product, which is processed right through. The finished product, which is in a raw or crude state, is extracted and processed through different stages to obtain the finished product in its final saleable condition. This method is also a type of process costing.**

c) Process Costing

**The costing method that ascertains the cost of each process or stage of producing output is called process costing. Under this method, a separate accounting is opened for each process to which all costs incurred thereon are charged. The cost per unit of output is obtained by averaging the costs incurred on the process during a certain period. This method is suitable for industries where manufacturing is carried on continuously such as textile, chemical and paper industries.**

d) Operating Costing

**The method of costing which is used for ascertaining the costs of service rendered is known as operating costing. Under this method, the cost of per unit of service rendered such as quintal per kilometre, kilowatt per hour, or patient per day is determined. Therefore, this method is popular in industries and institutions that provide services instead of manufacturing products. Examples of such industries are transport company, electricity authority, and hospitals.**

e) Standard Costing

**Historical costing is not effective for cost control purpose, as it does not provide a measure to compare actual costs. Therefore the costing method, which is used for the purpose of controlling costs, is called standard costing. Under this method, standard costs are predetermined and are compared with the actual cost. If there are any differences between the two types of costs, the reasons for the differences are analyzed for the purpose of controlling the costs of output, job and process. Standard costing is useful in all industries, but it is**

**more useful in industries, which produce  
standard products.**

f) Marginal Costing

**The method of costing which uses the concept of marginal cost is called marginal costing. Marginal cost is the aggregate of all variable costs such as prime costs and variable overheads. This method ascertains cost by differentiating fixed and variable components of the cost. It excludes fixed costs and takes into account only variable costs for determining the cost of output.**

g) Absorption Costing

**This method is different from marginal costing, because it takes into account all costs, both fixed and variable, for determining the cost of output. Under this method, all cost including fixed and variable costs, are charged to operations, processes, or products to ascertain the cost.**

h) Uniform Costing

**The method of costing, which uses the common principles and procedures by several concerns for some common purpose, is called uniform costing. The uniform costing method can be extended so as to be useful in inter-firm comparison.**

i) Historical Costing

**The costing method, which is based on past cost data, is called historical costing. It uses historical or past costs, not future or estimated costs for its purpose. Under this method, therefore only past costs of output, processor operation are ascertained, which are already incurred.**

J) Direct Costing

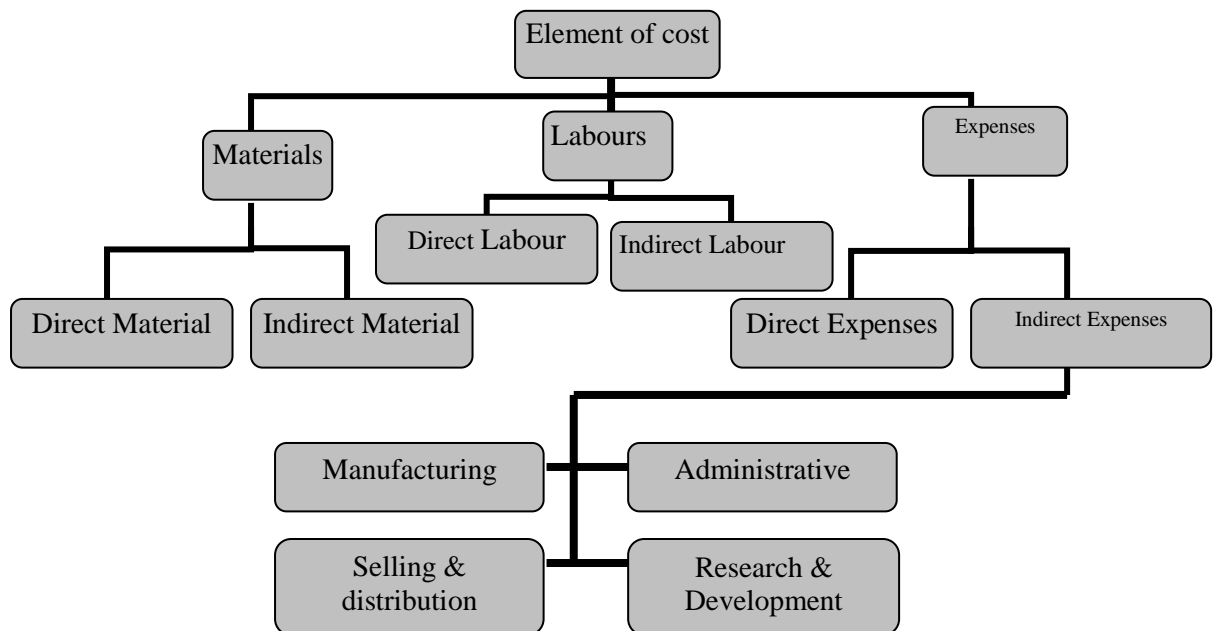
**This method of costing is based on the concept of direct cost. Direct cost is that component of cost which can directly be charged to the output, process or operation. For example, raw materials can directly be charged to the goods produced. Therefore this method charges all direct costs to product, process or operation in order to ascertain the cost.**

### 2.2.3 Classification / Elements of Costing

Costing is one of the major tools of management. Management decision required proper classification and analysis of the total costs. For the purpose of decision making the management must have clear picture of different elements of costs. Broadly speaking the element of cost is three in number, materials (stores), Labour (Wages), and Other Expenses (Overheads). In

practice, these three broad classifications are further analysed into different elements

**Figure: 2.3**  
Element of Cost



## **1) Materials: Cost involved in all sorts of materials, supplies.**

2) Labour: Cost relation to personnel involvement.

3) Expenses; All other cost except materials and labour e.g. power, rent, insurance etc.

4) Direct Cost: Traceable to or identified with a given cost object easily e.g. direct material, direct labour.

**5) Indirect Costs: Not identifiable with a given cost object e.g. indirect material, indirect labour and indirect expenses.**

6) Manufacturing: Cost involved in manufacturing or Production activities

**7) Administrative: Costs involved in general administration and control division.**

**8) Selling and distribution: Cost involved in selling and distribution activities.**

**9) Research and development: Cost involved in innovation activities.**

**Apart from the analysis of the total cost by its elements and other method of analysis, which is often used in costing, is the division of the total cost between fixed and variable cost. Variable costs are the items of expenditure, which vary with the units of product produced. Fixed costs are those, which remain more or less constant irrespective of an increase or decrease in the number of units produced**

## Pricing

**In general price is value or amount of money sacrificed to obtain a particular product or service. Price may also be defined as the exchange of something of value between parties involved in a transaction. Pricing on the other hand means the determination of proper value to a particular product or service. In broader sense, price setting involves the determination of some object that can be used to establish the value of the exchange to all parties involved in the transaction.**

### 2.2.4.1 Objective of Pricing Policy

Formulation of price policy begins with the classification of the basic objectives of the firm. Pricing objectives have to be in conformity with overall organizational objectives. In most of the situation, profit maximization is the main objective of price policy, but is only one objective. Importance of pricing varies from firm to firm; pricing is one of the tools that a firm has to attempt to reach the stated objective. (Munakarmi, 2003 A.D.) Following may be other objectives of price-policy in an organization:

- a) Pricing the goods based on reasonable costs,
- b) Increase in the market share or its growth rate at the expenses of immediate profits,
- c) Avoid adverse public reaction consequent upon charging high price,
- d) Ethical consideration not to reap high profit.
- e) Immediate survival of the firm,

- f) Charge reasonable price so as to have good relations with government and public at large,
- g) Maximization of prestige of the firm rather than of profit,
- h) To safeguard against the emergence of new producers in the same line.

#### 2.2.4.2 Pricing Method

##### i) Cost Oriented Pricing Method

Cost oriented pricing methods are primarily based on the notion that the price should cover all types of cost and be able to give the organization a fair amount of profit. Cost oriented pricing method includes cost-plus or mark-up pricing, target return on investment pricing and target profit pricing.

##### a) Cost Plus or Mark up Method

**This is the simplest method of pricing which involves a calculation of the fixed and variable costs per unit and adding the desired profit margin on the total cost. For e.g.**

Units to be Produced and Sold 5000 units:

Direct Cost (labour and materials)	= Rs. 50,000
Fixed Overheads	= Rs. <u>20,000</u>
Total Cost	= Rs. 70,000
Average Cost Per Unit	=Rs. 70,000/5000
	= Rs. 14
Mark up or profit per unit	= Rs. 3
Price per unit	= Rs. 17

##### b) Target Return on Investment Pricing

**This pricing method is popular among manufacturing organizations that needs to recover a fixed target return (Profit) on their investment from the price. Under this method the desired return on investment is added to the total cost to arrive at the price.**

**c) Target Profit or Break Even Pricing**

This method uses the breakeven analysis (BEA) to evaluate the revenue and profit. This Analysis uses break-even points to determine revenue and profit from a product at a given Price under certain cost structure. The Break Even Point is no profit and no loss point. If sales (revenue) increase beyond the point, the organization is able to make a profit. The break-even point can be computed in terms of units as well as monetary volume.

**ii) Demand / Value Oriented Pricing Method**

Value oriented pricing methods are based on customer's value perception rather than costs of the product. There are mainly two types of value oriented pricing method:

- a) **Perceived value pricing:** It is mainly used for a new product.
- b) **Customer Value Pricing:** It is generally used for existing product.

**iii) Competition / Marketing Oriented Pricing Method**

**The market oriented pricing methods are based on the competitors' prices. Under this approach the price setter does not consider costs and demand as major pricing factor. The price is changed only when the**

## **industry price level changes. It can be adopted under three ways.**

### **a) Going Rate Pricing**

This method of pricing is adopted by organizations operation in an oligopolistic market.

### **b) Price Above Competition**

In this method organization can afford to set the price above competitive level. If the organization has a product that can be differentiated to some extent, it may price the product slightly above the prevailing market price.

### **c) Price Below Competition**

Price below competition is a popular method adopted by organizations that operate in a highly competitive market. Organizations, whose prices below competition, believe that more buyers can be attracted by the lower prices.

## **2.2.4 Production/Operations System**

Production/Operation is a system composed of many components for production of desired goods and services. Production/operations system is the heart of production and operations management. It uses operations resources like materials, labour, capital, technology, information etc. in transformation process to produce desired goods and services. The main objective of the operations system is to provide conversion process capable to meet organizational needs and strategies.

Production / operations as a system is interrelated and interdependent with other functions such as marketing, finance, accounting, personnel, research and development (R&D), purchasing and engineering. Similarly, production and operations management decisions are based on corporate mission and strategy which are affected by changes in political, Economical, social, demographic, technological, competition etc. Therefore, these external environments also affect production and operations system.

#### 2.2.4.1 Types of Production System

There are two types of production systems. They are as follows:

- i. Intermittent Production System
- ii. Continuous Production System

##### i. Intermittent Production System

**In this system, goods and services are produced to fulfil the orders of customers rather than for stock. The production facilities used in this system are flexible enough to produce wide varieties of products in accordance with the order and need of customers. Therefore, there is no continuity in flow of material and resources. The flow is intermittent i.e. not continuous. In this system, raw materials, process, and design should be continuously adjusted and changed with the changes in design, shape, size, quality, and orders of customers. As a result, production planning and controlling becomes complex. It is widely used in hospitals, machine, shops, restaurants, furniture, and offset printing press etc.**

##### ii. Continuous Production System

Continuous production system is used for producing highly demanded products. In this system, similar types of products are produced in large volume to meet sales forecast and market demand. Therefore, it produces goods for stock not for order. In this system, all raw materials, process and technologies are standardized. Due to standardization, fixed route and process should be followed for producing products, which makes easier for planning, scheduling and controlling activities. But, it is rigid because of standardization. This system is followed in production of biscuits, noodles, beers, televisions etc.

## **2.3 Review of Related Books**

Underlying principles and international practices are found in different books. Entire book is the collection of principles and practices in different circumstances and contexts. The balance sheet and income statement of a business shows the financial position at a given point of time and summary of revenue and expenses during the accounting period. So, financial evaluation is done with the financial tool i.e. ratio analysis and funds flow. Only evaluation made through ratio analysis and funds flow is not sufficient so, various analysis relating to working capital, costing, pricing and break even are also review from the related books. The performance of an organization is evaluated from the figures of different accounts consisting in balance sheet and income statements.

### **2.3.1 Working Capital Management**

According to Surya Rana, "Working Capital in its simplest form is defined in two way: Gross working Capital and net working capital. Gross working capital simply refers to the gross amount invested into current assets. However net working capital generally refers to the excess of current asset over current liabilities. Current assets refers to the current assets refer to all those assets such as cash, marketable securities, debtors, accounts receivable, inventory, short term investment etc. Which can be convertible into cash

within an accounting period. On the other hand, current liabilities represent the obligations such as creditors, bank overdraft, outstanding expenses, accruals, accounts payable etc. Which are to be paid during an accounting period.” (Rana, 1946 A.D.)

According to Jain, Working capital is taken either as the total current asset or as the excess of current assets over current liabilities. Working capital, in the first sense, is known as gross working capital and in the second sense, is known as net working capital. Both the net and gross concepts of working capital are important. Gross working capital focuses attention on the efficient management of individual current assets in the day-to-day operations of the business. But for having a long-term view of working capital, it is essential to concentrate on the net concept of working capital because long term, funds are to be arranged for financing net working capital. Thus working capital can be defined as the excess of current assets over current liabilities. (Jain, 1993 A.D.)

### **2.3.2 Funds Flow Statement**

According to N.K. Kulshrestha, “The Term Funds flow refers to the circulation of the working assets of a business enterprises in the course of its conduct. As the name implies the fund statement, which shows sources and application of funds, popularly known as funds flow statement. (Kulshrestha, 1970 A.D.)

The Study of Funds Flow statement depicts how the firm’s liquid cash and credit fund (resources) have been employed. On the commencement of business the funds obtained or invested by the promoter will be used in acquiring fixed or current assets according to the nature of business. In the course of the business activities funds will circulate at a necessary rate from one point of another and complete the cycle and repeat it again like cash to raw material, raw material to stock, stock to finished goods inventory, inventory to receivables and receivables to cash etc. Such circulation of funds is known as funds inflows and funds outflow. (Ibid)

Funds movements in the business enterprise are analyzed and studied with the help of fund statements. These statements are source and use of funds statement as they depict the sources from which funds are obtained and the uses to which they are being put. They bring into light the underlying financial movements and reflect the changes in the financial position or working capital position in two different dates. These statements are variously called as statement of funds, statement of financial operations statement of changes in working capital, statement of sources and application of funds and “where got and where gone statement” (Anthony, 1960 A.D.)

### **2.3.3 Ratio Analysis**

According to Weston and Brigham, financial statements report both on a firm’s position at a point in time and on its operation over some past period. However, the real value of financial statements lies in the fact that they can be used to help predict the firm’s future earnings and dividends. From an investor’s standpoint, predicting the future is what financial statement analysis is all about, while from management’s standpoint, financial statement analysis is useful both as a way to anticipate future conditions and more important, as a starting point for planning actions that will influence the future course of events. (Weston & Brigham, 1989 A.D.)

According to James C. Van Horne “To evaluate the financial condition and performance of the firm, the financial analysis needs certain yardsticks. The yardsticks frequency used in a ratio or index relating to pieces of financial data to each other”. Thus, ratio analysis is considered to be the yardstick tools to evaluate the financial performance and condition of the firm. (Van Horne, 1987)

### 2.3.4 Costing

Costing is one of the major tools of management. Management decision required proper classification and analysis of the total costs. For the purpose of decision making the management must have clear picture of different elements of costs. Broadly speaking the element of cost are three in number i.e. materials (stores), Labour (Wages), and Other Expenses (Overheads).

According to Robert L. Danby & Michael D. Lawrence "Cost is a use of a firm's resources, such as the payment of cash the promise to pay cash, or the expiration of the value of an asset. Costs are necessary for a business to survive because only by incurring costs can a business purchase inventory, acquire assets, pay operation expenses, and increase sales. Excessive costs, however, can cause a business to fail. Thus, costing deals with the planning, measurement, and control of costs." (Danby and Lawrence, 1996 A.D.)

**Costing is the division of the total cost between fixed and variable cost. Variable costs are the items of expenditure, which vary with the units of product produced. Fixed costs are those, which remain more or less constant irrespective of an increase or decrease in the number of units produced. (Swaminathan, 1980 A.D.)**

### 2.3.5 Pricing

In general price is value or amount of money sacrificed to obtain a particular product or service. Price may also be defined as the exchange of something of value between parties involved in a transaction.

According to Philip Kotler and Gary Armstrong “ Pricing is the amount of money charged for a product or service, or the sum of the values that costumers exchange for the benefits of having or using the product or services.” (Kotler & Armstrong, 2001 A.D.) In general pricing can be defined as the value of product, express in monetary terms which a consumer pays or is expected to pay in exchange of the expected or offered utility.

Formulation of price policy begins with the classification of the basic objectives of the firm. Pricing objectives have to be in conformity with overall organizational objectives. In most of the situation, profit maximization is the main objective of price policy, but is only one objective. Importance of pricing varies form firm to firm; pricing is one of the tools that a firm has to attempt to reach the stated objective. (Munakarmi, 2003 A.D.)

## **2.4 Review of Related Articles**

An analytical study of an enterprise is essential to know their profit, potentiality operative efficiency and decision-making technique. In our country many financial exports and other analysis have make some research towards financial position of different corporations by using various analytical tools. This part mainly focused on the review of Journal/articles published by different management experts relating to the financial aspects of public enterprises in Nepal as well as the materials found from JEMC Ltd.

The research on “Performance of PEs” in Nepal jointly conducted by ISS and CCC as a part of the research project entitled “Performance of PE in Asia” jointly sponsored by International Development Research Centre, Ottawa, Canada and Nepal Government made in mid 1975, is the first comprehensive research work in public enterprises in Nepal. (HMG/N, CCC & ISS, 1980 A.D.) In the study it was found that the main criteria for providing financial assistance by Nepal Government was not based on normal corporate portfolio structure and needs, but on crisis policy of adequate working capital has been instrumental in bringing about a circular consolation of property in many PEs. Absence of sufficient equity cushions has led to the poor performance of many PEs.

Prof. Dr Manohar Krishna Shrestha (1983) made a study on working capital management in PE'S. A case study of 'financial results and constraints'. In his study 10 PE's have been taken into account for analysis. In this study, he stated that PE's working capital management is important for 4 reasons:

1. P.E must determine the adequacy of investment in current assets otherwise it would seriously erode their liquidity position.
2. They must select the type of current asset suitable for investment so as to raise their operation effectively.
3. They are required to ascertain the turnover of current asset that generally determine the profitability of P.E.
4. They must find out the appropriate sources of funds to finance current assets.

Due to this quite obvious reason, he argued that ' mistakes made in management of working capital can lead to adverse effects that seriously reduce the liquidity, turnover, and profitability of PE.

Although working capital management is so important yet mistakes are being committed frequently by PE managers in the management.

This chapter reviews the available literature relating to JEMC and views the financial performance of PE's. So, far as analysis of financial performance in the context of Nepalese and foreign enterprise is concerned some studies

have been undertaken by the management experts and students describing the financial performance of PE's.

JEMC provides the services in textbook publication and distribution throughout the country and also helps in the education system of the country. The previous studies cannot be ignored as they provide the foundation to the present study. So, some notable literatures relevant to the study are reviewed in this study to identify the relevancy of the present study.

The management consultant company conducted a study on the performance of PEs of Nepal. In this context, it was concluded that the assets management in general and current assets management in particular were the weakest points in Nepalese PEs. (Management Consultant Company) The report also pointed out that because of the lack of operational objectives, application of the long run planning, use of modern management tools, capital budgeting and efforts towards cost control had not been made so far.

The Auditors report presented by Nepal Government, Auditor General Office pointed out that there is no effective control financial system of budget expenditure, cost accounting and fund management. Rate of return is not satisfactory because of high stock level valuation of finished goods. The valuations of stocks are not on cost basis but on average costing system. The report pointed out that the high capital expenditure budget is estimated without considering the sources of funds. Similarly, there are excess of expenditures on the regular expenditures such as maintenance expenditures and other goods expenditure, professional fees and miscellaneous expenditure than budget allocation. Moreover the report pointed out that since the debt collection system is not effective, sundry debtors outstanding are increasing in compare to previous years. (Auditor General Office, 2005 A.D.)

According to the assessment of JEMC by International Book Development Ltd. London in 1999 draw some conclusions that it's essential weakness stand from a lack of management expertise, poor motivation, and heavy over manning and poor quality product due to the purchase of the cheapest

materials available. The pilot project for durable textbooks is an attempt to address the latter problem, but in due course the others must be dealt with, if the company is to develop and maintain an efficient level of production. This report also dealt a detailed analysis of the current management system and concluded that it has to carry on as part of a separated mission. (Kenith Lowan, 1999 A.D.)

According to Mr. Krishna Prasad Acharya in "The Nepalese Journal of Public Administration, 99<sup>th</sup> issue, Feb, 2005 has questioned." Where about the public Enterprises? Public Enterprises established with the objective of undertaking developmental, promotional and social welfare activities committed by government. They were established to perform agriculture productions, manufacturing and trading business, financing along with other service and social benefit activities. But performances of such activities are not satisfactory and are facing many problems. There is inefficient utilization of resources, over facilitation to the employees and management, over staffing, government intervention in day-to-day activities like employment appointment, investment and procurement. Similarly the government officials take undue special facilities form the public enterprises. (Acharya, 2005 A.D.)

According to the activity report of JEMC by Yasushi Oku, JICA, senior volunteer pointed out some problems that there is not proper communication between press staff and maintenance staff. A proper department is not allocated to maintenance personnel; they are performing their job remaining far away from print shop, which takes time for quick maintenance. Present store preservation system found poor and unscientific. Mechanical workshop is also in poor condition. (Yasushi Oku, 2005 A.D.)

## **2.5 Review of Related Thesis**

**Numbers of PEs have been established in Nepal, most of the studies have been made on working capital and inventory management but a very few research was made on the research field of pricing policy and costing procedures of manufacturing organization. Some of the important studies done so far in various of manufacturing organization in Nepal have been carefully reviewed and their findings have been listed as under.**

Thesis report submitted by Mr. Dhan Bahadur Thapa on “ Financial Performance of Bhrikuti Paper Mills Limited.” Observed that liquidity position of Bhrikuti Paper Mills was poor during the earlier part of the study period but it was very high in the later part. Although the activity ratio was very low, they showed an increasing trend indication that the company had improved in the utilization of its various assets. The profitability position was not fully satisfactory so far, however registered an improving gesture. (Thapa, 1992 A.D.)

**The Thesis conducted by Mr. Deepak Khanal on “ A study on Capital Structure of Industrial Public enterprises” have selected samples from industrial public enterprises of Nepal and used financial ratio and correlation analysis as the tool of analysis. He concluded that the capital investment and earnings were not**

**correlated. Most of the public enterprises were in loss position. He suggested that the management should improve their performance efficiency.  
(Khanal, 1999 A.D.)**

Thesis report submitted by Mr. J K Pathak on “Pricing Policy of Manufacturing Public Enterprises in Nepal” sought out the relationship between the pricing practices of manufacturing public enterprises and their impact of their profitability. His major findings were that the manufacturing public enterprises adopted and adhoc pricing policies and resulted in unsatisfactory profitability. HMG should not receive even one percent annual return of its network during the eight-year study. Mr. J.K. Pathak in his study “Surplus Generation Nepalese Public Enterprises” observed that the financial performance of these enterprises is unsatisfactory and also deterioration over time in terms of low profitability, increasing cost of production, low internal financial and utilization of production capacity.

(Pathak, 1983 A.D.)

Another study on “Financial Aspect of JEMC Ltd.” By Durga B. Karanjit analyse some suggestion for better improvement. The study covers a period of eight fiscal years from 2035/2036-2042/2046. The research has been made to draw the following findings; (Karanjit, 1991 A.D.)

**1) The internal resources had remained inefficient and required rethinking  
On existing credit policy.**

2) Regarding cost structure, the selling price of textbook is same all over the kingdom.

3) The production planning of JEMC is not exactly as demand of textbooks. The level of textbook inventory is increasing each year. JEMC is carrying its printing operation below its attainable capacity.

4) The inventory management of JEMC is not reasonable. Its level is increasing every year.

## Chapter Three RESEARCH METHODOLOGY

### 3.1 Introduction

**Human nature is always curious to learn, understand & investigate the phenomenon raising the questions like how, what, why, when etc. The method which man employs for obtaining the knowledge of whatever the unknown can be termed as Research. Research is to find out something to gain knowledge about a phenomenon. Here, re means repeatedly or again and again, search says to investigate or to find. Thus, searching repeatedly is called research, which includes searching new facts, knowledge, principles and theories in scientific way Likewise; research needs various methodologies, tools, techniques etc.**

Methodology is the research method used to test the hypothesis. Research methodology is a systematic way to solve the research problems. It describes the methods and process applied in the entire aspects of the study. It refers to the various sequential steps (along with a rationale of each step) to be adopted by a researcher in studying a problem with certain objectives in view. (Kothari, 1994)

**Thus the overall approach to the research is presented in this chapter. This chapter contains the research design, population and sample size, sample selection procedure, data collection procedure, data processing, use of tools and techniques etc.**

### **3.2 Research Design**

Research design is the plan, structure and strategy of investigation in order to obtain answer of research questions. The research is based on recent historical data. The study will explore the financial position of JEMC. The financial position refers to the amount of resources i.e. assets and liabilities of the company on the specific period and the result of their utilization. To conduct the study both descriptive and analytical research approach had been adopted. Descriptive approach is utilized for conceptualization, problem identification, conclusion and suggestion of the study, whereas, analytical approach will be followed for the presentation and analysis of data. Thus, the study is analytical as well as exploratory is nature. The data have been analysed on the basis of standard financial formulas used in the book of financial management.

### **3.3 Population and Sample**

Existing 38 PE's constitute the population of the study, due to the resource constrain only one public enterprise i.e. JEMC has been selected as a sample for the present research work. The study spans over a period of ten years and covers the period form 2055/2056 to 2064/2065. This study is based on the audited financial statements for the sample size.

### 3.4 Sources and Nature of Data

**The study is mainly based on secondary data. The secondary data are used to analyze the historical trend. The major source of secondary data are annual report i.e. P/L account, balance sheet, various publications of JEMC, auditors report, various mini research projects magazines, official publications, unpublished studies and reports, researchers' journals, bulletins of different authorities, other related newspapers, publications and web-sites. However in some cases primary data were also obtained from discussion with the officials of JEMC.**

### 3.5 Data Collection Techniques

**The study is mainly based on secondary data. To collect necessary data, published materials are viewed in various spots. Books of by different authors, unpublished thesis reports, journals, magazines, Internet web sites, bulletins published by JEMC are major sources of the data. To collect these secondary data, the researchers visited campus library of Shanker Dev Campus ,**

**TU central library. Different web sites were searched to collect necessary information for the study.**

### **3.6 Method of Presentation and Analysis**

**Simple method of data presentation has been used. Data presentation and analysis are divided into small sub-topics, every result has been tabulated and clear interpretations have been given simultaneously. Details of calculation are presented at the end of the report. Tables, diagrams and graphs have been used to make report clear and easily understandable summary conclusion and recommendation have been presented at the last chapter of the report.**

### **3.7 Tool of analysis**

For the analysis of various financial and statistical tools are used. The major tool employed for the analysis of the study is the ratio analysis that established the quantitative or numerical relationship of two variables of the financial statements. Ratio analysis is the basic tools used for the study and is considered to be the powerful tool of financial analysis. Beside ratio analysis various other financial tools and techniques i.e. Working Capital, funds flow, costing, pricing, break even point and statistical tools have been used for the study. The financial as well as statistical tools have been studied in brief in the following pages.

### 3.7.1 Financial Tools

**Financial tools are also the measures or the instruments to analyze the collected data from different sources. In this study, the researcher has used the following financial tools to analyze the data.**

### **3.7.1.1 Ratio Analysis**

Ratio Analysis is a widely used tool for financial analysis. It is a Powerful tool and technique of financial analysis, which helps in identifying the sound financial structure of the organization. It also helps the analyzer to make quantitative judgement of the firm's financial position as well as its performance.

A ratio is defined as the indicated quotient of two mathematical expressions. Ratio refers to the numerical or quantitative relationship between two items or variables. A ratio is calculated by dividing the relationship with other.

The primary purpose of ratio is to point out areas for further investigation; ratio analysis stands for the process of determining and presenting the relationship of items and groups of items in the financial statement.

According to James C. Van Horne "To evaluate the financial condition and performance of the firm, the financial analysis needs certain yardsticks. The yardsticks frequency used in a ratio or index relating to pieces of financial data to each other". Thus, ratio analysis is considered to be the yardstick tools to evaluate the financial performance and condition of the firm.

#### **1) Liquidity Ratio**

Liquidity ratio provides the quick measure of the liquidity position or the ability of the firm to meet its current obligation. In other words, liquidity ratios are the indicator of short term solvency or financial strength of the firm. The most common ratio under this group comprises

- i) Current ratio
- ii) Quick Acid test ratio
- iii) Inventory to working Capital

### **i) Current Ratio**

Current ratio established the relationship between current assets and current liabilities. It includes all those assets, which are in the form of cash or can be converted into cash not exceeding a period of one year. Cash, bank balance, receivables, inventory etc. includes in current assets. Like wise current liabilities includes all obligations maturing within a year. Creditors, bank overdraft, bills payables include current liabilities. It is computed by dividing current assets by current liabilities.

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

### **ii) Quick or Acid Test Ratio**

This ratio established a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of value. Quick assets include cash and book debts (debtors and bills receivables) only in inventories and prepaid expenses are excluded. It includes cash, cash at bank, receivables, marketable securities, short-term loan and advance, accrued income etc. It is calculated by dividing quick or liquid assets by the current liabilities.

$$\text{Quick Ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}}$$

### **iii) Inventory to Working Capital**

The ratio is an index of the position of overstocking. It shows what part of the working capital the closing stocks represent? Whether the circulating capital is un-necessarily blocked as a result of overstocking? The mounting stocks value of inventories fluctuates according to market price. The ratio is calculated by dividing total inventory by working capital.

$$\text{Inventory to working ratio} = \frac{\text{Total Inventory}}{\text{Total working Capital}}$$

## 2) Leverage or Capital Structure Ratio

This ratio shows the degree or extent of debt availed by the organization and its capacity to serve such debt. In other words credit worthiness and the financial risk of the organization can be judged with the help of their ratios.

The usual ratios computed in this group are:

- i) Debt equity ratio
- ii) Debt to total capital ratio
- iii) Interest coverage ratio
- iv) Fixed charges coverage ratio

### i) Debt Equity Ratio

It is a ratio between the creditor ship fund and ownership fund. It is also known as External-Internal Equity Ratio as it represents the relationship between outsiders fund and owner fund. Based on the different approaches with references to the computation of the quantum of debt, debt-equity ration can be projected in any one of the following forms.

- a) If current liabilities are excluded from the debt:

$$\text{Debt equity ratio} = \frac{\text{Long term debt or creditor ship fund}}{\text{Shareholders equity or Net Worth}}$$

- b) If Current liabilities are included in the debt:

$$\text{Debt equity ratio} = \frac{\text{Total debt or outsiders fund}}{\text{Shareholders equity of Net worth}}$$

### ii) Debt to Total Capital Ratio

Leverage ratio slightly variant to debt-equity ratio is debt to capital ratio. This ratio related outside liabilities not merely to the shareholders fund but to the total capitalization of the organization. This ratio can be calculated in various

ways based on the different approaches used in the computation of the quantum of debt.

**a) When current liabilities are excluded from the debt and total capital:**

$$\text{Debt to total capital ratio} = \frac{\text{Long-term debt}}{\text{Permanent capital or capital}}$$

**b) When current liabilities are included in the debt and total capital:**

$$\text{Debt to total capital ratio} = \frac{\text{Total debt}}{\text{Total capital or total assets}}$$

iii) **Interest Coverage Ratio**

**It judges the sufficiency of an organization's income to pay the interest by establishing the relationship between income before interest and taxes (EBIT) and interest expenses.**

$$\text{Interest Coverage ratio} = \frac{\text{Earning before income and taxes (EBIT)}}{\text{Interest Expenses or Charges}}$$

$$\text{EBIT} = \text{Profit after tax} + \text{Income tax} + \text{Interest Expenses}$$

iv) **Fixed Charges Coverage Ratio**

Fixed charges include all fixed outlays, including debt interest, sinking fund contribution for repayment of loan, lease payment and preference dividend payments if any. Fixed charges other than sinking fund contribution and preference dividend is tax deductible and therefore the firm need only earn pre-tax amounts equal to those fixed charges. However to cover the non-tax deductible sinking fund contribution and preference dividend payments, the firm must earn more pre-tax or before tax income which can be computed by dividing them by 1- tax rate. The ratio will be computed as:

$$\text{Fixed charges c} = \frac{\text{EBIT} + \text{Lease Payments}}{\text{Pref. Div.} + \text{Repayment of Loan}}$$

### 3) Activity or Velocity or Turnover Ratios

Activity ratios, thus, involve a relationship between sales and the various assets, and presume that there exists an appropriate balance between sales and various assets. A proper balance between sales and assets generally reflects that assets are managed well. Several activity ratios can be calculated to judge the effectiveness of asset utilisation.

- i) Inventory Turnover ratio
- ii) Debtors Turnover ratio
- iii) Average collection period or Age of receivables
- iv) Fixed assets turnover ratio
- v) Capital employed turnover ratio

#### i) Inventory Turnover ratio

Inventory or stock, turnover indicates the efficiency of the firm's inventory management. An enterprise is required to maintain inventory or stock for efficient and smooth procurement, Production and sales operations. As such inventories constitute a lion's share of their current assets requiring huge investment. So it is necessary to manage inventories efficiently and

effectively to avoid unnecessary investment. Inventory turnover ratio indicates the efficiency with which the inventories of the firm are managed and is computed in various ways as:

$$\text{Inventory turnover ratio} = \frac{\text{Cost of goods sold or Cost of sales}}{\text{Average inventory}}$$

Or,

$$\frac{\text{Sales}}{\text{Average inventory at selling price}}$$

## ii) Debtor's Turnover Ratio

**The debtor's turnover indicates the number of times on the average that debtors (receivables) turnover each year. When credit is used as a tool for the promoting of sales, debtors or account receivables and bills receivables emerge in the enterprise's books of accounts. As the firm has to wait for a short period in future to get payment against goods or services delivered to the customers on credit, debtors form the part of current assets and consumes the relative share of firm's resources. As a matter of fact, investment in debtor should justify its worth by pushing up the sales of an enterprise.**

$$\text{Debtor turnover ratio} = \frac{\text{Credit sales}}{\text{Average debtors}}$$

## iii) Average Collection Period or Age of Receivables

The quality of the debtors rests on their liquidity, which in turn, is affected by the credit policy pursued by an enterprise. Average collection period is a measure of time taken to collect cash from customers from the dated of sale and is computed as:

$$\text{Average collection period} = \frac{\text{Days/Weeks/Months in a year}}{\text{Debtor's turnover}}$$

#### **iv) Fixed Assets Turnover Ratio**

The fixed assets turnover ratio measures the efficiency with which the firm is utilising its investment in fixed assets, such as land, building, plant and machinery, furniture etc. It is computed as:

$$\text{Fixed assets turnover ratio} = \frac{\text{Sales}}{\text{Net Fixed Assets}}$$

## v) Total Assets Turnover Ratio

The ratio seeks to measure the efficiency in the management of total assets of the firm. Total assets represent both fixed (tangible and intangible) and current assets and ignore fictitious assets like discount on issue of shares and debentures, preliminary expenses, accumulated losses and deferred revenue expenditures etc. It is computed as:

$$\text{Total assets turnover ratio} = \frac{\text{Sales}}{\text{Total Assets}}$$

## vi) Capital Employed Turnover Ratio

Capital employed may be defined as non-current liabilities plus owner's equity. Thus, it represents the permanent capital or long run funds entrusted to the firm by creditors and owners. In an equivalent way, the term capital employed can be defined as working capital (net current assets) plus non-current assets. The presumption is that the working capital and non-current assets should be financed from the long-term sources. To examine the effectiveness in utilising the capital employed, the capital employed turnover ratio can be calculated as follows:

$$\text{Capital employed turnover ratio} = \frac{\text{Sales}}{\text{Capital employed}}$$

## 4) Profitability Ratio

An organization should earn profits to survive and grow over the long period of time but not at the cost of employees, customers and society. Obviously, organizations will have no future if it is unable to make reasonable profit from its operation. Profitability ratios are used as a measure to judge the operating efficiency (success or Failure) of an organization. They are usually computed by relating it either with sales or investment as listed below:

- i) Profitability ratios related with sales
  - a) Gross profit margin
  - b) Net profit margin
  - c) Operating expense ratio
  
- ii) Profitability ratios related with investment:
  - d) Return on total assets
  - e) Return on net assets or capital employed
  - f) Return on shareholders fund
  - g) Return on equity / ordinary / common shareholders fund / investment / equity
  - h) Earnings per share
  - i) Dividend per share
  - j) Dividend payment ratio
  - k) Earnings yield or earnings price ratio
  - l) Dividend yield ratio
  - m) Price earnings ratio
  - n) Market value to book value ratio

### **3.7.1.2 Working Capital Management**

According to I. M. Pandey, Working capital management refers to the administration of all aspects of current assets, namely cash, marketable securities, stock and current liabilities. Working capital is the lifeblood of the organization. To sustain the belief of the people and customer, the organization should always get ready to meet the obligations. Need of working capital is directly related to firms growth. The concept of working capital is used in two ways, **Gross working capital** and **Net working capital**. Gross working capital refers the firm's investment in current assets. "Investment in the current assets should be just adequate, not more not less, to the need of the business firm. Excessive investment in the current assents should be avoided because it impairs the firm's profitability, as idle investment earns

nothing. On the other hand, inadequate amount of working capital can threaten solvency of the firm because of its inability to meet its current liabilities". (Pandey, 1998) Firm's decision about the level of investment in current assets involves a trade off between risk and return. Since the financing of any assets or projects is concerned with two major factors, cost and risk. When firm invests more in current assets, it reduces the risk of liquidity losses in the terms of profitability since the opportunity cost of earning from the excess investment in current assets is lost. The firm therefore, is required to strike a right balance.

The term net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders, which are expected to mature for payment with an accounting year and include creditors, bills payable, bank overdraft and outstanding expenses. Net working capital can be positive or negative. A positive working will arise when current assets exceeds current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets. Current assets should be sufficiently in excess of current liabilities to constitute a margin or buffer for maturing obligations within the ordinary operating cycle of a business. In order to protect their interest, the short-term creditors always like a company to maintain current assets at a higher level than current liabilities. It is a conventional rule to maintain the level of current assets should be considered in determining the level of current assets vis-à-vis current liabilities. A weak liquidity position poses a threat to the solvency of the company and makes it unsafe and unsound. A negative working capital means a negative liquidity and is disastrous for the company. Excessive liquidity is also bad. It may e sue to mismanagement of current assets. Therefore, prompt and timely action should be taken by management to improve and correct the imbalance in the liquidity position of firm. Therefore, there should be minimum amount of net working capitals on the permanent basis. A portion of the working capital should be financed with the permanent sources of funds such as owners' capital, debentures, long-term debt, preference capital or retained earnings.

### **3.7.1.3 Funds Flow Analysis**

The Study of Funds Flow statement depicts how the firm's liquid cash and credit fund (resources) have been employed.

On the commencement of business the funds obtained or invested by the promoter will be used in acquiring fixed or current assets according to the nature of business. In the course of the business activities funds will circulate at a necessary rate from one point of another and complete the cycle and repeat it again like cash to raw material, raw material to stock, stock to finished goods inventory, inventory to receivables and receivables to cash etc. Such circulation of funds is known as funds inflows and funds outflow. The process of bringing funds by stream forms a regular circular path around fund pool, which has already shown in figure: 2.2, in chapter 2.

Since the funds are called circulating or working capital of the business, it circulates as above as per the nature of business. If the funds of the organization does not circulate and interrupted or retained in one sector for a long-term organization will not generate further wealth. Consequently the business organization may be collapsed. (Kulshrestha, 1970)

### **3.7.1.4 Costing**

Costing is one of the major tools of management. Management decision required proper classification and analysis of the total costs. For the purpose of decision making the management must have clear picture of different elements of costs. Broadly speaking the element of cost are three in number i.e. materials (stores), Labour (Wages), and Other Expenses (Overheads).

Apart from the analysis of the total cost by its elements and other method of analysis, which is often used in costing, is the division of the total cost between fixed and variable cost.

**Variable Cost:** Variable costs are the items of expenditure, which vary with the units of product produced.

**Fixed Cost:** Fixed costs are those, which remain more or less constant irrespective of an increase or decrease in the number of units, produced.

### **3.7.1.5 Pricing**

In general price is value or amount of money sacrificed to obtain a particular product or service. Price may also be defined as the exchange of something of value between parties involved in a transaction.

Pricing on the other hand means the determination of proper value to a particular product or service. In broader sense, price setting involves the determination of some object that can be used to establish the value of the exchange to all parties involved in the transaction.

There are various types of pricing models. They are

Cost Oriented Pricing Method

Cost Plus or Mark Up Method

Target Return On Investment Pricing

Target Profit Or Break Even Pricing

Demand / Value Oriented Pricing Method

### **3.7.1.6 Break Even Analysis**

Break Even Analysis is an analytical technique used to study cost volume profit relationship and to determine the point at which revenues and costs agree exactly. It indicates the level of operations that produces neither profit nor loss. A profit seeing venture must reach the BEP before going further to earn a profit. If the firm has not reached the point, it means it has suffered a loss. By determining this point the firm can assess precisely how it is actually

away from the point. If the firm operating at a level above the BEP it indicates that the firm is making profit. Thus, cost and revenue relationship at the BEP can be expressed as under:

$$\text{Total Sales Revenues} = \text{Total Fixed Costs} + \text{Total Variable Cost}$$

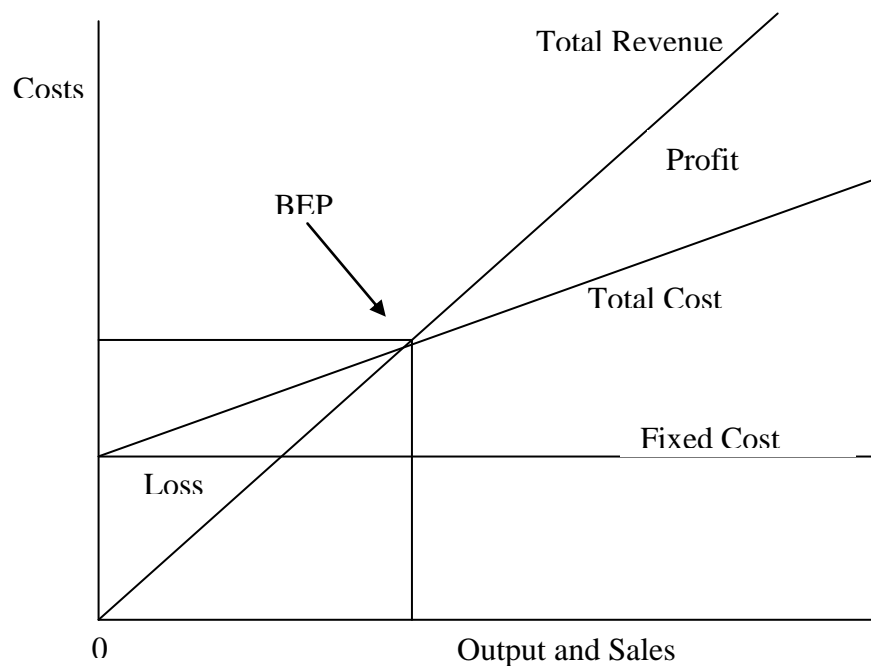
Fixed costs are those costs, which do not change with variation in the level of productive activity i.e., rent, taxes, insurance, depreciation etc. Variable costs include expenses which fluctuate in correspondence with variations in level of output and sales i.e. raw materials, direct wages, variable overheads etc.

$$\text{Calculation of BEP} = \frac{\text{Total Fixed Cost}}{1 - \frac{\text{Variable cost per unit}}{\text{Selling price per unit}}}$$

$$\text{BEP in Units} = \frac{\text{Total Fixed Cost}}{\text{Fixed cost contribution per unit}}$$

Figure: 3.1

### Graphical Representation of Break Even Analysis



The above BE Chart shows quick visual picture to the management above the impact of changes in sales, fixed cast, and variable cost on profit.

### 3.7.2 Statistical Tool

**Statistical tools are the measures or the instruments to analyze the collected data form different sources. In statistics, there are numerous statistical tools to analyze data of various natures. In this study, the researcher has used the following statistical tools to analyze the data.**

#### 3.7.2.1 Average (Mean)

**An average is a single value related from a group of values to represent them in someway, a value, which is supposed to stand for whole group of which it is part, as typical of all the values in the group. (Gupta, 1990) There are various types of averages. Arithmetic mean (A.M. simple and weighted), median, mode, geometric mean, harmonic mean, are the major types of averages. The most popular and widely used measure representing the entire data by one value is the A.M. The value of the A.M. is obtained by adding together all the**

**items and by dividing this total by the number of items or observations.**

**Mathematically,  
Arithmetic Mean (A.M.) is given by,  $\bar{X} = \frac{\sum X}{n}$**

Where,

$\bar{X}$  = Arithmetic Mean

$\sum X$  = Sum of all the values of the variable X.

n = Number of observations

### **3.7.2.2 Correlation Analysis**

Correlation is a statistical tool, which studies the relationship between two variables. Correlation coefficient summarized in one figure, the degree and they extend to which the two variables are correlated but it does not tell about cause and effect. (Bajracharya, 2053 B.S.)

For analysing the relationship between two variables, Karl Pearson's correlation coefficient (r) has been used. Correlation analysis describes the positive and negative relationship between variables. It helps to determine whether there is:

- ❖ A positive or negative relationship exists
- ❖ The relationship is significant or insignificant and
- ❖ Establish cause and effect relation if any

The statistical tool, correlation analysis is preferred in this study to identify the relationship between variables, whether the relationship is significant or not. For the purpose of decision-making, interpretation is based on following terms:

1. When  $r = 1$ , there is perfect positive correlation.
2. When  $r = -1$ , there is perfect negative correlation
3. When  $r = 0$ , there is no correlation

4. When 'r' lies between 0.7 to 0.999 (-0.7 to 0.999) there is a high degree of positive (or negative ) correlation.
5. When 'r' lies between 0.5 to 0.699, there is moderate degree of correlation.
6. When 'r' is less than 0.5, there is low degree of correlation.

### **3.7.2.3 Graph**

Graph helps to show the general trend of the ratios in respect to the time period. Graph is a very common and simple way of presenting data for two variables, which have a relationship in a figure or chart or a graph. Graph works best when the data is continuous.

# CHAPTER-FOUR

## Analysis and Presentation of data

### 4.1 Introduction

This chapter highlights and evaluates the financial position of JEMC. Some financial and statistical tools and techniques have been used to evaluate the financial position of JEMC. The major financial tools used for this study is Ratio analysis between various variables to analysed working capital management is also considered in the study. To evaluate the overall performance of JEMC, study though ratio analysis and funds flow is not sufficient as JEMC is the text book publishing house its costing on production, pricing of text book, production procedures, it's capacity utilization as well as break even point is also analysed to examine how they effect in the financial position and what steps have to be taken to correct the deficiencies in the financial activities of the JEMC. Where as statistical tools includes graphical presentation as well as correlation analysis between some of the variables like assets, liabilities, inventory, working capital, sales etc. are taken from the financial analysis

The financial management always strives to maintain an adequate working capital at every time so as to carry on the operations successfully and maximize the return on investment. This requires a careful inquiry into the current assets and current liabilities so as to control the working capital and to conserve it properly. From the analysis of working capital one can trace the symptoms of disease and can be taken suitable steps to mitigate it. There are several tools to measure the working capital of JEMC, but are considered only one financial tools i.e. ratio analysis.

## 4.2 Ratio Analysis

The use of ratio analysis as a financial tool has been considerably increased these days.

1. Ratios simplify the comprehension of financial statements.
2. They tell the whole story as a heap of financial data is condensed in them.
3. Ratio serves as an instrument of management control.

Thus, ratio analysis is the technique to assess the profitability, solvency and the efficiency of the enterprise.

### 4.2 Liquidity Ratios

Liquidity ratios are used to measure the liquidity position of an organization and to judge an organization's ability to meet its short-term obligations. They throw a light on the strength of working capital and the solvency of the organization. They measure the liquidity position whether it would be possible to honour its financial obligations and when they mature. The most important and usual liquidity ratios are Current Ratio and Quick Ratio.

#### 4.2.1 Current Ratio (CR)

Current ratio measures the liquidity position of the organization. The standard current ratio should be 2:1 and it is also defined by the nature of the organization. The current Ratio is a measure of liquidity calculated by dividing the firm's current assets by current liabilities.

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

The position of current ratio and the values of current assets and current liabilities according to Janak Education Material Centre balance sheet are tabulated as below.

Table: 4.1

## Current Ratio of JEMC

*(Rs. In thousand)*

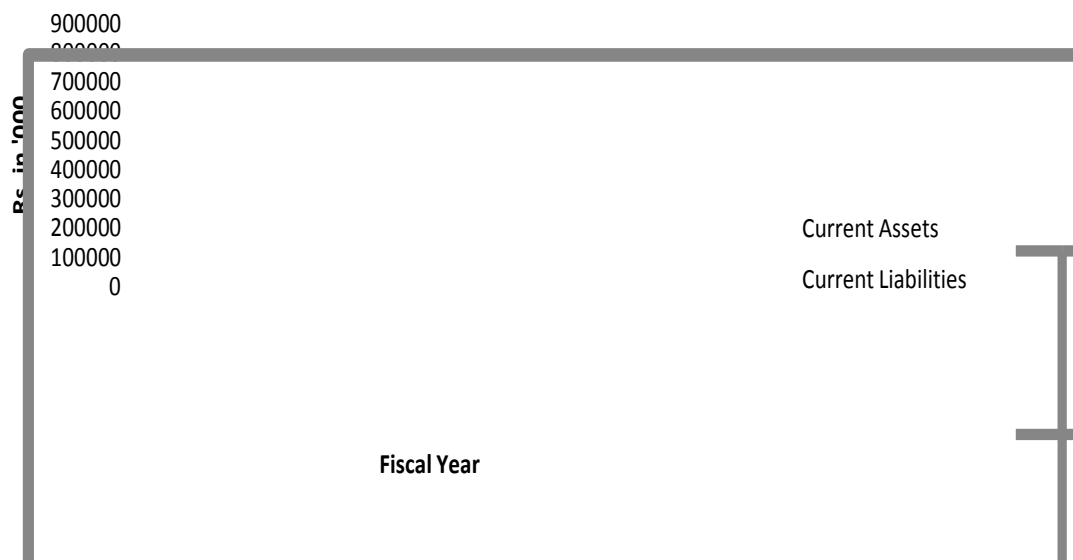
Fiscal Year	Current Assets	Current Liabilities	Current Ratio
2056/2057	410619	215992	1.90:1
2057/2058	364542	146843	2.48:1
2058/2059	370943	109076	3.40:1
2059/2060	446463	161511	2.76:1
2060/2061	419644	98899	4.24:1
2061/2062	569024	220318	2.58:1
2062/2063	501133	103135	4.86:1
2063/2064	403192	103617	3.89:1
2064/2065	405376	187283	2.16:1
2065/2066	795969	720103	1.11:1
<b>Average</b>	<b>468690</b>	<b>206677</b>	<b>2.27:1</b>

**On going through the above table 4.1 it's observed that the trend of current ratio of JEMC over 10 years is always more than the average standard norm of 2:1 except in the year 2056/2057 and 2065/2066 (ie.1.90: 1 and 1.11:1) whereas the position of current ratio in the year 2060/2061 and 2062/2063 is 112 % and 123% more then the average standard norm. Accordingly, the current ratio of JEMC during the study period is fluctuating. The Average current ratio of JEMC is above the norm, which is 2.81:1.**

**As such it can be said that the financial position of JEMC is very strong during those periods and it was in the position to meet its current obligation and in time and the current liabilities are fully covered by the current assets.**

Figure: 4.1

Current Assets and Current Liabilities



**According to the above figure 4.1 graphical presentation of current assets and current liabilities, both the current assets and**

**current liabilities are in the increasing trend of parallel line and in fluctuating in the same direction except in the year 2058/59, which is in the opposite direction to some extent. From the year 2057/2058 current asset is in increasing trend up to 2062/63 and current liabilities are in decreasing trend up to 2060/61. Both current asset and current liabilities has highly increase in the year 2065/2066. Thus, there is a sufficient cushion for the current obligation.**

#### **4.2.2 Quick Ratio**

**The quick ratio indicates the relationship between quick or liquid assets and current liabilities it measures the liquidity position of organization. The standard quick ratio should be 1:1. It may also be defined by the nature of the organization. The quick ratio shows the ability for payment of immediate current debt from current assets. Liquidity of an asset can be measured by its virtue of immediate conversion into cash without the loss of value. Cash within current assets is considered to be most liquid. Marketable**

**securities and bank debt are relatively liquid. Items like prepaid expenses are considered less liquid in comparison to the current assets stated above. So, the calculation of quick ration includes only these assets that are most liquid in nature.**

**Thus, the quick asset is calculated by deducting inventory and prepaid expenses from the current assets. Hence quick ration can be found by dividing the total of quick assets by the total of current liabilities.**

**Mathematically,**

$$\text{Quick Ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}}$$

Table: 4.2

Quick Ratio of JEMC

*(Rs. in thousand)*

**The quick ratio of JEMC is presented the following table: 4.2.**

**Quick ratio measures the liquidity position of the organization and the standard quick ratio should be 1:1, which is also defined by the nature of organization. The quick ratio shows the ability for payment of immediate current debt form current assets. On going through the above table, the quick ratio in 2058/2059, 2060/61, 2061/62,2062/63 and 2063/64 are 1.12, 2.17, 1.51,2.30 and1.77 respectively, which shows the satisfaction**

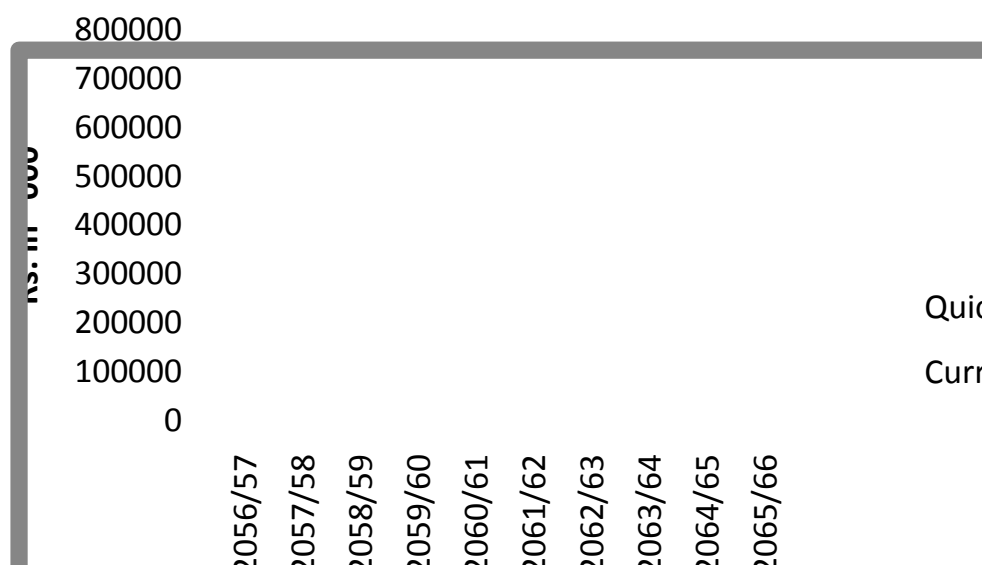
<b>Fiscal Year</b>	<b>Quick Assets</b>	<b>Current Liabilities</b>	<b>Quick Ratio</b>
2056/57	173131	215992	0.80:1
2057/58	132538	146843	0.90:1
2058/59	122392	109076	1.12:1
2059/60	152935	161511	0.95:1
2060/61	215244	98899	2.17:1
2061/62	333002	220318	1.51:1
2062/63	237081	103135	2.30:1
2063/64	183160	103617	1.77:1
2064/65	179837	187283	0.96:1
2065/66	307187	720103	0.43:1
<b>Average</b>	<b>203651</b>	<b>206677</b>	<b>0.99:1</b>

**position of liquidity with in the organization and quick ratio of other remaining years are below the standard ratio. Due to fluctuation position of inventory, there is a**

**proportionate decrease in the Current asset that ultimately resulted in the declining position of quick ratio. Average quick ratio for the study period is 0.99, which is reached to standard ratio. JEMC is not seems to the satisfactory position in meeting its current liabilities in each of the years. The trend line of quick asset and current liabilities are shown in figure: 4.2.**

Figure: 4.2

Quick Assets and Current Liabilities



The figure: 4.2 shows that the trend of quick assets increased rapidly for the 2056/57 and goes down to 132538 for the year 2057/58. In the following years quick assets increased steadily and followed by Current Liabilities.

### 4.2.3 Inventory to Working Capital Ratio

This ratio represents the stock position whether the circulating capital is unnecessarily blocked up of circulating assets? A company is in favourable condition if its working capital can cover its inventories. The higher is the cover given by working capital the lower is the risk of loss by the likely fall in the risk of loss by the likely fall in the value of inventories in future. The ratio is calculated by dividing inventories by the working capital.

$$\text{Inventory to working ratio} = \frac{\text{Total Inventory}}{\text{Total working Capital}}$$

Following table: 4.3 shows the inventory to working capital of JEMC.

Table 4.3

#### Inventory to Working Capital Ratio

**(Rs. In thousand)**

Fiscal Year	Total Inventories	Working Capital	Ratio
2056/57	221360	194627	1.14
2057/58	231274	217999	1.06
2058/59	226201	261867	0.86
2059/60	270673	284952	0.95
2060/61	177101	320745	0.55
2061/62	212015	347805	0.61
2062/63	226219	397998	0.57
2063/64	230040	299575	0.77
2064/65	225538	218093	1.03
2065/66	488783	75866	6.44
<b>Average</b>	<b>250930</b>	<b>261953</b>	<b>0.93</b>

From the table: 4.3 it is observed that the ratio of inventory to working capital is 1.14:1 in 2056/2057 B.S., which has, goes down to 0.55:1 in 2060/2061. The ratio is decreasing up to 0.55:1, which seems that JEMC is maintaining high level of inventory or with respect to inventory level. The working capital is

very low for which the fund is financed by bank loan. Due to these reason JEMC has to bear high amount of interest in one day in other hand there is a risk of damage books and out dated books if the Curriculum Text Book Centre (CTC) change the curriculum without concerning to JEMC.

Figure: 4.3



The above trend line shows that the inventories are in various years are fluctuating position. During three years 2056/2057 to 2058/2059 its fluctuation is very slow but in the year 2060/2061 and 2065/2066 it is highly increased. Similarly, Current liability is increasing in trend.

### 4.3 Turnover Ratio

Inventory ratio refers to the transference of stocks in to sales or the words how an organisation is able to manage and uses its assets in generating sales. In indicate the degree of conversion of assets into sales. How effectively the assets are utilized can be judged by using different types of turnover ratio. In case of JEMC Inventory turnover ratio, Fixed Assets Turnover Ratio, Total Assets Turnover Ratio and Average Collection Period was made to judge the utilization of assets.

### 4.3.1 Inventory Turnover Ratio

Every firm has to maintain certain level of inventory to meet the requirement of the business. The stock turnover ratio indicates whether the investment in inventory is efficiently used or not. It tests the efficiency in inventory management. It also explains whether investment in inventories is within proper limits or not. It indicates marketability of inventory and reasonableness of quantity on hand.

It measures the velocity of conversion of stock into sales. A high stock turnover indicates efficient management of inventory, because more frequently the stocks are sold, the lesser amount of capital is required to finance the inventory. On the contrary, a low stock turnover indicates over investment in stock, dull business, poor quality of goods, stock accumulation, accumulation of obsolete and slow moving goods, low profits as compared to total investment and inefficient inventory management. Since, there is no standard for stock turnover ratio. The ratio is calculated by dividing Inventory to sales. Following formula is used to calculate the inventory turnover ratio.

$$\text{Inventory turnover ratio} = \frac{\text{Sales}}{\text{Average Inventory}}$$

Inventory turnover ratio of JEMC is calculated in table: 4.4 below.

Table: 4.4

## Inventories Turnover Ratio

(In thousand)

<b>Fiscal Year</b>	<b>Average Inventories</b>	<b>Sales</b>	<b>Inventories Turnover (times)</b>
2056/57	365167	425091	0.86
2057/58	336997	432764	0.78
2058/59	344374	547289	0.63
2059/60	361537	412049	0.88
2060/61	223937	463821	0.48
2061/62	194608	652455	0.30
2062/63	219118	621197	0.35
2063/64	228129	493828	0.46
2064/65	227789	561662	0.41
2065/66	357161	724963	0.49
<b>Average</b>	<b>285882</b>	<b>533512</b>	<b>0.54</b>

Inventory turnover ratio for ten years as shown in table: 4.4 indicate that the ratio has fluctuated steadily. The ratio increased from 2056/057 is 0.86 times, then gradually decrease in two years 2057/058 and 2058/059 and again increase in the year 2059/060 by 0.88 times. Than after the ratio is decreased rapidly by 0.48 and 0.30 times respectively in 2060/61 and 2061/62. The above table seems that inventory turnover ratio of JEMC is not in satisfactory level. JEMC has to take some steps to push up the sales. If stocks (text books of various classes) don't turnover frequently during a year or within an academic year, stocks lies for a longer period of time and may be out of course and have to bear a great loss.

Figure: 4.4

## Average Inventory and Sales



The Figure: 4.4 of inventory turnover ratio of JEMC show that the inventory and sales are fluctuated. Inventory of JEMC is in increasing trend in first five years and in decreasing trend in the year 2060/61 and 2061/62. The sales also increased form 2056/2057 to 2058/2059 but steadily, in the year 2059/2060 there is a decrease in sales and thereafter increased. The sales have increased rapidly in 2065/2066. It seems that JEMC has to push up its sales to meet its satisfactory level.

### 4.3.2 Fixed Assets Turnover Ratio (FATOR)

The fixed assets turnover ratio indicates the extent to which the investment in fixes assets contributes towards sales. This ratio measures the efficiency with which the firm is utilizing its investment in fixed assets. It also indicates the adequacy of sales in relation to the investment in fixed assets. This ratio is determined by dividing sales by net fixed assets and has no standard for this ratio. Higher fixed assets turnover ratio indicates better business performance and lower ratio, inefficient utilization of available fixed assets. The FATOR of JEMC has been calculated by taking revenue from sales and total fixed

assets in the following table by using the following formula to know how effectively the fixed assets are being utilized.

$$\text{Fixed assets turnover ratio} = \frac{\text{Sales}}{\text{Net Fixed Assets}}$$

Table: 4.5

### Fixed Assts Turnover Ratio

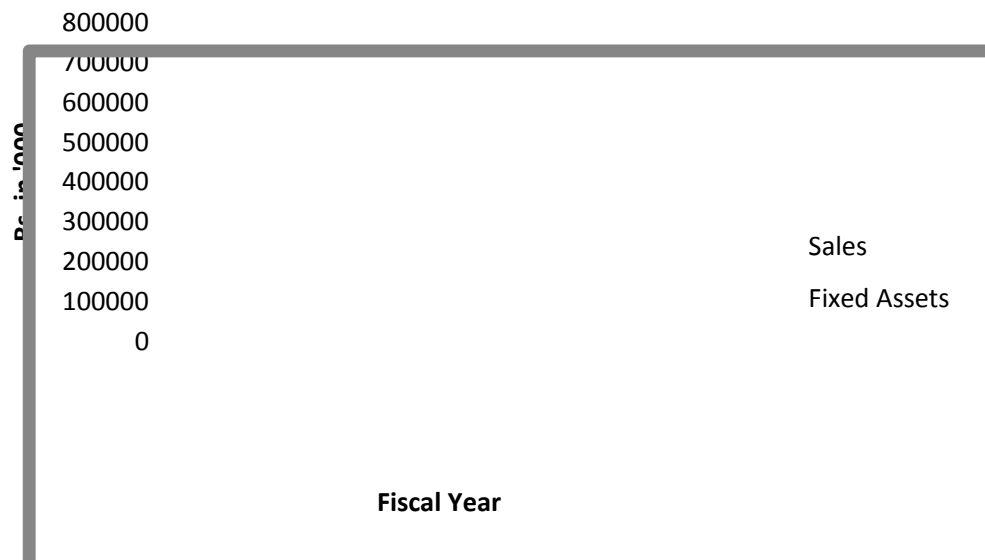
(Rs. In thousand)

<b>Fiscal Year</b>	<b>Sales</b>	<b>Fixed Assets</b>	<b>FATOR</b>
2056/57	425091	276277	1.54
2057/58	432764	338264	1.28
2058/59	547289	297101	1.84
2059/60	412049	277538	1.48
2060/61	463821	267472	1.73
2061/62	652455	259808	2.51
2062/63	621197	248256	2.50
2063/64	493828	249179	1.98
2064/65	561662	251777	2.23
2065/66	724963	261271	2.77
<b>Average</b>	<b>533512</b>	<b>272694</b>	<b>1.96</b>

From table: 4.5, it can be observed that the FATOR of JEMC is in increasing trend. The ratio of 2056/2057 is 1.54 and it has increased to 2.77 in 2065/2066. The ratio has highly increased during the study period of seven years. It is a sign of very much favourable condition and its fixed assets were utilizing into full extent. But the sharp increase of ratio during 2056/057 was due to the rise of price of textbook in 2056/057 though the production of text books were on the same level.

Figure: 4.5

## Fixed Assts and Sales



The figure: 4.5 of sales and fixed assets shows that total sales of JEMC is increasing gradually in compare to fixed assets. Fixed Assets of JEMC shows increasing only in the year 2057/2058 and 2065/2066 then after have fluctuated in decreasing trend.

In conclusion, ratio of FATOR increases only due to raise in price in the year 2056/057 and 2065/2066. Though the study shows the improvement in FATOR, to meet its objective and goals JEMC should increase its sales volume.

### 4.3.3 Total Assets Turnover Ratio (TATOR)

TOTOR expresses the relationship between the amount invested in the assets and the results accruing in terms of sales The TATOR of JEMC is computed by dividing the value of net sales from by the value of total assets. It indicates the efficiency with which assets of the organizations have been properly utilised. A higher ratio would mean better utilisation of total assets and lower ratio reflects under utilisation. The ideal ratio in this normally be two

times the value of total assets. Formula of total assets turnover ratio is given below.

$$\text{Total assets turnover ratio} = \frac{\text{Sales}}{\text{Total Assets}}$$

Table: 4.6

### Total Assets Turnover Ratio

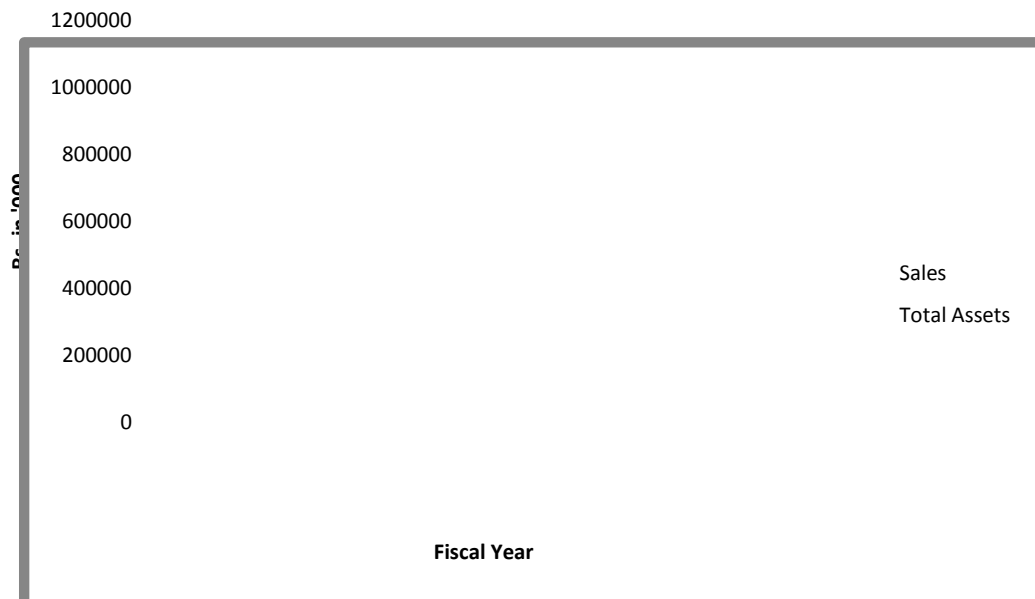
(Rs. In thousand)

<b>Fiscal Year</b>	<b>Sales</b>	<b>Total Assets</b>	<b>TATOR</b>
2056/57	425091	694600	0.61
2057/58	432764	708700	0.61
2058/59	547289	671900	0.81
2059/60	412049	727400	0.57
2060/61	463821	591838	0.78
2061/62	652455	609392	1.07
2062/63	621197	749388	0.83
2063/64	493828	652371	0.76
2064/65	561662	657153	0.85
2065/66	724963	1057240	0.69
<b>Average</b>	<b>533512</b>	<b>711998</b>	<b>0.75</b>

According to the above table the gross operation revenue of JEMC has increased each year during the study period except in the year 2059/2060. The total asset is the sum of fixed assets and current assets of the organization; both of them contribute equal importance in generating income of the organization. Fixed Assets have direct effect over the production of goods while current assets contribute to both the production and sales activities of the organisation. Therefore, the organisation must manage its total assets properly in generating maximum sales through their proper utilisation so that assets don't remain idle.

Figure: 4.6

## Total Assets and Sales



On going through Figure: 4.6, the total assets has steadily growth. The sales have a sharp rise in the year 2056/057 to 2058/059 and 2065/066. Similarly a total asset invested is also increased in the year 2059/060 by 8.25% in comparison to the year 2058/059 though the Average sales turnover has decreased by 29.63 %. As a result it is observed that the investment in total assts seems to be unplanned without making proper analysis of cost and benefits. So, JEMC has to give attention in the revenue generation aspects of assets and their effective utilization as well as the costs of investments.

### 4.3.4 Average Collection Period (ACP) and Debtor Turnover Ratio (DTR)

The Average Collection Period Ratio measures the quality of receivables or debtors since it indicates the average length of time that the firm must wait for receiving cash. The shorter the collection period, the better the quality of debtors. The average collection period should be compared against the firms credit term and policy to judge its credit and collection efficiency. The ACP and DTR can be calculated form the following ways:

$$\text{Average Collection Period:} = \frac{\text{Debtors} \times \text{Days in year (365)}}{\text{Sales}}$$

$$\text{Debtor turnover ratio} = \frac{\text{Sales}}{\text{Debtors}}$$

Table: 4.7

**Average Collection Period and Debtor's Turnover Ratio**

(Rs. In thousand)

Fiscal Years	Receivables	Sales	Collection Period in days	Changes in days	Debtor's Turnover Ratio (times)
2056/57	147163	425091	126		3
2057/58	98978	432764	83	-43	4
2058/59	100364	547289	67	-17	5
2059/60	137282	412049	122	55	3
2060/61	187190	463821	147	26	2
2061/62	53410	652455	30	-117	12
2062/63	36295	621197	21	-9	17
2063/64	39572	493828	30	9	12
2064/65	41423	561662	26	-4	14
2065/66	54588	724963	28	2	13
<b>Average</b>	<b>89627</b>	<b>533512</b>	<b>68</b>	<b>-</b>	<b>9</b>

In above table it can be seen that receivable is in increasing trend only it decrease in the year 2062/063 i.e. Rs. 36295. The revenue from the sales of text book is increasing trend up to the year 2061/062 to 652455 and in the year 2063/064 it decrease from 493828.

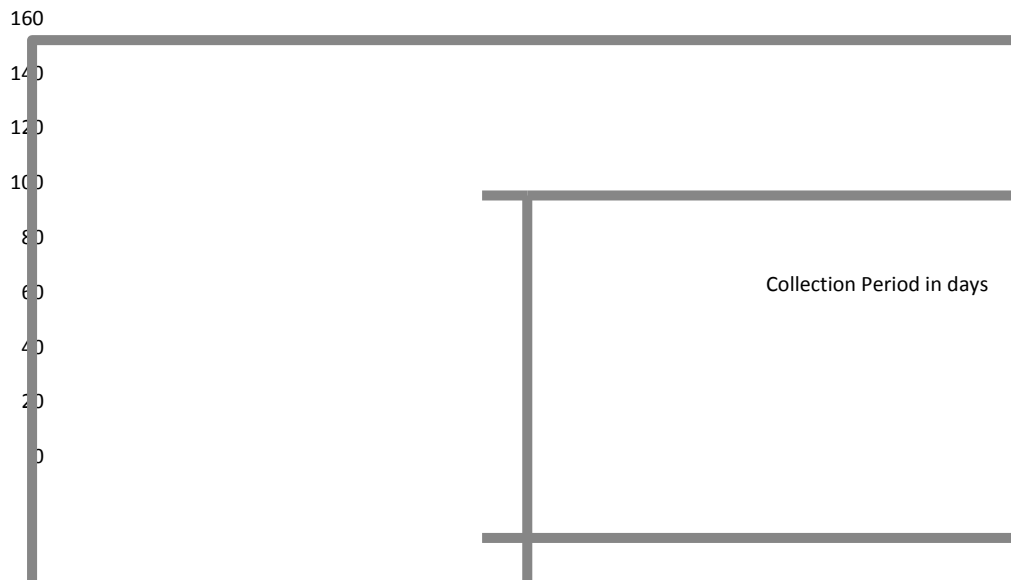
Regarding Collection Period it can be observed that the collection period in the year 2056/057 was 126 days. The collection period is extremely higher in the year 2060/61 and reached to 147 days. The collection period was reduced by 43 days in the year 2057/058 and reached to 83 days. The collection period reduced by 17 in the year 2058/059 and reached to 67, within these two years 2057/58, 2058/059 the scenario of collection period seems improved. But the collection period again increased by 55 and 26 in the years 2059/060 and 2060/061 respectively and reached to 147 and again decreased by 117 in 2061/062.

The average Collection Period for the industries is 73 days. Regarding the collection period of JEMC study is made to the credit policy to Sajha Prakashan and Curriculum Text Centre, they are the sole distributors of JEMC for text book . According to the agreement made between JEMC and Sajha Prakashan, only Rs. 20 million credit is given to Sajha Prakashan for 4 months for the month of Chaitra to Ashad but there is and Average outstanding of Rs. 101 million 2 hundred sixty six thousand which is 5 times more than the agreement. So the collection of debtors is not favourable

According to Debtors Turnover Ratio, it is uniform. The Debtors Turnover Ratio of the year 2056/057 is only 2 times. Similarly the collection period for the year 2057/058, 2058/059, 2059/060, 2060/61, 2061/62, 2062/63, 2063/64 2064/65 and 2065/066 is 4, 5, 3, 2, 12, 17 , 12, 14 and 13 times respectively. So the DTR of JEMC is not favourable.

Figure: 4.7

### Collection Period in days



The above trend line shows average collection period of JEMC. According to the trend line, the average collection period of JEMC is fluctuating. The collection period only in the year 2061/62,2062/63,2063/64 and2064/65 is good. But in other years, collection period is not in the satisfactory level.

So, conclusion can be drawn that receivable management of the JEMC is not is satisfactory level. According to the discussion with JEMC staff its 98% of sales were made on credit basis and remaining 2 % only made of cash basis. The fund needed for its operation was financed through borrowings at high interest rate while on the other hand its own funds were lying idle in the form of receivables and advances without any interest. Thus JEMC have to make clear policy of debt management.

#### 4.4 Profitability Ratio

Profitability Ratios measures a firms earning capacity and operation efficiency. A company must earn a sufficient amount of profit to survive and sustain in the future from its operation. No, firm can exist without a sufficient profit. Therefore, profit is the ultimate outcome of any company.

Profitability ratios of the firm can be calculated in relation to sales and in relation to investment. Profit of JEMC can be found by applying the profitability ratios. Profitability ratio indicate the corporations overall efficiency of operation. It is true that higher the profitability ratio betters the financial position and vice versa. Thus, financial manager should consciously evaluate the efficiency of the company in terms of profit. The profitability ratios are calculated to measure the operating efficiency of the company. Two major types of profitability ratios are calculated.

1. Net Profit to Net Worth (Return on Investment)
2. Net Profit to Net Sales

#### 4.4.1 Net Profit to Net worth (Return on Investment)

**In order to evaluate whether the company is making an adequate profit or reasonable return on investment or not, the net profit to net worth ratio is used. This ratio judges the effectiveness in using the total fund supplied by the owners and creditors. Higher ratio shows the higher return on the assets used in the business thereby indication effective use of the resources available and vice versa. It can be calculated by dividing Net Profit before tax and bonus to net worth.**

$$\text{Net Profit to Net worth Ratio} = \frac{\text{Net Profit before tax and bonus}}{\text{Net Worth}}$$

Table: 4.8

## Net Profit to Net Worth Ratio

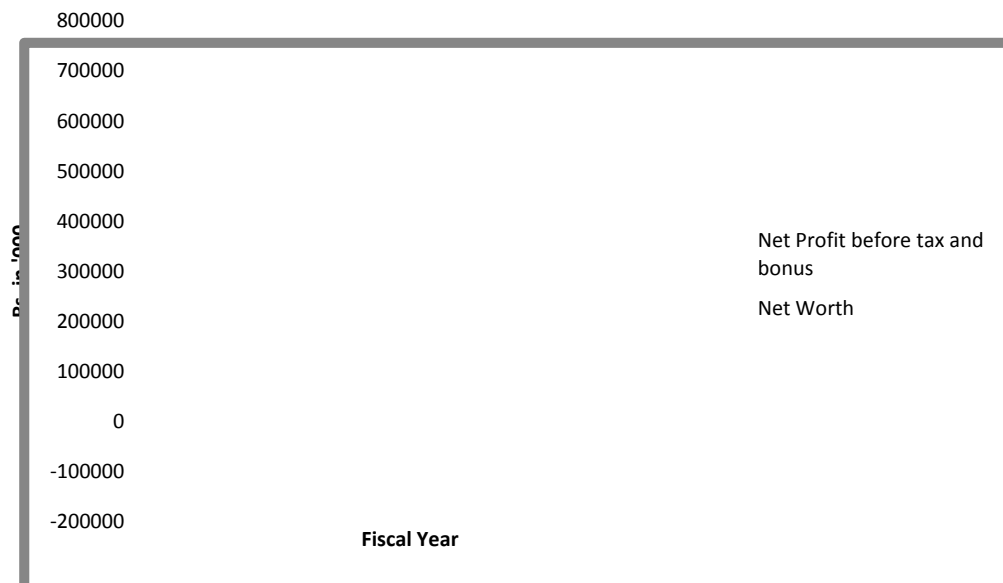
(Rs. In  
thousand)

<b>Fiscal Years</b>	<b>Net Profit before tax and bonus</b>	<b>Net Worth</b>	<b>Net Profit to Net worth ratio (%)</b>
2056/57	237120	478621	0.5
2057/58	481793	532198	0.9
2058/59	727420	562872	1.3
2059/60	744136	565885	1.3
2060/61	8369	591838	0.01
2061/62	34475	609392	0.06
2062/63	32345	648489	0.05
2063/64	(30180)	553663	(0.05)
2064/65	(88006)	469969	(0.18)
2065/66	(132731)	337237	(0.39)
<b>Average</b>	<b>201905</b>	<b>535016</b>	<b>0.38</b>

In the table: 4.8, it is observed that the highest rate of return on investment is 1.3 in the two years 2058/059 and 2059/060. The investor of JEMC i.e. the government's expectation of return on investment is 7 % to 9 % where as the actual average return on investment for the study period is 0.9%. The net profit before tax to net worth ratio or return on investment is very low. If we go through the Profit and loss account there is an operating loss instead of negligible profit from 2063/064 to 2065/066.

Figure: 4.8

## Net Profit and Net Worth



According to the Figure: 4.8, Net Profit is increasing in trend and Net Worth or Return on Investment are also in increasing trend. Though both of them are in increasing trend JEMC is not making reasonable return on investment

In order to have a reasonable rate of return the management must curtail the unnecessary overheads and working capital.

### 4.4.2 Net Profit to Sales Ratio

This ratio measures the overall profitability of the firm by establishing relationship between net profit and sales. A high net profit margin would enable the firm to withstand adverse economic conditions and a low margin will have opposite implications. The relationship between net profit and sales indicates management's ability to operate the business with sufficient success not only to recover the cost of production, operation expenses of business and cost of borrowed fund but also to leave a margin of reasonable compensation to the owners for providing their capital at risk. It can be calculated by dividing Net Profit by Sales and expressed as percentage of net sales

Sales constitute the fundamental dynamic force in a business enterprise. Without sufficient sales of goods and services business may not be successful. The ratio of net profit to sales shows the profitability of corporations indicating that the only increase in sales does not mean anything unless it commands profit. From this ratio it can also be acquired the information of the total expenses incurred during a certain period of time. Formula and calculation of net profit to sales ratio is presented below.

$$\text{Net Profit to Sales Ratio} = \frac{\text{Net Profit}}{\text{Sales}}$$

Table: 4.9

### Net Profit to Sales Ratio

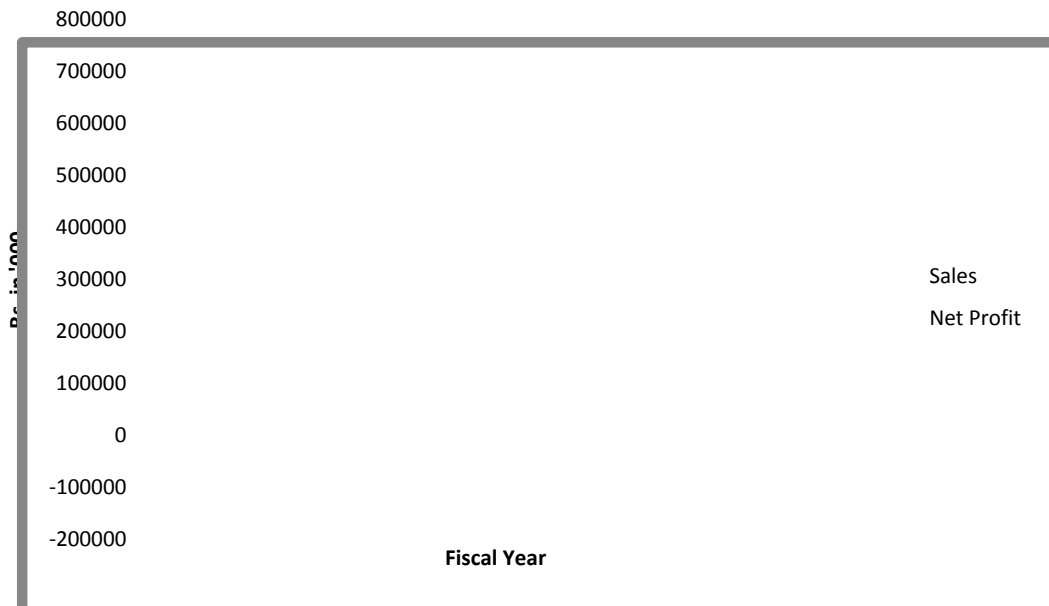
(Rs. In thousand)

<b>Fiscal Years</b>	<b>Sales</b>	<b>Net Profit</b>	<b>Net Profit to sales</b>
2056/57	425091	237120	0.55
2057/58	432764	481793	1.1
2058/59	547289	727420	1.31
2059/60	412049	744136	1.78
2060/61	463821	8369	0.02
2061/62	652455	34475	0.05
2062/63	621197	32345	0.05
2063/64	493828	(30180)	(0.06)
2064/65	561662	(83694)	(0.15)
2065/66	724963	(132731)	(0.18)
<b>Average</b>	<b>533512</b>	<b>201905</b>	<b>0.38</b>

From the table: 4.9, it can be observed that the ratio of Net Profit to Sales is increasing year by year by the year 2059/60 than decreased than after and increase highly in 2065/066. The maximum ratio is 1.78% in the year

2059/2060 and minimum ratio is 0.02% in the year 2060/61 then after negative in the year 2063/064, 2064/065 and 2065/066. Consequently the ratio is not in favourable or expected condition though the ratios are in increasing trend.

Figure: 4.9  
Net Profit and Sales



The Figure: 4.9 of profit and sales of JEMC shows that the profit of JEMC is in increasing trend and sales are in fluctuating position. Though it is earning profit, it does not mean that its net profit is very good. As mentioned earlier, the expenses in JEMC still does not seem to be in due control therefore the management of JEMC should take initiative actions to reduce unnecessary and wasteful expenses.

## 4.5 Leverage Ratio

### 4.5.1 Debt-equity Ratio (Fixed assets to Net Worth)

It is the test of long-term solvency of the firm. Debt-equity ratio measures the relative claims of creditors and owners against the assets of the firm. This

ratio indicates the relationship between debt and equity i.e. outsiders funds and shareholders funds which are sometime called as external and internal equities. The ratio is also termed as debt to net worth ratio. It can be calculated either by dividing the Fixed Assets by Net Worth or Total Debt by Shareholder's Equity/funds. For a industry company the standard derived ratio is 65%, However, if the nature of the company is distributive or advertising then a lower ratio is considered satisfactory.

The ratio of Fixed Assets to Net Worth is most important ratio to find out the percentage of fixed assets financed by owners of the organisation. The fixed asset for an organization is required by the nature of the organization. The proprietors of the organization have to invest in fixed assets as a permanent investment. It can be financed by outward sources like banks and financial institutions but excessive reliance on creditors and loans form banks is a sign of weakness of the organization. Formula and calculations of the ratio is shown below.

$$\text{Fixed Assets to Net Worth Ratio} = \frac{\text{Fixed Assets}}{\text{Net Worth}}$$

Table: 4.10

### Fixed Assets to Net Worth Ratio

(Rs. In thousand)

<b>Fiscal Years</b>	<b>Fixed Assets</b>	<b>Net Worth</b>	<b>Ratio in %</b>
2056/57	276277	478621	58%
2057/58	338264	532198	64%
2058/59	297101	562872	53%
2059/60	277538	565885	49%
2060/61	267472	591838	45%
2061/62	259808	609392	43%
2062/63	248256	648489	38%
2063/64	249179	553663	45%
2064/65	251777	469969	54%
2065/66	261271	337237	77%

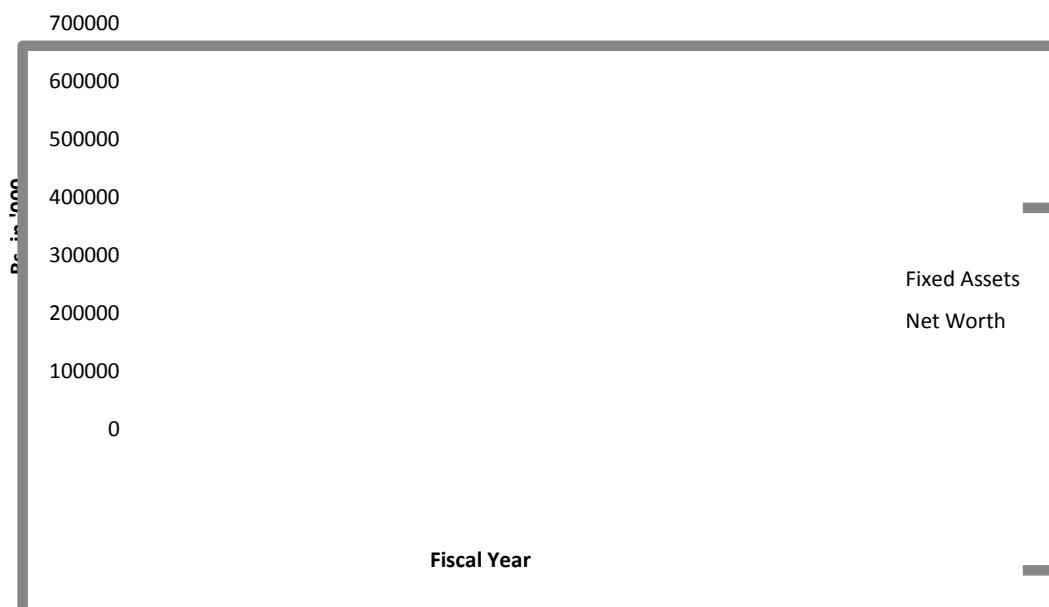
<b>Average</b>	<b>272694</b>	<b>535016</b>	<b>51%</b>
----------------	---------------	---------------	------------

The table: 4.10 show that the ratio (in percentage) is 58% for the year 2056/057 and then it increased in 64% in the year 2057/058. Again the ratio increases highly in the year 2065/2066 as 77%. Thus the tendency of fixed assets to net worth has again decreased to 53 %, 49%, 45%, 43% and 38% in the remaining five years 2058/059 and 2062/063 respectively and again starts to increase in 2063/064 ,2064/065 and 2065/066.

So, conclusion can be drawn that Fixed Assets to Net Worth does not reach to the general industries standard (i.e. 65%) for five following years except in the year 2065/066.

Figure: 4.10

### Fixed Assets and Net Worth



The graph shows the relation between total fixed assets and Net Worth of JEMC. The increasing trend of fixed asset increased up to the year 2057/058 and begins to decline. In other hand Net Worth is in increasing trend. Though its Net worth (equity) is in increasing JEMC is not in a position to cover its long-term debts or in a satisfactory level.

#### 4.5.2 Total Debt Ratio (Current Liabilities to Net Worth)

**The ratio of current liabilities to Net Worth measures the relative contribution of short-term creditors and owners in the capital of the organization. If the fund provided by them is insufficient, the organization has to rise from banks and financial institution on a high rate of interest, which will be a burden to the organization. The ratio is calculated by dividing the current liabilities by Net Worth. The general industrial standard for current liabilities to net worth is 30 % to 35%. The standard also depends the nature of the business.**

$$\text{Current Liabilities to Net Worth Ratio} = \frac{\text{Current Liabilities}}{\text{Net Worth}}$$

Table: 4.11

#### Current Liabilities to Net Worth Ratio

(Rs. In thousand)

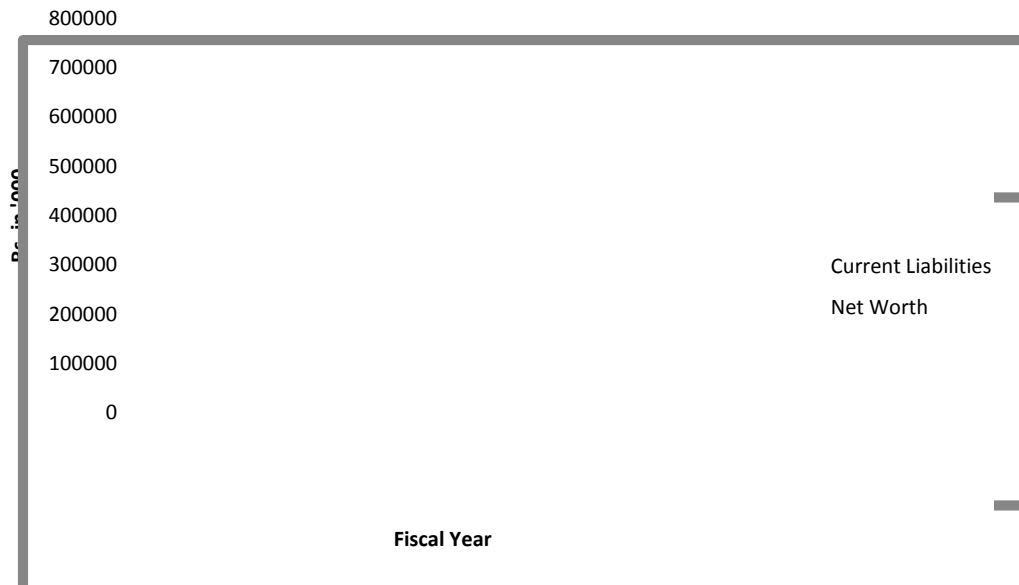
Fiscal Years	Current Liabilities	Net Worth	Ratio in (%)
2056/57	215992	478621	45%
2057/58	146843	562198	26%

2058/59	109077	562872	19%
2059/60	161511	565885	29%
2060/61	98899	591838	17%
2061/62	220318	609392	36%
2062/63	103135	648489	16%
2063/64	103617	553663	19%
2064/65	187283	469969	40%
2065/66	720103	337237	214%
<b>Average</b>	<b>206677</b>	<b>535016</b>	<b>39%</b>

The table: 4.11 shows that the total Current Liabilities fluctuate throughout the year but Net worth of JEMC is in increasing trend. The ratio of current liabilities to net worth for the year 2055/056 to 2056/057 is 32% and 45%, which covers the general industrial standard and it good for JEMC. Whereas for the year 2057/058 to 2063/64, the ratios were 26%, 19%, 29%, 17%, 36%,16% and 19% respectively, which do not reached to the general industrial standard. Finally it reaches to 214% in 2065/066. So, in these year Current Liabilities to Net Worth is not satisfactory for JEMC.

Figure: 4.11

### Current Liabilities and Net Worth



In the Figure: 4.11 Current Liabilities increased up to the year 2056/057 and have a fluctuate position then after. Net worth of JEMC is increasing trend. Though the trend of Current Liabilities is in fluctuating trend the Net worth of JEMC is increased by 17% in the year 2057/058 and increased gradually in the following years. Thus, it can be observed that the current liability to net worth ratio of JEMC is not so satisfactory.

#### 4.6 Funds Flow Statement

On the evaluation of financial position of a concern, only the increase or decrease ratio is not sufficient one must have knowledge about the movement of funds into the organisation. A huge amount of capital investment does not mean the well condition of the concern. The capital invested in the concern must circulate in the various sector, which accumulates funds or multiply the funds or generate funds as the blood circulate in our body. If the funds kept stand still for a long time and does not generate further fund, the organization position cannot be said as efficient or good.

While evaluating the financial position of a concern, fund flow analysis can be used as another significant technique of financial analysis. This technique is

designed to highlight changes in the financial condition of a concern between two financial dates. On the commencement of business the funds obtained or invested by the promoter will be used in acquiring fixed or current assets according to the nature of the business concern. In the course of its business activity they circulate at a necessary rate from one point to another and complete the cycle and repeat it again like cash to raw material, raw material stock to finished goods inventory, inventory to receivables and receivables to cash etc.

Since the funds are called circulation or working capital it circulates as above as the nature of the business if it does not circulate and interrupted or retained in one sector for a long time it does not generate further wealth. Consequently the business concern may be collapsed.

**As the name implies the fund flow statement showing sources and application of funds popularly known as “Fund Flow Statement. The study of fund flow statement depicts how the firm's liquid cash and credit fund (resources) have been employed. It will emphasise on understanding of the means by which increase in the firms wealth have been financed, from which funds were derived and used or it identify the changes that have accrued in assets and liabilities items between two different balance sheets. So, it is a progress report on the changes in the**

## **composition of a firm's net wealth during the sturdy period**

Comparatively, use of fund is more than the sources of fund in total. It mean there is decrease in the fund in this seven years period. This creates difficulties in working capital management. So the management should think over the management of working capital properly.

### **4.7 Cost Analysis**

**During a certain period financial accounts was deemed as a tool of providing the financial information of any business recording transaction. It furnishes profit and loss account and Balance sheet revealing financial position as at the end of the period by which the success or failure of the organisation is depicted. Today, following the industrial Revolution the business organisation have to face keen competition in the national and international market. A business concerns must know actual financial position time to time. Beside these one should be cost conscious, as it is helpful in fixing price of its product in a competitive basis. So, a business concern whether it is a trading or manufacturing should know the cost in**

## **acquiring the goods or the operation cost (the cost incurred in the process of its product or in the services rendered)**

In this cost conscious market, mere knowledge of total cost of sales cannot satisfy the management and may not be in a position to control the various cost of product. For the proper decision making the management must have clear picture of different elements of cost. Generally elements of costs are bifurcated as Direct and Indirect Cost. The direct costs are also further divided into direct material, direct labour and direct expenses. Similarly the Indirect expenses are also bifurcated as works overhead, selling and distribution overhead and Administration overhead. (Taken form the book, Lectures on Costing).

Apart form the analysis of the total coast by its elements, another method of analysis, which is often used in costing, is the decision of the total cost between fixed and variable cost. In simple terms the variable costs are the items of expenditure, which vary with the units of product produce, whilst the fixed costs are those, which remain more or less constant irrespective of an increase or decrease in the number of units produced. Items comprising the prime cost viz. the Direct Material, Direct Labour and the Direct Expenses are normally variable costs. Whist most items of overhead expenditure are fixed cost. The classification is very important in guiding management decisions regarding changes in production capacities and in fixation of selling prices etc and controlling cost element overheads. Following this method JEMC also bifurcated the total cost into two parts i.e. press expenditure as variable cost and selling, distribution and administrative expenses as fixed cost.

According to the balance sheet of JEMC, the total cost of cost of sales is classified into (a) Direct or variable cost (b) Indirect or Fixed Cost. Again the fixed cost is subdivided into two division (a) Indirect expenses (b) Provision for expenses. In other words the total cost constitutes direct cost, indirect cost and provision for expenses. Among provisions the provisions for depreciation

is the major portion, which affects the cost of sales and consequently the profitability of a concern though working capital of the company is not affected. It is observed that paper is the biggest component among variable cost (i.e. 71.48%) followed by salaries and allowances (i.e. 17.24%). These two components combined together play a vital role in pricing textbook of JEMC. Since these two components constitute a major part of cost of production, the management must always be alert in procuring the paper for printing text books and proper capacity utilization of labour.

Regarding Fixed Cost (a) Salaries and allowances of administrative staffs (b) Bank interest (c) Depreciation are the major components. In every year salaries and allowances increased steadily and depreciation is also increased steadily as these two components are uncontrollable fixed cost. From the table it can also be observed that there is huge amount of interest paid. As a result the cost of bank interest influenced in the profitability of JEMC also seems that the working capital is not managed properly.

So, conclusion can be drawn that salaries, wages as a whole, paper cost, and bank interest are three major components of total cost of sales. So, management needs to have close observation on these factors for upgrading the financial position of organization.

#### **4.8 Pricing of Text Book in JEMC**

According to the policy of JEMC, it is known that the JEMC had adopted the pricing of Rs. 0.20 per page of the textbook. Without analysing its cost it has been pricing the book as 20 paise per page of the textbook. In this section an attempt is done to analyse the cost of sale per page after adjusting 10% profit on cost and 20% commission on sales.

#### **4.9 Break Even Analysis**

**Break Even Analysis is used as another tool of evaluating a business concern as a more advance and improved technique of**

**financial analysis. It is concerned with the Cost Volume Profit Analysis. It magnifies a set of inter relationship of fixed cost, variable cost, the level of activity, sales mix and the profitability of the concern. This analysis is made mathematically to find out the BEP, Contribution and margin of safety etc.**

**Table: 4.12  
Break Even Analysis**

**(Rs. In  
Thousand)**

Year	2056/57	2057/58	2058/59	2059/60	2060/61	2061/62	2062/63	2063/64	2064/65	2065/66
Total Sales Revenue	428,814	438,045	553,220	418,100	494,053	669,568	630222	507413	567237	732924
Less, Com. on Sales	74,734	75,064	100,179	75,859	95,737	118,152	109580	-	-	-
Net Sales Income	354,080	362,981	453,041	342,241	398,316	551,416	520642	507413	567237	732924
Less, Variable Cost	263,479	250,960	313,977	234,717	241,710	369,593	378008	448003	534404	708198
Contribution Margin	90,601	112,021	139,064	107,524	156,606	181,823	142634	59410	32833	24726
Fixed Cost	88,230	107,203	131,790	100,083	104,168	168,649	110289	89590	116527	157457
Profit	2,371	4,818	7,274	7,441	52,438	13,174	32345	(30180)	(83694)	(132731)
BEP (in Rs.)	344,814	347,369	429,344	318,557	377,451	527,386	402514	765726	1942116	5248567
BEP in %	97.38	95.70	94.77	93.08	94.76	95.64	77.31	150.91	342.38	716.11

From the table: 4.12, it is found that the margin of safety of the JEMC is very low in each of the year. The highest margin of safety is 6.92% in the year 2059/60 and the lowest safety of margin is 1.35% in the year 2055/56. It means either the actual sales are nearly to the BEP sales or the fix cost of the centre is very high. So the bank should increase the margin of safety to manage its working capital properly and easily.

## 4.10 Correlation Analysis

Correlation is a statistical tool, which studies the relationship between two variables. Correlation coefficient summarized in one figure, the degree and they extend to which the two variables are correlated but it does not tell about cause and effect.

For analyzing the relationship between two variables, Karl Pearson's correlation coefficient ( $r$ ) has been used. Correlation analysis describes the positive or negative relationship between variables. It helps to determine whether there is:

- ❖ A positive or negative relationship exists
- ❖ The relationship is significant or insignificant and
- ❖ Establish cause and effect relation if any

The statistical tool, correlation analysis is preferred in this study to identify the relationship between variables, whether the relationship is significant or not. For the purpose of decision-making, interpretation is based on following term:

1. When  $r = 1$ , there is perfect positive correlation.
2. When  $r = -1$ , there is perfect negative correlation
3. When  $r = 0$ , there is no correlation
4. When ' $r$ ' lies between 0.7 to 0.999 (-0.7 to 0.999) there is a high degree of positive ( or negative ) correlation.
5. When ' $r$ ' lies between 0.5 to 0.699, there is moderate degree of correlation.
6. When ' $r$ ' is less than 0.5, there is low degree of correlation.

### 4.10.1 Correlation between Total Inventories to Working Capital

**The coefficient of correlation between total inventories to working capital is to measure the degree of relationship between these two variables. In the analysis total inventories is dependent variable and total working capital is independent variable. The purpose of the computing correlation coefficient is to justify whether there is any relationship between two variables or not.**

From the computation (see appendix - I), it is found that the coefficient of correlation between total inventories and working capital is -0.73. It shows that there is moderate degree of negative correlation between these two variables.

**Calculation of Probable Error (P.E.)**

$$\begin{aligned} \frac{0.6745(1-r^2)}{\sqrt{n}} \text{ P.E.} &= \\ &= \frac{0.6745(1-(-0.76)^2)}{\sqrt{10}} = 0.09 \end{aligned}$$

Now,  $10 \times \text{P.E.} = 10 \times 0.09 = 0.9$

**Since, r is near to 6 x P.E, The value of r is significant i.e. there is significant relationship between total inventories to working capital.**

#### 4.10.2 Correlation between Total Receivables to Total Sales

**The coefficient of correlation between total receivables to total sales is to measure the degree of relationship between these two variables. In the analysis total receivable is dependent variable and total sales are independent variable. The purpose of the computing correlation coefficient is to justify whether there is any relationship between two variables or not.**

From the computation (see appendix - II), it is found that the coefficient of correlation between total receivables to total sales is -0.68. It shows that there is low degree of negative correlation between these two variables.

Calculation of Probable Error (P.E.)

$$\begin{aligned} \frac{0.6745(1-r^2)}{\sqrt{n}} \text{ P.E.} &= \\ &= \frac{0.6745(1-(-0.68)^2)}{\sqrt{10}} = 0.11 \end{aligned}$$

**Since,  $r < \text{P.E}$ , The value of  $r$  is not significant at all i.e. there is no significant relationship between total receivables to total sales.**

#### 4.10.3 Correlation between Net Profits to Total Sales

**The coefficient of correlation between net profits to total sales is to measure the degree of relationship between these two variables. In the analysis net profit is dependent variable and total sales is independent variable. The purpose of the computing correlation coefficient is to justify whether there is any relationship between two variables or not.**

From the computation (see appendix - III), it is found that the coefficient of correlation between net profits to total sales is -0.64. It shows that there is perfect negative correlation between these two variables.

**Calculation of Probable Error (P.E.)**

$$\begin{aligned} \frac{0.6745(1-r^2)}{\sqrt{n}} \text{ P.E.} &= \\ &= \frac{0.6745(1-(-0.64)^2)}{\sqrt{10}} = 0.13 \end{aligned}$$

**Here, probable error is 0.13. It means there is error in calculation of correlation coefficient. It justifies there is significant relation between net profits to total sales.**

**4.10.4 Correlation between Current Liabilities to Net Worth**

**The coefficient of correlation between current liabilities to net worth is to measure the degree of relationship between these two variables. In the analysis current liabilities is dependent variable and net worth is independent variable. The purpose of the computing correlation coefficient is to justify whether there is any relationship between two variables or not.**

From the computation (see appendix - IV), it is found that the coefficient of correlation between current liabilities to net worth is -0.83. It shows that there is high degree of negative correlation between these two variables.

**Calculation of Probable Error (P.E.)**

$$\begin{aligned} \frac{0.6745(1-r^2)}{\sqrt{n}} \text{ P.E.} &= \\ &= \frac{0.6745(1-(-0.83)^2)}{\sqrt{10}} = 0.21 \end{aligned}$$

Since,  $r < \text{P.E.}$ , The value of  $r$  is not significant at all i.e. there is no significant relationship between current liabilities to net worth

#### **4.10.5 Correlation between Net Profits to Net Worth**

**The coefficient of correlation between current liabilities to net worth is to measure the degree of relationship between these two**

**variables. In the analysis current liabilities is dependent variable and net worth is independent variable. The purpose of the computing correlation coefficient is to justify whether there is any relationship between two variables or not.**

From the computation (see appendix -V), it is found that the coefficient of correlation between net profits to net worth is 0.38. It shows that there is high degree of positive correlation between these two variables.

**Calculation of Probable Error (P.E.)**

$$\begin{aligned} & \frac{0.6745(1-r^2)}{\sqrt{n}} \text{ P.E.} = \\ & = \frac{0.6745(1-(0.38)^2)}{\sqrt{10}} = 0.18 \end{aligned}$$

Now,  $10 \times \text{P.E.} = 10 \times 0.18 = 1.8$

**Since,  $6 \times \text{P.E} > r$ , The value of r is not significant i.e. there is no significant relationship between net profit to net worth.**

## **Chapter Five**

### **Summary, Conclusions and Recommendations**

#### **5.1 Introduction**

In this chapter, summary and conclusions of the research as well as recommendations are presented separately. After summarizing and concluding the research, recommendations are suggested to JEMC regarding the financial performance of Center. The researcher has tried to give suggestions and recommendations to the concerned center and further researcher based on this research.

#### **5.2 Summary**

Basically, the entire research work has focused on the study on financial aspect of JEMC based on working capital management. For this study, seven years period secondary data, i.e. 2056/57 to 2065/66, are taken. Balance sheet, profit and loss accounts and their appendixes are studied. For necessary information regarding the practice of JEMC, personal contact with the staffs of the JEMC is made. The general objective of the study is to analyze the financial aspect of JEMC. To meet the general objective, other specific objectives are formulated as follows.

**1) TO STUDY THE GROWTH OF THE COMPANY (I.E. PRODUCTION, SALES AND FINANCIAL POSITION) FOR THE FISCAL YEAR 2056/2057 – 2065/2066.**

- 2) To evaluate the financial analysis (working capital management).
- 3) To examine costing procedure and pricing policy.
- 4) To examine production procedure and capacity utilization of the existing machines.
- 5) To give suggestions, ideas and recommendations based on the analysis of the data.

To meet the research objectives this study is divided into five chapters. First is introduction chapter, which includes general background, profile of the organization under study, statement of problem, objectives of the study, significance of the study, limitations of the study, and organization of the study.

**THE SECOND CHAPTER DEALS WITH REVIEW OF THE LITERATURE. IT REVIEWS AVAILABLE LITERATURE REGARDING FINDING AND RECOMMENDATION OF PREVIOUS**

## **RESEARCH WORK MADE IN RESPECT OF JEMC**

The chapter third explains research methodology used in this study. It will include the research design, population and sampling procedures, sources of data and their collection procedure, tools for analysis and methods of analysis.

The fourth chapter focuses on presentation and analysis of data. This chapter will concern with the application of defined research method on the collected data and information. The generated results after the application of research method on data will be analyzed and interpreted in this chapter.

This fifth chapter presents summary conclusion and recommendations of the study. This fifth chapter presents summary, conclusion and recommendations of the study based on the facts found from observations and analysis of data's presented in the fourth chapter.

**THIS STUDY IS SUFFERS FROM  
DIFFERENT LIMITATIONS; FOR THE  
LACK OF SUFFICIENT TIME, ENOUGH  
ECONOMIC RESEARCH AND THE  
RIGOROUS TIME SCHEDULE, THE  
RESEARCHER IS COMPELLED TO LIMIT  
THE STUDY IN THE FOLLOWING WAYS.**

- 6) The study is based on the secondary data.
- 7) The study is based on the financial statements (Balance sheet / Profit and loss) of JEMC.

8) The study is based on the annual publications of JEMC and Curriculum Development center.

9) The study covers a period of ten fiscal years terms from 2056/57 to 2065/66.

10) The study is focused mainly on financial analysis (working capital management, costing procedure, pricing policy, production procedure, capacity utilization and collection of credit etc) of textbook produce in JEMC.

### **5.3 Conclusions**

From the analysis of the data, following conclusions have been drawn out.

It observed that the trend of current ration of JEMC over ten years is always more than the average standard norm of 2:1 except in the year 2056/2057 and 2065/2066 which is 1.90:1 and 1.11:1 respectively.

The quick ratio in 2058/2059, 2060/61, 2061/62, 2062/63 and 2063/64 are 1.12, 2.17, 1.51, 2.30 and 1.77 respectively, which shows the satisfaction position of liquidity with in the organization and quick ratio of other remaining years are below the standard ratio.

The ratio of inventory to working capital is 1.14:1 in 2056/2057 B.S., which has, goes down to 0.55:1 in 2060/2061. The ratio is decreasing up to 0.55:1, which seems that JEMC is maintaining high level of inventory or with respect to inventory level. The working capital is very low for which the fund is financed by bank loan.

The coefficient of correlation between total inventories and working capital is -0.73. It shows that there is moderate degree of negative correlation between these two variables.

The coefficient of correlation between total receivables to total sales is -0.68. It shows that there is negative correlation between these two variables.

The coefficient of correlation between net profits to total sales is -0.64. It shows that there is negative correlation between these two variables.

The coefficient of correlation between net profits to net worth is 0.38. It shows that there is low degree of positive correlation between these two variables.

Inventory turnover ratio for ten years indicates that the ratio has fluctuated steadily and it is not in satisfactory level.

The Fixed Asset Turnover Ratio (FATOR) of JEMC is in increasing trend. The ratio of 2056/2057 is 1.54 and it has increased to 2.77 in 2065/2066. The ratio has highly increased during the study period of seven years. It is a sign of very much favorable condition and its fixed assets were utilizing into full extent.

The Debtors Turnover Ratio for the year 2056/057 is only 2 times. Similarly the DTR for the year 2057/058, 2058/059, 2059/060, 2060/61, 2061/62, 2062/63,2063/64, 2064/65 and 2065/66 is 4, 5, 3, 2,12, 17,12,14 and 13 times respectively. So the DTR of JEMC is not favorable. Likewise The Collection Period is 126, 83, 67, 122, 147, 30, 21, 30,26 and 28 respectively in the year 2056/57 to 2065/66.

The investor of JEMC i.e. the government's expectation of return on investment is 7 % to 9 % where as the actual average return on investment for the study period is 0.9%. The net profit before tax to net worth ratio or return on investment is very low till 2062/63. But in the year 2063/64 to 2065/66 the centre is in loss. The trend of occurring loss is in increasing ratio.

Fixed Assets to Net Worth does not reach to the general industries standard (i.e. 65%) for ten following years except in the beginning year 2065/066 and 2057/58. Though its Net worth (equity) is in increasing trend JEMC is not in a position to cover its long-term debts or in a satisfactory level.

The ratio of current liabilities to net worth for the year 2056/057 is 45%, which covers the general industrial standard and it good for JEMC. Whereas for the year 2057/058 to 2060/61, the ratios were 26%, 19%, 29% and 17% respectively, which do not reached to the general industrial standard. Likewise in the year 2062/63 to2064/65 the ratios were 36%, 38%, 45% and 54%. Finally in the year 2065/66 , the ratio were 214%.

The coefficient of correlation between current liabilities to net worth is -0.83. It shows that there is high degree of negative correlation between these two variables.

It is found that the margin of safety of the JEMC is very low in each of the year. The highest margin of safety is 6.92% in the year 2059/60 and the lowest safety of margin is 1.35% in the year 2055/56. It means either the actual sales are nearly to the BEP sales or the fixed cost of the center is very high.

It is found that the source of fund and application of the fund are changed by fluctuating trend. Comparatively, use of fund is more than the sources of fund in total. It means there is decrease in the fund in this seven years period. This creates difficulties in working capital management.

## **5.4 Recommendations**

Suggestion is the output of the study. It helps to take corrective action in their activities in future. On the basis of analysis and the findings of the findings of the study, following suggestions and recommendations are made to overcome weaknesses and inefficiency of the concerned body.

Current ratio and quick ratio of the JEMC are reached the standard of the organization. It is suggested to continue maintaining the standard so that the organization could cover short-term obligations properly.

JEMC is maintaining high level of inventory or with respect to inventory level. The working capital is very low for which the fund is financed by bank loan. Due to these reason JEMC has to bear high amount of interest in one day in other hand there is a risk of damage books and out dated books if the Curriculum Text Book Center (CTC) change the curriculum without concerning to JEMC.

The fixed assets turnover ratio has highly increased during the study period of seven years. It is a sign of very much favourable condition and its fixed assets were utilizing into full extent. It is suggested to maintain the ratios as same as the study period.

Fixed Assets have direct effect over the production of goods while current assets contribute to both the production and sales activities of the organisation. The organisation should manage its total assets properly in generating maximum sales through their proper utilisation so that assets don't remain idle.

According to the agreement made between JEMC and Sajha Prakashan, only Rs. 20 million credit is given to Sajha Prakashan for 4 months for the month of Chaitra to Ashad but there is average outstanding of Rs.101 million 2 hundred sixty six thousand which is 5 times more than the agreement. So the collection of debtors is not favourable. So the organization is suggested to review and take corrective action to reduce the credit and credit period.

The receivable management of the JEMC is not satisfactory level. According to the discussion with JEMC staff its 98% of sales were made on credit basis and remaining 2 % only made of cash basis. The fund needed for its operation was financed through borrowings at high interest rate while on the

other hand its own funds were lying idle in the form of receivables and advances without any interest. Thus JEMC have to make clear policy of debt management.

JEMC is not making reasonable return on investment. In order to have a reasonable rate of return the management must curtail the unnecessary overheads and working capital. The centre is in loss since 2063/64 up to now. The trend of loss of JEMC is increasing every year .

Though, the ratio of Net Profit to Sales lies within 1.78% to 0.02%. Consequently the ratio is not in favourable or expected condition even the ratios are in increasing trend.

The expenses in JEMC does not seem to be in due control therefore the management of JEMC should take initiative actions to reduce unnecessary and wasteful expenses.

The current liability to net worth ratio of JEMC is not so satisfactory. So the management of JEMC should take corrective action to overcome the current obligations.

JEMC has been pricing the books at the rate of Rs.0.20 paisa per page; however, the selling price is lower than the expected sales price. Here is contradiction on the actual selling price and expected selling price. So JEMC is making less than 10% profits each year. So the management of JEMC is suggested to change the pricing policy. In other word, it should price the textbooks after adjusting reliable profit in total cost.

The margin of safety of the JEMC is very low in each of the year. It means either the actual sales are nearly to the BEP sales or the fix cost of the centre is very high. So the bank should increase the margin of safety to manage its working capital properly and easily.

The use of fund and the sources of fund of JEMC are fluctuated highly and irregularly. The uses of fund are more than the sources of fund in total. It means there is decrease in the fund in this ten years period. This creates difficulties in working capital management. So the management should think over the management of working capital properly.

On going through the productivity, the resources acquired by JEMC have not been utilized properly. So it will be better to utilize the tangible and intangible assets as well as resources i.e. man, money, material and machine in full volume.

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## Appendix - I

### Calculation of Correlation between total Inventories to Working Capital

Total inventory (X)	Working Capital (Y)	$x=X-\bar{X}$	$y=Y-\bar{Y}$	$x^2$	$y^2$	xy
2213	1946	-296	-673	87616	459292	199208
2312	2179	-197	-440	38809	193600	86680
2262	2618	-247	-1	61009	1	247
2706	2849	197	230	38809	52900	45310
1771	3207	-738	588	544644	345744	-433944
2120	3478	-389	859	151321	737881	-334151
2262	3980	-247	1361	61009	1852321	-336167
2300	2996	-209	377	43681	142129	-78793
2255	2181	-254	-438	64516	191844	111252
4888	758	2379	-1861	5659641	3463321	-4427319
$\Sigma x = 25089$	$\Sigma y = 33020$			$\Sigma x^2 = 6751055$	$\Sigma y^2 = 7432670$	$\Sigma xy = -5167677$

Calculation of means,

$$\bar{X} = \frac{\Sigma x}{N} = \frac{25089}{10} = 2509$$

$$\bar{Y} = \frac{\Sigma y}{N} = \frac{33020}{10} = 3302$$

Calculation of Correlation Coefficient

$$r = \frac{\Sigma xy}{\sqrt{\Sigma x^2} \sqrt{\Sigma y^2}}$$

$$= \frac{-5167677}{\sqrt{6751055} \sqrt{7432670}}$$

$$= -0.73$$

## Appendix - II

### Calculation of Correlation between Receivable to Sales

Receivable (X)	Sales (Y)	x=X- $\bar{X}$	y=Y- $\bar{Y}$	x <sup>2</sup>	y <sup>2</sup>	xy
1471	4250	575	-1084	330625	1175056	-623300
989	4327	93	-1007	8649	1014049	-93651
1003	5472	107	138	11449	19044	14766
1372	4120	476	-1214	226576	1473796	-577864
1871	4638	975	-696	950625	484416	-678600
534	6524	-362	1190	131044	1416100	-430780
362	6211	-534	877	285156	769129	-468318
395	4938	-501	-396	251001	156816	198396
414	5616	-482	282	232324	79524	-135924
545	7249	-351	1915	123201	3667225	-672165
<b><math>\Sigma x = 8956</math></b>	<b><math>\Sigma y = 53345</math></b>			<b><math>\Sigma x^2 = 2550650</math></b>	<b><math>\Sigma y^2 = 10255155</math></b>	<b><math>\Sigma xy = -3467440</math></b>

Calculation of means,

$$\bar{X} = \frac{\Sigma x}{N}$$

$$= \frac{8956}{10}$$

$$= 896$$

$$\bar{Y} = \frac{\Sigma y}{N}$$

$$\frac{53345}{10} = 5334$$

Calculation of Correlation Coefficient

$$r = \frac{\Sigma xy}{\sqrt{\Sigma x^2} \sqrt{\Sigma y^2}}$$

$$= \frac{-3467440}{\sqrt{2550650} \sqrt{10255155}}$$

$$= -0.68$$

Appendix - V

Calculation of Correlation between Net Profits to Net Worth

Net profit (X)	Net worth (Y)	$x=X-\bar{X}$	$y=Y-\bar{Y}$	$x^2$	$y^2$	$xy$
2371	4786	-476	-563	226576	316969	-623300
4817	5321	1970	-28	3880900	784	-55160
7274	5628	4427	279	19598329	77841	1235133
7441	5658	4594	309	21104836	95841	1419546
8369	5918	5522	569	30492484	323761	3142018
344	6093	-2503	744	6265009	553536	-1862232
323	6484	-2524	1135	6370576	1288225	-2864740
-301	5536	-3148	187	9909904	34969	-588676
-836	4699	-3683	-650	13564489	422500	2393950
-1327	3372	-4174	-1977	17422276	3908529	8251998
<b><math>\Sigma x=28475</math></b>	<b><math>\Sigma y=53495</math></b>			<b><math>\Sigma x^2=128835379</math></b>	<b><math>\Sigma y^2=7022595</math></b>	<b><math>\Sigma xy=11339825</math></b>

Calculation of means,

$$\bar{X} = \frac{\Sigma x}{N} = \frac{28475}{10} = 2847$$

$$\bar{Y} = \frac{\Sigma y}{N}$$

$$\frac{53495}{10} = 5349$$

Calculation of Correlation Coefficient

$$r = \frac{\Sigma xy}{\sqrt{\Sigma x^2} \sqrt{\Sigma y^2}}$$

$$= \frac{11339825}{\sqrt{128835379} \sqrt{7022595}}$$

$$= 0.38$$

### Appendix-III

#### Calculation of Correlation between Net Profits to Sales

Net Profit (X)	Sales (Y)	x=X- $\bar{X}$	y=Y- $\bar{Y}$	x <sup>2</sup>	y <sup>2</sup>	xy
2371	4250	-476	-1084	226576	1175056	515984
4817	4327	-1970	-1007	3880900	1014049	-1983790
7274	5472	4427	138	19598329	19044	610926
7441	4120	4594	-1214	21104836	1473796	-5577116
8369	4638	5522	-696	30492484	484416	-3843312
344	6524	-2503	1190	6265009	1416100	-2978570
323	6211	-2524	877	6370576	769129	-2213548
-301	4983	-3148	-396	9909904	156816	1246608
-836	5616	-3683	282	13564489	79524	-1038606
-1327	7249	-4174	1915	17422276	3667225	-7993210
<b><math>\Sigma x=28475</math></b>	<b><math>\Sigma y=53345</math></b>			<b><math>\Sigma x^2=128835379</math></b>	<b><math>\Sigma y^2=10255155</math></b>	<b><math>\Sigma xy=-23254634</math></b>

Calculation of means,

$$\begin{aligned} \bar{X} &= \frac{\Sigma x}{N} \\ &= \frac{28475}{10} \\ &= 2847 \end{aligned}$$

$$\begin{aligned} \bar{Y} &= \frac{\Sigma y}{N} \\ &= \frac{53345}{10} \\ &= 5334 \end{aligned}$$

#### Calculation of Correlation Coefficient

$$\begin{aligned} r &= \frac{\Sigma xy}{\sqrt{\Sigma x^2} \sqrt{\Sigma y^2}} \\ &= \frac{-23254634}{\sqrt{128835379} \sqrt{10255155}} \quad \therefore -0.64 \end{aligned}$$

### Appendix - IV

#### Calculation of Correlation between Current Liabilities to Net Worth

Cur. Liability (X)	Net Worth (Y)	x=X- $\bar{X}$	y=Y- $\bar{Y}$	x <sup>2</sup>	y <sup>2</sup>	xy
2159	4786	93	-563	8649	316969	-52359
1468	5321	-598	-28	357604	784	16744
1090	5628	-976	279	952576	77841	-272304
1615	5658	-451	309	203401	95481	-139359
988	5918	-1078	569	1162084	323761	-613382
2203	6093	137	744	18769	553536	101928
1031	6484	-1035	1135	1071225	1288225	-1174725
1036	5536	-1030	187	1060900	34969	-192610
1872	4699	-194	-650	37636	422500	126100
-7201	3372	5135	-1977	26368225	3908529	-10151895
<b><math>\sum x=20663</math></b>	<b><math>\sum y=38182</math></b>			<b><math>\sum x^2=31241069</math></b>	<b><math>\sum y^2=7022595</math></b>	<b><math>\sum xy=-12351862</math></b>

Calculation of means,

$$\begin{aligned}\bar{X} &= \frac{\sum x}{N} \\ &= \frac{20663}{10} \\ &= 2066\end{aligned}$$

$$\begin{aligned}\bar{Y} &= \frac{\sum y}{N} \\ &= \frac{38182}{10} \\ &= 3818\end{aligned}$$

Calculation of Correlation Coefficient

$$\begin{aligned}r &= \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} \\ &= \frac{-12351862}{\sqrt{31241069} * \sqrt{7022595}} \\ &= -0.83\end{aligned}$$