

# **CHAPTER-I**

## **INTRODUCTION**

### **1.1 Background**

In Nepal more than 80% of the people depend on agriculture for their livelihood. Their main occupation is agriculture. In spite of this the agriculture production is not enough for the fulfillment of the need of increasing population. Land is the main that we need for agriculture and it is fixed, so we can easily note that there is pressure on land by the increasing population. There are many people without land consequently the employment problem is increasing day by day. In such a situation industrialization is considered essential for the economic development of the country these days.

In Nepal industrialization is in its infant stage still. Slowly the country is stepping towards the industrialization by establishing different kinds of industries and enterprises due to the open policy of the government. Nepal follows the open policy of mixed economy where public and private sector enterprises and industries are in existence for the development of country's economy that complement each other in the development process from very inception of economic planning process back in 1956. Since then substantial initiative has been taken in promoting, protecting, and developing public enterprises (PE'S).

A PE has been defining as a productive entity/organization owned or controlled by public authorities, which sells its output in the market. In some cases, these tended to be capital and /or technology-intensive operations that were regarded as essential to economic progress or to national security, such as mining, hydropower and petroleum products.

Public enterprises (PE) become quite popular in 20<sup>th</sup> century in the developing countries. It has been considered as one of the best effective economic tools for economic development and social justice in the countries.

Peeps have a nearly half- century –long history in Nepal. The first one emerged in 1953 with the partial nationalization of Nepal Bank Ltd, the first commercial bank

established in the private sector in 1937. There has been a rapid growth in the number of PE'S after 1956. The number crossed the 60 mark in 1989/90, including 51 non-financial and nine financial enterprises. Most of the country's Peps were built as turnkey projects under bilateral agreement and with the help of international donors.

In Nepal, the public enterprise were established in public services, industry, trade, finance and other sectors to create the infrastructure for basic services and also because the private sector was seen as inefficient in important areas; the capital investment capability was low, and because technical know-how development was still in a very primary stage. After Nepal Bank Limited was established in 1954 as a public enterprise, like Nepal Industrial Development Corporation and Royal Nepal Airlines Corporation also came into being. In the industrial sector also, industries like the Manipur Cigarette Factory, Birgunj sugar Mill, and Bansbari Leather Shoe were established in 1961. Subsequently, banks, business sector, telecommunication, electricity and water supply in the services sector; cement, bricks, medicines and textiles in the industrial sectors came into existence.

“By the end of 1990, Nepal had a total of 34 manufacturing public enterprises. At present Nepal have 7 manufacturing public enterprises.”<sup>1</sup> They are

1. Dairy Development Corporation
2. Herbs Production and Processing Company Limited
3. Janakpur Cigarette Factory Limited.
4. Nepal Drugs Limited.
5. Udayapur Cement Limited.
6. Hetauda Cement Industry Limited.
7. Nepal Orind and Magnesite Private Limited.

Finance is that area of business linking all other related areas of the business. It is the means of integrating and coordinating such functions in the business organization.

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<sup>1</sup> Agrawal, Govinda Ram, Business Environment in Nepal, M.K Publishing, Kathmandu , 2008, p196

It is concerned with analyzing the financial statements of the enterprises and drawing certain conclusions. The success and failure of an organization is generally measured in terms of its financial position of the business with certain intervals.

Financial analysis is the process of critical judgment of detail accounting information given in the financial statements. To depict the performance of any firm, financial analysis is essential. All concerned stakeholders are interested to know the trend of past variable such as sales, expenses, assets, liabilities, return on equity, net income etc. This helps them to make future anticipation of their interests in the business. The concerned stakeholders may be promoters, managers, creditors, investors, government, customers etc.

### **Introduction of Janakpur Cigarette Factory (JCF)**

From 2013B.S. the government has started five year development plans which are also running now (eleventh five year plan) and the government has been operating the development works according to these plans.

In the various periods of these development plans, government has established various enterprises in different sector for economic development of Nepal. As already mentioned at present there are seven manufacturing public enterprises in Nepal. Among the JCF is the third and largest manufacturing enterprises in Nepal which was established during the second three year plan (1962-65) in 2021B.S. under the techno-financial assistance of Soviet Union. Its authorized capital is Rs.8 crore and production capacity is 5 Arab and 25 crore sticks per annum which is expected to meet the national demand of cigarette in full. As a matter of fact, the factory made the country almost self-sufficient in cigarette production.

JCF is enthusiastic to encourage assist home industries. It provides priority to home products, indigenous resources and services whenever required. JCF is contributing a substantial amount to the government in the form of customs, duties, income taxes etc. Hundreds of people all over Nepal benefited from it directly in the form of distributors, retailers, and as associates apart employing about 800 persons.

Although, JCF has played a vital role for the development of cigarette industries in Nepal it has been facing a great competition due to establishment of private companies in cigarette industry, as well as third country cigarette industries. JCF has played pioneer role for successful cigarette industry by manufacturing quality cigarettes.

## **1.2 Statement of the Problem**

The rationale behind the establishment of public enterprises are basically to accelerate the rate of economic growth, to build infrastructure, to make provision of public utility, to supply essential commodities, to generate employment opportunity, to maximize foreign earnings and to contribute to national fund. In order to achieve these objectives, public enterprises have to be efficient in the utilization of resources.

Nepalese manufacturing public enterprises (NMPEs) are performing unsatisfactorily. Janakpur Cigarette Factory (JCF) has also been functioning since last forty-three years as PE in Nepal. But the previous earning records of JCF show unsatisfactory returns on its investment. It can just be stated that JCF is not accomplishing its task efficiently. Profitability is a must for the growth and survival of the business. It is a measure of efficiency of the business enterprise.

There are several factors, such as poor liquidity position, lack of ideal capital planning, poor performance of inventories, ineffective accounting practices; poor marketing policy etc. might be responsible for inefficient operation of the business enterprise. In our view, besides other factors poor liquidity and lack of proper financing decision may also be one of the important reasons for inefficient operation of JCF.

It is therefore, worthwhile to investigate the performance of JCF in view point of its financial position to find out the main reason which is deteriorating JCF day by day.

### **1.3 Objectives of the Study**

This (study) research has been undertaken basically with the primary objective of analyzing the financial performance and position of JCF.

The specific objectives of this study are as follows:

1. To analyze financial position of JCF.
2. To analyze funds flow of JCF.
3. To examine the trend of JCF.
4. To explore the various reasons for existence financial position of JCF.

### **1.4 Significance of the Study:**

Appropriate financial performance analysis is very important. The enterprises will have to plan its financial requirement initially at the time of its promotion, expansion and operation. This study has been framed in such a way that it will be helpful for managerial decision and the concerned decision makers to determine the fund requirement, liquidity, solvency, efficiency and profitability position of the company. Similarly, a series of financial statements analysis and interpretation of different years helps one to forecast and measure the trend regarding the firm's ability. The other important part of this study is that however, JCF is making profit but it is not satisfactorily growing. Therefore, this study shall be of utmost value to Nepalese government in formulating necessary policies regarding its development. Apart from these, this study can be used as a reference material to conduct further in depth study and analysis.

### **1.5 Limitations of the Study**

This study has the following limitations:

- ) However there are different sector of public enterprises this study has been chosen only from industrial sector i.e. Janakpur Cigarette Factory Ltd.
- ) This study is concerned with the financial performance of JCF.

- ) This study covers analysis of financial statements of JCF for five years period from
- ) This study is mainly based on secondary data published by JCF.

## **1.6 Organization of the Study:**

The study organized in five chapters. The titles of each chapter are as follows.

Chapter I : Introduction

Chapter II : Review of Literature

Chapter III : Research Methodology

Chapter IV : Data Presentation & Analysis

Chapter V : Summary, Conclusion & Recommendation

### **Chapter I – Introduction:**

The first chapter contains introductory matters, which describes the general background, objectives of the study, statement of the problem, significance of study and limitations of study and organization of overall study.

### **Chapter II – Review of literature**

Second chapter deals with the review of available literature. It is organized into conceptual framework and the review of books, journals, the review of previous related studies and unpublished thesis.

### **Chapter III – Research Methodology:**

Third chapter contains research methodology employed in the study which includes research design, resource of data, nature of data, population and samples, method of data analysis and tools of analysis.

### **Chapter IV – Data Presentation & Analysis:**

The fourth chapter explains the presentation and analysis of data through the way of designed methodology and interpreted by the help of various tools and techniques.

Major findings of data analysis are also presented in this chapter.

## **Chapter V – Summary, Conclusion & Recommendation:**

The fifth chapter summarizes the main conclusion that flow from the study and offers suggestions for further improvement and conclusion of the study.

A bibliography and appendices will be attached at the end of the study.

## **CHAPTER-II**

### **LITERATURE REVIEW**

In this chapter concept of financial performance, concept of PEs, historical development of PEs in Nepal, an introduction of JCF and review of related research study are included.

#### **2.1 Concept of Financial Performance**

Financial performance is a quantitative analysis of firm's efficiency. In other word's it is a way of studying financial position or condition of a company. The company's financial plan and policy prepared and implemented by management should be judged on the basis of its financial performance. Conceptually, the vocabulary "Financial Performance" concerns with the measurement and analysis of financial operation of a firm through profitability, liquidity and turnover, inflows and outflows of funds and their cost-volume-profit relationship approaches.

The profit earned by the firm is the main indicator of financial performance. Profit results mainly from successful operation and efficient management of enterprises. Over the long term, adequate and reasonable earnings are essential to assure survival and growth to capital adequacy through profit retention to access market for both debt and equity and to provide fund's for increased assistance to the productive sectors.<sup>2</sup>

Financial Performance can be analyzed with the help of financial statement

##### **2.1.1 Concept of Financial Statements**

Financial Information is required for financial planning, analysis and decision making. Financial information can be taken through financial statements.

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<sup>2</sup> Mowrice C. Mould, Financial Information for Management, U.N.



‘The financial statements contain summarized information of the firm’s financial affairs, organized systematically. They are means to present the firm’s financial situation.’<sup>3</sup>

Preparation of the financial statements is the responsibility of top management. As these statements are used by investors and financial analysts to examine the firm’s performance, they should be prepared very carefully and contain as much information as possible.

Two basic financial statements prepare for the purpose of external reporting to owners, investors and creditors are: (i) balance sheet (or statement of financial position) and (ii) profit and loss account (or income statement) <sup>4</sup>

In this connection, John J. Hampton says, “Financial statement is a financial report prepared for a given period of time. It is an organized collection of data, organized according to logical and consistent accounting procedure.”<sup>5</sup> Similarly, John N Myer has stated, “The financial statements provide a summary of the accounts of business enterprises, the balance sheet reflecting the assets, liabilities and capital as of a certain period,”<sup>6</sup> Thus; it is evident that financial statements consist of profit and loss account and balance sheet.

## **2.1.2 Components of Financial Statements**

### **2.1.2.1 Profit and Loss Account**

Profit and loss account presents the summary of revenues, expenses and net income (or net loss) of a firm. Thus, it serves as a measure of the firm’s profitability. The profit and loss account is a “score- board” of the firm’s Performance during a period of time. Since the profit and loss account reflects the results of operations for a period of time, it is a flow statement

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<sup>3</sup>Pandey, I.M., Financial Management, Seventh Revised Edition, ( Vikas Publishing House Pvt. Ltd., 1995) pp29

<sup>4</sup>Pandey, I.M., Financial Management, Seventh Revised Edition, ( Vikas Publishing House Pvt. Ltd., 1995) pp30

<sup>5</sup>Hampton, John J., Financial Decision Making, ( Prenrtice Hall of India, New Delhi

<sup>6</sup>Myer, John N., Financial Statement Analysis, ( Prentice Hall of India, New Delhi,1974) pp31981)pp.63

Myer viewed, “the income statement summaries the operations of business during a specific period of time and shows the result of such operations in the form net income or net loss.”<sup>7</sup>

Thus the income statement is an important asset of the concern as it reflects the efficiency with which the concern is utilizing its resources to generate the surplus. “In this statement, revenue of a certain period is compared with the expenses, the difference being either net profit or net loss for the period.”<sup>8</sup> However the income statement may not be the true representative of the operational efficiency of the concern as at times, it may consist of non-operational incomes and non-operational expenditures. Yet the income statement or profit and loss account occupies a significant place in portraying the result of business operations.

#### **2.1.2.2 Balance Sheet**

Balance sheet is one of the most significant financial statements. It presents the position of company’s assets, liabilities and shareholders equity at a particular date. It is a mirror of the financial position of a firm at a particular date. In this connection, I.M Pandey says “The balance sheet contains information about the resources and obligations of a business entity and about it’s’ owners interests in a business at a particular point of time. In accounting language, the balance sheet communicates information about the assets, liabilities and owners’ equity for a business firm as on a specific date. It Provides a snapshot of the position of the firm’s accounting period.”<sup>9</sup>

Alternatively, balance sheet indicates the result outcome of the firm’s investment, financing and dividend decisions, and shows an important statement that keeps different interested parties well informed about the financial health of the concern.

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<sup>7</sup> Ibid., pp13

<sup>8</sup> Chaudhary, S.B. Management Accounting (Kalyami Publisher, New Delhi, India 1978), pp21

<sup>9</sup>Pandey, I.M., Financial Management, Seventh Revised Edition, ( Vikas Publishing House Pvt. Ltd., 1995) pp31,32

## **2.2 Concepts of Public Enterprises**

Public enterprises have played significant role in the economy of every countries of the world. Trade and industry were left autonomous in the hand of businessmen when almost every country before the 'First World War' governed by the principle of 'Laissez Faire'. In such classical type of economy, internal and external trade was also free from the government intervention. The 'First World War' (1914-1918) made the state realize the value for the policy of protectionism. More especially, after success of economic planning in former USSR, during the Great Depression 1929, the policy of 'Protectionism' was developed of 'Keynesianism'. It envisaged an important role for public sector enterprises. Many revolutionary changes (like October Revolution in Russia, emerge of International Labor Organization) and 'Second World War' (1939-1945) created an atmosphere favorable environment of 'Protectionism'. Many states imposed restriction on trade for private sector. Then, Government involved industrial and commercial activities and also controlled the private sector to achieve the national goal and objectives.

Most of the countries of the world had developed PE's in order to achieve the national goal and objective, especially, developing countries of the world had established for the rapid economic development of their economy. In the developing they were established in order to develop the infrastructure (like transportation, telecommunication, hydro-electricity, water supply, production of required goods and services, distribution and other commercial sectors). The same ideas were behind the emergence of such enterprises.

Public Enterprise (PE) became quite popular in 20<sup>th</sup> century in the developing countries. It has been considered as one of the best effective economic tools for economic development and social justice in the countries.

In any part of the world, public enterprises (PE's) are supposed to have been established to provide quality goods and services to the general public at fair prices and Nepal is no exception.

PEs has been accepted in Nepal as the inevitable means for rapid socio-economic development. The First Five Year Plan (1956-1961) states that government would monopolize those industries which promised greater public welfare and private sector provided the feasibility reports on them gave green signals.<sup>10</sup>

PEs have assumed significant role in almost every countries of the world, yet there has so far been no standard designation of its own. Different government and agencies, to suit their own respective situation, have defined the term PE differently.

Encyclopedia Britannica, "PE may be defined as an undertaking that is owned by the national state, local government, supplies services or at a price and is operated on more or less self supporting basis. Such enterprises may also be international initiated or inter municipal i.e. owned and operated jointly by two or more national state or local government."<sup>11</sup>

According to World Bank report 1988, "State owned enterprises are financially autonomous and legally distinct entitles whole or partly owned by central or sub-national government."<sup>12</sup>

Hanson says "The term PE is a more restricted and more familiar sense, to mean state ownership and operation of industrial, agricultural, financial and commercial undertakings."<sup>13</sup>

UN has defined PE as "Those organization namely government 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."<sup>14</sup>

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<sup>10</sup> Corporation Coordination Council, Profiles of PEs in Nepal, (HMG/Nepal, Kathmandu, June 1978)

<sup>11</sup> Ibid p.19

<sup>12</sup> World Bank report, 1988

<sup>13</sup> Hanson, A.H., PE and Economic Development, Second Reprint Edition, (Routledge and Kegan Paul Ltd., Great Britain, 1972), p 115

<sup>14</sup> Purneshwor Shrestha, "PE management in Nepal" 1<sup>st</sup> edition, 1997, p42

Laxmi Narayan says, “Broadly speaking PE means an activity of business character managed and owned 51 percent or more by the government central, state or local, providing goods and services for a price.”<sup>15</sup>

The definitions show the two main characters of the PEs which are public ownership and business enterprises. The public ownership implies that major decision would rest on distinctive social criteria to the exclusion of any personal interest, the surplus would not accrue to a private group of individual and it involves social accountability. The business enterprise implies that the government expects a return on the capital investment in PEs and the goods and services are made available for price which may be adjusted from time to time to cover the cost of inputs.

PEs was developed in most of the countries in order to achieve the desired national objectives keeping the economic and industrial development of the country. Especially, in the developing countries, it was believed that the government should play a predominant role in national economic development. With this point of view, PEs were established in production, distribution and even in business sectors. Motivated by the same ideas, PEs were started to emerge in Nepal too.

Accordingly Peps were established in order to prepare infrastructure, to service, to produce the required goods in the country and to export goods, to help in controlling the price situation, to create opportunities for employment, to create government revenue and to contribute significantly in the national development as well as to assist in the country’s economic advancement. PEs was established in public service, industry, trade, finance and other sectors where the private sector was seen as an inefficient in important areas.

### **2.3 Historical Development of Nepalese Public Enterprises**

History of Nepalese Public Enterprises is no longer because the history of industrial and commercial developments is also no longer. PEs has a nearly half-

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<sup>15</sup> Narayan Laxmi, Principles and Practice of public Enterprise Management , (S.Chand and Co. Ltd., New Delhi, 1982), p.3

century-long history in Nepal. The first one emerged in 1953 with the partial nationalization of Nepal Bank Ltd, the first commercial bank established in the private sector in 1973. There has been a rapid growth in the number of Peps after 1956. The number crossed the 60 in 2047/48, including 51 non-financial and nine financial enterprises.

In Nepal, government initiative was essential at a time when private sector investment could not be attractive in the provision of basic social and economic services. In this case, the institution of public enterprises was justified. As a result, a number of public enterprises, covering different sectors of the economy, like public services, industry, trade, finance and other sectors were set up during different periodic plans. The concept of economic planning was started from 2013 B.S.

### **1. Development of PEs during First Five year Plan Period (1956-1961)**

The declared policy of this plan period was to establish Peps as required and to ensure simple and short operational procedures in order to realize the objective of the plan. The plan adopted the principle of mixed economy. The plan stated that the government monopolies the undertaking in the field of transportation and irrigation because in these sector government's involvement was presumed to generate public welfare. The plan has further envisaged establishing Peps' in the manufacturing sector in some big industries like cement, sugar, cigarette and steel. During this plan period only seven Peps' were established

### **2. Development of PEs during Interim plan period (1961-1962)**

The Interim plan period was a link period between First Five Year Plan period and Second Three year plan. During the period, GON did not change in his policy of first five years plan about the public enterprises. Similarly, in the plan period, GON declared Industrial Enterprises Act in May 28, 1961 which Act made the first plan's guidelines. During the plan period three public enterprises were established.

### **3. Development of PEs during Second Three-Year Plan (1962-1965)**

The second three-year plan laid emphasis on manufacturing industries to promote industrializations in the country. The plan clearly demarcated the areas of public enterprises of basic utilities and communications etc. as well as support services for all sectors like supply of credit and other physical inputs like improved varieties like seeds and fertilizers. During the plan period, eleven public enterprises were established. The plan period was also growth period of Nepalese public enterprises.

### **4. Development of PEs during Third Five-Year Plan (1965-1970)**

The Third Year Plan Period emphasized the need to involve both the private sectors as well as public sectors in the industrialization process of the country which out lined the need to follow pragmatic approach as to which industries are required to be established under the public as well as private sector. The plan was given the priority to the import substitute product of basic needs and export promotional industries, which based upon the local raw materials. During plan period twelve Peps were established.

### **5. Development of PEs during Fourth Five-Year Plan Period (1970-1975)**

In the Fourth Five Year Plan Period, the largest numbers of public enterprises were established. The plan envisaged the policy of promoting industries in the public sector at least for the initial period. During the plan period, nineteen public enterprises were established in the different sectors of the economy.

### **6. Development of PEs during Fifth Five-Year Plan Period (1975-1980)**

The Fifth Five Year Plan Period adopted the industrial policy 1974 and provisioned for establishment of four industrial districts and four industrial ventures in the public sector, projecting substantial expansions in the private industrial sector. The plan also mobilize local capital, skill and resources to maximum extent to generate employment opportunity in order to absorb surplus agricultural labor, to

bring about qualitative and quantitative improvement in productivity in industrial products to gain self sufficiency in the production of daily necessities and certain construction materials, to reduce regional economic imbalance of trade through import substitution and export promotion. During the plan period, eight public enterprises were established under the different sector of the economy.

During the plan period, Nepal Carpet Limited and Vegetable Ghee Industry were handover the private sector.

### **7. Development of PEs during Sixth Five-Year Plan Period (1980-1985)**

The Sixth Five Year Plan Period declared the definite policy about the public enterprises in Nepal. Considering the poor performance of Nepalese public enterprises, the plan promised to provide greater autonomy and less political intervenes in the Peps' internal operation. The plan also declared about the consolidation of similar public enterprises. The plan further stated public commercial and; industrial enterprises will be vested with the sufficient freedom of action to conduct their day to day operation. During the plan period, eight public enterprises were established in different sector of the economy.

During the plan period, Hetauda Leather Industry was disposed to private sector. Paddy and Rice Exporting Company Ltd. Were gone to liquidate during 1982.

### **8. Development of PEs during Seventh Five-Year Plan Period (1985-1990)**

The Seventh Five-Year Plan Period expressed the concern at the state of affairs of Peps and pointed to the adequacy of returns from them as compared to the huge size of investment and therefore called upon the need to run them efficiently. Similarly, it was declared for giving them the required autonomy and recommended suitable reward and punishment on the basis of performance evaluation in the interest of Peps' efficiency. During the plan period, four public enterprises were established under the different sector of economy.<sup>16</sup>

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<sup>16</sup> NG, National Planning Commission, the Seventh Plan (1985-1990), National Planning Commission, Kathmandu, 1992 p.521



## **9. Development of PEs during Eight Five-Year Plan Period (1992-1997)**

The Eight Five Year Plan Period laid down much more emphasis on participation because after succession of the mass movement of 2046 B.S. and 'Restoration of Democracy', the government's policies were guided by the liberalization and globalization. Therefore, GON adopted the aim of privatizing Peps. The objectives of privatization were mainly concerned with the development of industry and business sectors, increment in productivity and efficiency, the mobilization of saving and increase in public participation in the commercial field. The government had adopted a policy of liberal economy with the aim to raise the living standard of the people by bringing about structural reforms in various sectors of the economy. In this process, priority was given to the involvement of private sector in public enterprises. In line with this twelve public enterprises were privatized by way of different process.<sup>17</sup>

## **10. Development of PEs during Ninth Five Year Plan Period (1997-2002)**

The Ninth Five Year Plan focused on the enhancement of privatization process and set up the different four objectives of privatization.

During the Ninth Plan Period, the government planned to privatize the following enterprises.<sup>18</sup> Which are Nepal Tea Development Corporation, Pokhara Dairy Development Project, Gorkhapatra Corporation, Himal Cement Company, Nepal Resin and Turpentine Ltd. Nepal Bank Ltd., Salt Trading Ltd., Rastriya Beema Sansthan, Rastriya Banijya Bank, Butwal Power Company Ltd. Lumbini Sugar Factory Ltd., Janakpur Cigarette Factory Ltd., Nepal Transport corporation, Nepal Housing Development Finance Company, Industrial Management Ltd., Agriculture Lime Industry, Agriculture Projects Service Center, Birgunj Sugar Factory Ltd., Dairy Development Corporation, Cotton Development Committee, Herbs Production and Processing Company, Hetauda Cloth Industry Ltd., Morang Sugar Factory Ltd., Nepal Telecommunication Corporation, Royal Nepal Airlines

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<sup>17</sup> GON, National Planning Commission, the Eighth Plan (1992-1997), National Planning Commission, Kathmandu, 1992 p.691

<sup>18</sup> Ninth Plan (1997-2002) National Planning Commission, GON,p.184

Corporation, Birendra International Conference Center, Nepal Oriend Magnesite, Hetauda Cement Company, Udaypur Cement Company, Nepal Electricity Authority. During the ninth plan period, only nine Peps was privatized.

### **11. Development of PEs during Tenth Five Year Plan Period (2002-2007)**

The Tenth Five Year Plan has recently finished. The main objective of Tenth Five year Plan was to make economic sector of country effective, healthy, dynamic and competitive by maximum utilization of available resources.

During this plan period eight Peps were privatized by using different privatization mode.

### **12. Development of PEs during Three Year Interim plan period (2007-2010)**

The Government of Nepal (GON) released the Three-Year Interim Plan for 2007/08-2009/10 in December 2007. The main objective of the Interim Plan is to lay the foundation of economic and social transformation for developing a prosperous, modern and judicious Nepal.

## **2.4 Introduction of Janakpur Cigarette Factory:**

### **1. Historical Perspective:**

Since the introduction of the first five year plan in 1956 Government of Nepal (GON) has placed high priority to export oriented and import substituting industries which are based on domestic raw material. Prior to the establishment of cigarette factory (J.C.F.), cigarette was the second highest item of import amounting to more than 40 million rupees Per Annum. Thus, the second three years plan had envisaged the establishment of a cigarette factory in Janakpur with the production capacity of 2000 million (annual) sticks of cigarettes. The motives for GON active participation in establishing cigarette industry are threefold.

- a. The industry is a major import substituting enterprises utilizing domestic raw materials with potentiality for export.

- b. Although the industry enjoyed a high place in the priority list, the private sector did not show interest because of the large capital involvement and technological complexity.
- c. GON's interest in setting up the industry in the public sector under the pragmatic approach of mixed economy received strong support of USSR's financial and technical aid for the project.

## **2. Establishment:**

JCF has been set up in the heart of Janakpur town of Dhanusha district of the central region of Nepal under former USSR'S financial and technical support. Its plan initiation and construction period was 2018 to 2021. It was established under the company act, 2021 and was inaugurated by late king Mahendra on 29 Poush 2021 B.S. JCF is basically an agro-based, consumer oriented as well as one of the important import substitute industry.

## **3. Investment:**

The initial investment of the project was 2 corers with the authorized capital of 8 corers issued and paid up capital of 4 corer 8 lakhs and 37 thousand.

## **4. Capacity Used**

The initial installed capacity was 2 arab sticks of cigarette per year working in 2 shifts, 8 hours each day but now its capacity is 5 arab and 25 crore sticks per year which is expected to meet the national demand of cigarette in full.

## **5. Production**

In its initial stage it used to produce Gurung, Chuchura, Sing, Jawala, Janaki, and Asha brand. In its medium term it used to produce Laliguras, Koseli, Silver 25, Munal, Sagun, Dobhan, Kasturi, Himchuli and Yak Kings brands. At present it is producing Yak kings, Yak filter, Lahure filter, Gaida, Gaida filter, Deurali and Upahar brands.

## **6. Major Objectives**

- ) To cultivate and produce high quality tobacco and try to carry on research in tobacco cultivation.
- ) To undertake business of all kinds of tobacco and tobacco products.
- ) To set up suitable manufacturing plants and to operate them.
- ) To make the country self sufficient in cigarette.
- ) To help the other social industries by using their products in production and packaging areas.

## **2.5 Comparative study of JCF**

Cigarette Industry in Nepal started with the establishment of Nepal Cigarette Factory at Birgunj in 1991 B.S. This factory was under private sector. Due to different problems this factory has already been closed.

Nepal Tobacco Company was the second cigarette-manufacturing unit in the country which was initially located at Kathmandu in 2017 B.S. This company was also established under private sector. Due to various problems this company has also been closed.

JCF, the third and largest cigarette manufacturing enterprise in the kingdom of Nepal, was set-up at Manipur in 2021 B.S. under the techno-financial assistance of Soviet Union. It is an undertaking of Government of Nepal (GoN).

Surya Tobacco Company, the fourth and last cigarette-manufacturing unit in the country, was established by Indian Tobacco Company, British Tobacco Company and Nepalese entrepreneurs as a private limited company. This is located at Simra of Bara District. It started its commercial production in 2043 B.S.

At present the cigarette industry in Nepal consists of only two units JCF and STC (Surya Tobacco Company) with a total installed production capacity of 8 arab and 25 crores sticks per annum.

The main competitor of JCF is STC. JCF has been facing intense competition with STC. Due to globalization different other cigarettes are being imported in Nepal like 555, Marlboro, Benson & Hedges, Rothmans, Kent, London, Gudang

Garam etc. Due to this at present JCF is not facing the intense competition of STC alone but also the cut-throat competition of imported cigarettes as well. Although JCF's competitors are increasing, STC still remains as the main competitor. Before the establishment of STC, JCF was making very satisfactory profit; it means it had very sound financial performance. But since the establishment of STC, JCF's financial performance has been deteriorating year by year. The main reasons behind this can be pointed out as follow.

- ) STC is private company which is driven by profit motive through the further development and success of company & JCF is public company which is driven by service and profit motive through self development of top management not the development of the company itself.
- ) As STC is private company, there is no government intervention in different matters like recruitment of employees, purchase of raw materials (tobacco), distribution of cigarette etc, but as being public enterprise, JCF is suffering from continuous government intervention in matter of recruitment of employees, purchase of raw materials, marketing policy etc.
- ) STC has been following very aggressive marketing policy compared to JCF. Because of its aggressive marketing policy it can penetrate almost all the potential market areas as compared to JCF and seems successful in capturing very potential market.
- ) As STC is private initiative, it makes its long term strategies, visions by it self and carried out them very successfully but JCF is public initiative, its long term strategies, visions are determined by top management whose are mostly hired by government and as the change in government there will be change in management system and they refuse to implement predetermined strategies which never lead JCF in the way to success.
- ) As STC is private company, it implements different shorts of employee motivational programs which boost up energy level of employees and make them responsible towards their work but in JCF there are no any employee motivational programs which make employees less responsible towards their duty.

These are the main reasons which lead JCF towards deteriorating financial performance as compared to STC. At present in the market, JCF is distributing Yak, Gaida Filter, Gaida, Lahura Filter, Uphar Brand etc in the market and STC is distributing Surry Classic, Surry, Surry Light, Shikhar light, Shikhar, Khukure, Pilot, Bijuli brand etc. Yak has to face intense competition with Shikhar, Gaida Filter has to face competition with Khukure. Surya brand of STC is expanding market without facing competition with any brand of JCF because JCF has at present no brand in that level to compete with Surya brand of STC. Especially, Gaida, Lahura, Uphar brand of JCF is making market in Terai region and hilly region.

According to normal survey conducted in about 15 to 20 shops in Katmandu and Caliper valley, researcher found that there is 27% who prefer to have Surry, 15% prefer Shikhar, 8% prefer Pilot, and 5% prefer Khukur. And 24% prefer Yak and about 5% prefer Gaia Filter of JCF. And remaining 16% prefer to have imported cigarettes (555, Marlboro, Cigar etc).

It shows that STC is capturing market in large percentage and JCF is capturing very small market. According to the survey, one of the main reasons behind this may be the marketing policy of JCF. JCF has been distributing its brands through dealers and they distribute through different vehicles but their vehicles(even bicycle) distribute only those shops which are near by the main road and those shops which are far from the main road are not served by them and those shops refuse to bring cigarettes from them due to farness. And JCF is also not conducting any programs to motivate shopkeepers too. But STC is distributing its brand through different distributors and they use different vehicles especially by bicycle which can reach anywhere anytime and STC is also offering different offers to shopkeepers for selling their cigarette which motivate sellers to sell as much as they can. Imported cigarette Marlboro is proving especial offer to small shops by building their shops and maintaining them and those shops build by Marlboro should only sell its brand and they refuse to sell other brand even there is customers of other brands. Due to these reasons market of JCF is declining even there is a large number of loyal customer of JCF.

Now in Nepal different types of cigarettes are being imported from different third countries. As society gradually turned into modernization, people prefer to have imported goods because of this especially in developed cities of Nepal, people those who work in respectable post are having imported cigarette rather than cigarettes made by PE (JCF). Now a day's young people are attracted towards cigarettes as the name of fashion and most of them want to have cigarette made by private co. (STC). According to JCF's survey it shows that only farmers, remotes, people working in very low level jobs and loyal customers are having their cigarettes. It shows that due to market captured by other cigarettes its sales have been declining year by year. Its sales decreased by 12% in 2006/07. Because of all these things its financial performance does not seem satisfactory in comparison to other cigarettes.

## **2.6 Review of Related Studies**

The thesis entitled (2004) "*A study of financial performance of Nepalese manufacturing public Enterprises in Nepal with a special reference to Janakpur Cigarette Factory Limited.*" was undertaken by Rashmi Adhikari and submitted to Central Department of Management, Tribhuvan University in March 2004.

The researcher has analyzed seven years financial statement from 2050/51 B.S. to 2057/58 B.S. This study was based on only secondary data. Adhikari used the ratio analysis and fund flow analysis as tools for analysis in the study.

The specific objectives of this study were

- ) To analyzed the financial performance of one of the Nepalese Peps in industrial sector, which is Janakpur Cigarette Factory Limited in terms of its profitability.
- ) The strength and weakness of various aspects of financial and operational structure of JCF.
- ) The position of sources and utilization of the funds and cash in the past to find out the role of sources of financing.

- ) To enquire into the short-term and long term financial strength of JCF.
- ) To examine capital structure and reasons for the existing financial position of JCF and suggest reforms.

For the purpose of the study, financial statement of JCF, other publications of JCF, publications of Ministry of Finance, annual reports of Audit, general and other related available documents were used.

In statement of problem, the researcher stated that the financial efficiency of Nepalese Peps had not been satisfactory in accomplishing one of the basic objectives relating to generate profit. JCF was one of the public enterprises in industrial sector whose financial position is getting worse day-by-day. So, the researcher had made the attempt; why had JCF been financially weak?

Form the analysis of the basic financial data of JCF, the following conclusions is made:

The study finds out that the profitability of JCF is highly unsatisfactory and unfavorable because seven measures of profitability indicate that JCF has been suffering from heavy loss. Only GPM of JCF is positive. Among the six profitability ratios, remaining five (namely NPM, ROFA, ROSE, and ROTA) is negative. The trends of profitability ratios are widely fluctuated in the negative region to downwards direction. The trend of current ratio and quick ratio is going downward direction every year. Capacity utilization of the JCF is not fully used during the study period. JCF seems unable to identify its customers' needs and wants therefore its product demand is lower in comparison to its competition. The study also stated that JCF fails to take proper pricing decision. It also stated that there is no proper performance evaluation mechanism and it is also not taking serious attention to proper planning, controlling and budgeting aspects.

Another thesis entitled (2004) "*A Public Enterprises in Nepal (Special Reference to Herbs Production Processing Company Limited, Kathmandu)*" and submitted to Central Department of Management, Tribhuvan University in December 2004 by Purna Narayan Maharjan.



The researcher has analyzed ten years financial statement from FY 2049/50 to 2058/59. This study was based only on secondary data. The data had processed into comparative and common size financial statements, appropriate tables, graphs and charts. Mr. Maharjan used the trend analysis, fund flow analysis and ratio analysis as tools to analyze the study.

**Objective of the study were**

- ) To examine the profitability records.
- ) To analyze the strength and weakness of various aspect of financial position and operational structure.
- ) To evaluate the financial health, i.e. strength of HPPCL.
- ) To analyze the changes in financial position in term of cash flow from operating, investing and financing activities.
- ) To analyze the short-term solvency position and measures of the capital structure position of HPPCL and
- ) To explore the various reasons for the existing financial situation and suggest the positive reforms for HPPCL.

The statement of the problem placed by Mr. Maharjan is that most of the public enterprises established in manufacturing sector are facing a huge loss; return on capital is very low and highly negative. The financial efficiency of Nepalese Peps have not been satisfactory in accomplishing one of the basic objective relating to generating of profit. HPPCL is one of the public enterprises in manufacturing sector whose financial position is getting worse day to day.

So, an attempt is being made why HPPCL has been financially weak?

From the pre-mentioned analysis, the major findings of the research are followings;

- ) The profitability records of HPPCL are not satisfactory. The profitability ratio indicates that HPPCL has been suffering from heavy loss.
- ) The liquidity position of the HPPCL is unsatisfactory. Average current and quick ratios show too low liquidity position

- ) The efficiency ratios are unsatisfactory except the debtors' turnover ratio. The debtors' turnover ratio is quite satisfactory and the firm seemed to have sound collection policy.
- ) The capital structure ratio of HPPCL is unsatisfactory. Overall ratio of capital structure has been increasing.
- ) Cash flow statement represents improper balance between cash inflow and outflow..
- ) HPPCL has not taken serious attentions to proper planning, controlling and budgeting aspects.
- ) There was no well communication system. The communication was only limited to the top level management. .
- ) Main problem in HPPCL was material unavailable in pick line in right quantity and in right place so as to supply for production and processing.

The another thesis entitled (2005)“*Financial Performance Evaluation of Nepal Oil Corporation Limited*” was undertaken by Tapendra Shahi and was submitted to Central Department of Tribhuvan University in May 2005. Mr. Shahi has analyzed only five years financial statement from FY 2054/55 to 2058/59. The study was based on the annual report and financial statement published by NOC. Mr. Shahi used Liquidity ratio, Activity ratio, Profitability ratio, Operating ratio as analytical tools as well as statistical tools and accounting tools.

The main objectives of the study are

- ) To analyze the existing situation of NOC
- ) TO evaluate financial performance of NOC
- ) To identify the problem of NOC regarding sales/distribution and financial plan.
- ) To make recommendation and suggestions based on analysis.

The statement of the problem stated by the researcher is that many of the existing enterprises are running at a loss and some are only in marginal profits. Main reasons behind this are the deficiency in managerial skill. Management is

appointed by the government and they are also transferred frequently. Their time is spent on doing routine accounting works and less importance is given to financial matter such as management of working capital, preparation of financial plans, capital budgeting etc. Now question arise whether or not the corporation is following these tools and technique and whether NOC has been able to accomplish financial viability or not.

**Major findings are as follows:**

- ) The current ratio of NOC was higher than its standard (i.e. 2:1) during the study period. The reason was ideal cash balance, unsatisfactory debt collection and pile up stock.
- ) Quick ratio rate of NOC was fluctuating but average quick ratio was 0.97 which was nearest standard rate (i.e.1:1) so it is satisfactory.
- ) Inventory turnover ratio was 17.23 which was satisfactory.
- ) Total asset turnover ratio was low so it was not satisfactory.
- ) Average capital employed ratio was 4.18 times, which was not satisfactory.
- ) Average fixed assets turnover ratio was 76.55, which was satisfactory.
- ) Gross profit margin ratio of NOC was not satisfactory.
- ) Net profit margin of NOC was also not satisfactory. Average not profit margin was 6% and the rate of net profit margin was fluctuating.
- ) Average operating ratio was 0.017 which was satisfactory.
- ) Profit trend analysis of study period show the positive and decrease profit in coming year.
- ) The NOC has not any clear cut policy of purchase and sales and inventory system.
- ) Comparative common size income statement shows high percentage of cost of good sold to the sales..
- ) There was perfect correlation between sales and stock..

- ) There was moderate degree of correlation between sales and net profit after tax.
- ) There was low degree of correlation between sales and current assets.
- ) NOC has depots and dealers to distribute the fuel for other consumer but they were concentrates in urban areas not in remote area.
- ) Scientific tools and technique were not applied by NOC in order to forecast purchase and sales.
- ) Problem of storage capacity also persists. Although storage capacity has been increased but it was not adequate in emergency period.
- ) Lack of regular observation and evaluation of physical and financial progress, irregular of auditing, manipulation of account those were the reason behind getting very poor financial condition of NOC
- ) During the study period there was very difficult to get the financial data of NOC for analysis.

Another thesis entitled (2005) “*Financial Performance of listed Manufacturing Companies in NEPSE.*” (with special reference to *Nepal Lube Oil Ltd., Joyti Spinning Mills, Bottlers Nepal Limited, Arun Vanaspati Udhoyog* )\_was written by Mr. Narayan Prasad Bhandari and has submitted to Central Department of Management, Tribhuvan University in March 2005.

The researcher has analyzed five years’ financial statement from FY 1998/99 to 2002/003. The study was based on the financial statements of the manufacturing companies provided by security board, NEPSE and manufacturing companies. Mr. Bhandari has used different ratios to analyze financial position of the concerns like liquidity ratio, leverage ratio, capital Adequacy ratio, Turnover ratio, profitability ratio. Mr. Bhandari has also use different tools of analysis like Income and expenditure analysis, correlation analysis and trend analysis.

The basic objectives of the study are as follows;

- ) To determine the problems being faced by NLO, AVU, JSM and BNL and indicate areas in which further investigation is needed.

- ) To find the effect on competitive power of them and the role of other manufacturing companies on it.
- ) To evaluate the liquidity, profitability, activity, productivity of labor in terms of production, sales, cost of good sold and net profit, capital adequacy position of them.
- ) To evaluate the trend in growth of production, sales, materials used and net profit of them.
- ) To recommend measure for the improvement of the financial performance and efficiency on the basis of the conclusions from the research.
- ) TO find out the opportunity and threats related to financial tools and technique used by firms.
- ) To identify the strength and weakness of the manufacturing companies which are the out come of financial performance activities.

In statement of problem, the researcher stated that after the restoration of democracy in Nepal the government had adopted liberalization economic policy, and as a consequence number of manufacturing companies, cooperative societies, financial companies and joint venture commercial banks mushroomed in a dramatic way. It has brought cut throat competition in all areas. Cut throat competition make difficult to survive. Most of the manufacturing companies have weakness in their management and operational activities. This research is carried out in order to look into companies' weakness and inefficiency of selected manufacturing companies with the help of their financial statements and to find out the opportunities which are the means of financial strength of the firms.

The major findings are as follows;

- ) Current ratio of all selected companies showed slightly fluctuating trend. All of the company could not maintain the conventional standard of 2:1.
- ) Mean total debt to asset ratio of JSM seems higher than other.
- ) Interest Coverage ratio in BNL remained highest among others.
- ) Mean total debt to net worth ratio came highest in NLO.

- ) Mean ratio of net worth to total asset is 29.26%.
- ) Average long term debt to net worth ratio is highest in NLO.
- ) Average net fixed assets to long term debt ratio is highest in AVU.
- ) Average inventory turnover ratio in AVU is highest which indicates that high portion of inventory is used by AVU
- ) Average raw materials turnover ratio in BNL seems highest which shows that BNL used high amount of raw materials
- ) Average net sales to total assets ratio in AVU seems highest among other which reveals that AVU is more successful to utilize its assets.
- ) Average net sales to plant and machinery ratio in NLO seems highest which indicates that plant and machinery cost of AVU seems lowest than other.
- ) An average sundry debtor to average daily sales ratio in NLO seems highest
- ) Average net profit margin in BNL seems highest and AVU and JSM have negative net profit margin which indicates that they have losses during study period.
- ) Average return on total capital employed in BNL seems highest
- ) Average net profit to net worth ratio in AVU seems highest.
- ) Average tax provision to pre tax profit ratio in AVU seems highest and JSM seems negative.
- ) Average return on total assets in BNL is highest.
- ) Average gross profit margin in BNL seems highest among others.
- ) Average EPS in BNL seems highest and JSM seems lowest. Average DPS in NLO seems highest
- ) Average sales in JSM seem highest and lowest in NLO. Sales highly fluctuate in AVU.
- ) Average other income in AVU appeared highest and lowest in JSM. Other income highly fluctuates in NLO.
- ) Average interest expenses in JSM appeared highest and lowest in BNL. Wages and salaries in JSM appeared highest and lowest in AVU.

- ) Average office operation expenses in JSM appeared highest and lowest in NLO. Distribution expenses also highest in JSM and lowest in NLO.
- ) Average depreciation on fixed assets in JSM appeared highest and lowest in NLO. Here, all expenses appeared highest in JSM and lowest in NLO.
- ) Correlation between costs of goods sold and net profit in AVU, NLO and JSM; between net profit and net worth in AVU and between EPS and MVPS in BNL and JSM seems not highly significant.
- ) Correlation between costs of goods sold and net profit in JSM and NLO; between costs of goods sold and net profit in BNL; between EPS and MVPS in AVU and NLO; between DPS and MVPS in BNL and NLO and between DPR and MVPS in BNL and NLO remained negative correlated.
- ) Trend analysis depicts that sales, cost of goods sold and net worth have been growing faster during study period in JSM than other.
- ) Growth rate of net profit seems faster in BNL. MVPS and EPS of BNL appeared greatest than other
- ) Number and percentage of profit earned manufacturing companies are moving inversely with the number and percentage of profit earned.

Some of the selected companies have negative return on shareholders equity.

## **2.7 Research Gap**

All the study mentioned above have analyzed the concern firms' financial performance on the basis of ratio analysis and trend analysis. They have analyzed the concern firms on the basis of the concern firms past records. They are also influenced by rumors and manipulations. Therefore, the study is designed to analyze the financial performance of the concern firm on the basis of ratio analysis and cash flow analysis. And the study has also carried out the environmental analysis of the industries of the concern firm i.e. JCF.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

“Research methodology refers to the various sequential steps to be adopted by research in studying a problem with certain subject/object in view.<sup>19</sup>” In other words research methodology describes the methods and process applied in the entire aspect of the study.

The main objective of the study is to analyze the financial statements of JCF with a broad view to suggest the measures, to improve the economic and financial activities from the existing conditions as well as to recommend suggestion for its improvement in future. So, the purpose of this chapter is to outline the method followed in the process of analyzing the profitability record, operation efficiency, efficiency of resources utilization, financial strength and weakness, internal financing and other related aspect of JCF.

This chapter includes research design, period covered, sources and nature of data, population and sample, data collection procedures, data processing procedures and techniques of analysis.

#### **3.1 Research Design**

“A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economic in procedure.”<sup>20</sup> The study aims at portraying accurately upon the financial position of JCF.

Research design is the plan structure and strategy of investigations conceived so as to obtain answer to research questions and to conduct variances. In this study descriptive and analytical research design has been used. Some statistical

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<sup>19</sup> Kothary C.R. “Quantitative Techniques” Vikas Publishing House Pvt. Ltd., 576 New Delhi-110014, 1988 edition p.19

<sup>20</sup> Claive Selltize and others, “Research methodology in social science” 1962, p,50 quoted in Kothari C.R.. “Quantitative Techniques”, Vikas Publishing House Pvt. Ltd., 576 p.22



and financial tools have been applied to examine and descriptive technique which have been adopted to evaluate financial position of JCF.

### **3.2 Period Covered**

The presents study is undertaken for a period of 5 years i.e. from fiscal year 2063/64 to 2066/67 and on the basis of the study period, the strength and weakness of financial condition of JCF is identified.

### **3.4 Sources of Data**

To achieve the objective of this study both primary as well as secondary data have been used. For the purpose of the study, financial statements of JCF, other publication of JCF, publications of ministry of finance, publications of national planning commission (various plans) and other related available documents are collected. Research report and other secondary information are basic sources of data. Further, the researcher has also used unstructured questionnaire and interview with the concerned authorities as the primary sources of information.

### **3.5 Population and Sample**

At present there are 36 enterprises fully or partially owned by the GON (both direct share investment of the government and inter-public enterprises share investment), there are 7 in industrial sector and only JCF has been selected as sample unit for this study.

### **3.6 Data Gathering Procedures and Instrument**

Most of the parts of the study depends upon secondary data i.e. balance sheet and profit and loss account of the company which has been collected from the central office of JCF. Other necessary data are picked up from various books such as journals, published and unpublished thesis, economic surveys, etc.

Primary data have been collected through the personal visit of researcher to central office, baneshwor itself. Informal talk and interview method have also been applied. Some primary information has been collected by developing the unstructured questionnaire to acquire the view of the officials. All the gathered data have been according to need and requirement of this study.

### **3.7 Data Processing Procedure**

Data collected from various sources by using various procedures were not in appropriate forms for the analysis. So, first of all, irrelevant data are set aside and relevant are compiled and processed in appropriate forms.

### **3.8 Tools and Techniques for Analysis**

For presentation of collected data and its interpretation some financial tools and statistical tools are used.

#### **3.8.1. Used Financial Tools**

##### **3.8.1.1 Ratio Analysis**

##### **3.8.1.2 Cash Flow Analysis**

#### **3.8.1.1. Ratio Analysis:-**

Ratio Analysis is the process of determining and interpreting numerical relationships based on financial statements. A ratio is a statistical yardstick that provides the measure of the relationship between two variables or figures. The primary purpose of ratios is to point out areas for further investigation.<sup>21</sup>

##### **3.8.1.1.1 Types of Ratios**

The following are the four broad grouping of those several ratios on the basis of the needs of different interested parties/users like owners, lenders, management, etc.

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<sup>21</sup> Pandey, I.M., Financial Management, Seventh Revised Edition, ( Vikas Publishing House Pvt. Ltd., 1995) pp104

## **A. Liquidity Ratio**

Liquidity ratio is the relationship between current assets and current liabilities. These ratios are calculated to judge the financial position of the firm short-term as well as long-term solvency point of view. It is also known as financial ratio.

Some important liquidity ratios are stated below.

### **(a) Current Ratio**

The current ratio of a firm measures its short-term solvency through establishing the relationship between total current assets and total current liabilities. The current ratio is computed by dividing current assets by current liabilities. It is given as following formula.

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

### **(b) Quick Ratio**

Quick ratio establishes a relationship between quick assets and current liabilities and shows the better picture of the company's ability to meet its short-term liabilities out of short-term assets.

This ratio is found out by dividing the total of the quick assets by total current liabilities.<sup>22</sup>

It is given as following formula.

$$\text{Quick/Acid test ratio} = \frac{\text{Quick or liquid assets}}{\text{Current liabilities}}$$

A quick ratio of 1:1 has usually been considered favorable. But the standard for the quick ratio varies from company.

## **B. Leverage Ratio**

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<sup>22</sup> Pandey, I.M., Financial Management, ( Vikash Publishing House Pvt. Ltd., 1979), pp505

Leverage ratio also known as capital structure ratio judged the long-term financial position of the firm. Capital structure ratio measures the contribution of financing by owners compared with financing provided by creditors. It indicates the firm's debt and fixed charge paying ability also.

Leverage Ratios are as follows,

#### **a. Total Debt to Total Assets Ratio (T.D. to T.A. Ratio)**

Firm's assets are financed either by debt or by shareholder's capital. Total debt to total assets ratio establishes the relationship between debt and total assets and it explains what percentage of the value of assets of the company has been financed by its creditors. Simply, a low T.D to T.A. ratio indicates lower risk to creditors as well as low leverage and vice-versa. It is calculated as follows.

$$\text{Total Debt to total Assets Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

#### **b. Debt to shareholder's Equity Ratio**

Debt to shareholders equity ratio measure the firm's long-term solvency. Debt to equity ratio relates all recorded creditors on assets to the owner's recorded claims in order to measure the firm's obligation to creditors in relating to funds provided by the owners.<sup>23</sup>

It is calculated by dividing firm's total debt (long term as well as short-term debt) by shareholders equity.

$$\text{Debt to Shareholder's Equity Ratio} = \frac{\text{Total Debt}}{\text{Shareholder's Equity}}$$

### **C. Activity/Turnover/Efficiency Ratios**

Turnover ratio is highly used to analyze the financial performance of each and every type of enterprises. This ratio measures the effectiveness of the

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<sup>23</sup> Manmohan and Goyal Shiva Nath, "Principle on Management Accounting", Sahhitya Bhawan Agra-1990, pp 434

employment of resources in a company through establishing the relationship between sales and various assets. The turnover is determined by inventory turnover ratio, debtors' turnover, current assets, fixed assets and total assets turnover.

#### **a. Inventory Turnover Ratio**

The inventory turnover shows how fast the turnover is turning into receivable through sales.<sup>24</sup> Thus, this ratio is used to examine whether inventory policy of the company is efficient or not. Inventory turnover ratio is computed by dividing the cost of goods sold by the average inventory.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

#### **b. Debtors Turnover Ratio**

The second major turnover ratio is debtors' turnover ratio. The debtors' turnover ratio indicates how rapidly debts are collected. It is a measure of the number of times on the average that receivables turnover each year.<sup>25</sup> A high turnover is indicative of shorter time lag between credit sales and cash collection i.e. efficient debtors management. It is calculated as follows:-

$$\text{Debtors Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Average Debtors}}$$

#### **C .Average Collection Period**

Average collection period indicates the average length of time that the firm must wait after making sales before receiving cash. This ratio reflects the credit and

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<sup>24</sup> Pandey, I.M., "Financial Management" – Vani Education Book's -1989, pp513

<sup>25</sup> Bhalla, V.K., "Financial Management", Khosla Publishing House 28 UA Jawahar Nagar Delhi-1987, pp 868

collection policies of the firm and the effectiveness of collection machinery.<sup>26</sup> The average collection period is determined by using following formula:-

$$\text{Average Collection Period} = \frac{365}{\text{Debtors Turnover}}$$

#### **d. Fixed Assets Turnover Ratio**

Fixed assets turnover ratio is an indicative of the efficiency concerning the profitable use of fixed assets. Thus, this ratio indicates the number of times the fixed assets is turned over during the year. This ratio is defined as sales divided by fixed assets. It measures how well the firm uses its long-term (fixed) assets and shows how many rupees of sales are supported by one rupee of fixed assets.<sup>27</sup>

It can be measured as follows:

$$\text{Fixed Assets Turnover} = \frac{\text{Sales}}{\text{Net Fixed Assets}}$$

#### **e. Current Assets Turnover Ratio**

Current assets turnover ratio measures the efficiency of the company in utilizing its investment on current assets. It shows the number of times on the average that current assets turnover each year. Generally, higher value of the current assets turnover indicates that the company is more efficient in the management of current assets and vice-versa. Current assets turnover equals sales divided by current assets; therefore,

$$\text{Current Assets Turnover} = \frac{\text{Sales}}{\text{Current Assets}}$$

#### **f. Total Assets Turnover Ratio**

The total assets turnover ratio examines the company's efficiency through establishing relationship between the amount invested in the assets and the result accruing in terms of sales. The total assets ratio is calculated as follows:

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<sup>26</sup> Dr. Srivastava, R.M., "Financial Management (Principles and Problems)" Pragati Prakashan Meerut India, 1984/85, pp 68

<sup>27</sup> Bhalla, V.K., "op. cit.", pp 87

$$\text{Total Assets Turnover} = \frac{\text{Sales}}{\text{Total Assets (Net)}}$$

#### **D. Profitability Ratios**

The test of effectiveness of any business undertaking is its profitability. Profit is outcome of successful operation and efficient management of enterprise. Profitability ratio measure the worth of the selected investment in various categories of assets depending largely on sales performance and operative efficiency. Generally, higher value of profitability ratio shows better financial performance of the company and vice-versa. Profitability position is measured by gross profit margin, net profit margin, operating ratio, return on shareholders equity and return on total assets etc.

##### **a. Gross Profit Margin**

This ratio indicates the percentage relationship between gross profit and sales. The excess amount of sales over cost of goods sold is gross profit. The ratio measures the efficiency of production management, size of gross profit depend upon cost, price and sales volume. So gross profit margin is the result of relationship between cost, price and sales volume. The following formula is used to determine the ratio.

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

##### **b. Net Profit Margin**

Net profit margin establishes the relationship between net profit and sales of a firm and measures the firm's ability to turn each rupee of sales into net profit. This ratio provides considerable insight into the overall efficiency if the business.

This ratio can be calculated as following formula,

$$\text{Net Profit Margin} = \frac{\text{Net profit after tax}}{\text{Sales}} \times 100$$

### **C. Return on Assets**

Return on assets evaluates how far the management is efficient in using resources invested in assets (fixed assets and total assets) whatever the source of financing may be. Following types of return on assets are calculated.

#### **a. Return on Fixed Assets Ratio**

Return on Fixed Assets Ratio (ROFAR) measures the profitability of all the financing resources that invested in the fixed assets by the firm. A high ratio is favorable and vice-versa. ROFAR is calculated by dividing net profit/loss by fixed assets.

#### **b. Return on Total Assets Ratio (ROTAR)**

Return on total assets (ROTA) measure the profitability of the total funds invested in the firms assets. In other words, it evaluates the efficiency of the company in utilization and mobilization of its assets. The return on total assets is net profit divided by total assets.

$$\text{Return on Total Assets} = \frac{\text{Net Profit after taxes}}{\text{Total assets}} \times 100$$

#### **c. Return on Shareholders Equity Ratio (ROSER)**

Return on shareholders equity ratio (ROSER) is an indicator of firm's ability of mobilizing resources of the owners. This ratio helps us to judge whether the firm has earned a satisfactory return to its equity holders or not. It is calculated as follows:-

$$\text{Return on Shareholders Equity} = \frac{\text{Net Profit after Taxes}}{\text{Shareholders Equity}} \times 100$$



#### **d. Operating Expenses Ratio (OER):**

Operating Expenses ratio expresses the relationship between operating expenses and sales and reflects the firm's operational efficiency i.e. lower ratio higher the operational efficiency and vice-versa. This ratio indicates the profitability of sales before taxes and interest expenses. It is computed by using following formula:-

$$\text{Operating Ratio} = \frac{\text{Operating expenses}}{\text{Sales}} \times 100$$

Operating expenses = Cost of goods sold + selling expenses at general and administrative expense (excluding interest)

#### **3.8.1.2. Cash Flow Analysis**

Cash is the most important current assets for the operation of business. The cash flow statement makes cash flow analysis. It shows a clear picture of cash inflows, outflows and opening and closing balance of the business firm in a particular period of time. It shows that the cash flow of operating activities, investment activities and financing activities of business concern.

#### **3.8.2. Used Statistical Tools**

##### **3.8.2. 1. Mean ( $\bar{x}$ )**

Mean represent the entire figure that is the largest and smallest items. It is frequently referred to as a measure of central tendency. Mean can be calculated as follows.

$$\bar{X} = \frac{\times}{N}$$

Where,  $\bar{x}$  = mean

$\times$  = Sum of the variable

N = number of observation.

### 3.8.2.2 Standard Deviation (S.D.)

The standard deviation measures the absolute dispersion. The greater the amount of dispersion, greater the standard deviation. A small standard deviation means a high degree of uniformity of the observations as well as homogeneity of a series; a large standard deviation means just the opposite. In this study, standard deviation is calculated at different ratios. It is calculated as follows.

$$\text{S.D.} = \frac{\sqrt{N^2 \bullet N'^2}}{N \bullet N'^2}$$

### 3.8.2.3 Co-efficient of Variation

“The co-efficient of variance is the relative measure of dispersion, comparable across distribution, which is defined as the ratio of the standard deviation to the mean expressed in percent.”<sup>28</sup> It is calculated as follows:

$$\text{C.V.} = \frac{\text{S.D.}}{\text{Mean}}$$

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<sup>28</sup> Levin, Richard and David Students Language & Rubin, “Statistics for Management” Prentice hall of India Pvt. Ltd. Delhi, fifth edition 1994, p.114

## **CHAPTER-IV**

### **ANALYSIS AND PRESENTATION OF DATA**

This chapter, 'Data Presentation and Analysis' is the fourth chapter of this research study. It is an important phase of the research. The data collecting activity consists of taking ordered information and transforming it into understandable form so that it can be examined and analyzed. Research as a media can be interpreted as having a collection of data and process of methodology that can be utilized to bring us to the conclusion. In this chapter the effort has been made to analyze the financial position of JCF. To achieve the objective it is essential to present, analyze and interpret the data. The analysis and presentation of data have been undertaken to examine the liquidity & profitability position of JCF with the help of financial statement of last five fiscal year from 2062/63 to 2066/67.

The following financial tools and techniques have been used in the presentation, analysis and interpretation of data. This chapter is divided into the following heads.

- Ratio analysis

- Cash flow analysis

#### **4.1 Ratio Analysis**

Ratio Analysis is the process of determining and interpreting numerical relationships based on financial statements. A ratio is a statistical yardstick that provides the measure of the relationship between two variables or figures. The primary purpose of ratios is to point out areas for further investigation.

##### **Types of Ratios**

The following are the four broad groupings of those several ratios on the basis of the needs of different interested parties/users like owners, lenders, management, etc.

##### **4.1.1 Profitability Ratios**

The test of effectiveness of any business undertaking is its profitability. Profit is outcome of successful operation and efficient management of enterprise.

Profitability ratio measure the worth of the selected investment in various categories of assets depending largely on sales performance and operative efficiency. Generally, higher value of profitability ratio shows better financial performance of the company and vice-versa. Profitability position is measured by gross profit margin, net profit margin, operating ratio, return on shareholders equity and return on total assets etc.

#### 4.1.1.1 Gross Profit Margin (GPM)

This ratio indicates the percentage relationship between gross profit and sales. The excess amount of sales over cost of goods sold is gross profit. The ratio measures the efficiency of production management, size of gross profit depend upon cost, price and sales volume. So gross profit margin is the result of relationship between cost, price and sales volume. Generally, a high gross profit margin reflects lower costs of goods sold, is a sign of good management and vice-versa. Gross Profit Margin is calculated by dividing the gross profit by net sales.

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

Table No. 4.1

#### Gross Profit Margin of JCF (GPM)

Fiscal Year	Gross Profit	Net Sales	GPM (%)
2062/63	275,528,969	1,161,013,821	23.73
2063/64	271,308,553	1,136,139,681	23.88
2064/65	290,050,999	1,153,879,282	25.13
2065/66	246,470,904	1,088,470,085	22.64
2066/67	213,456,610	968,713,320	22.00
Average (X)			23.47
Standard Deviation(SD)			1.080
Co-efficient of Variation (CV)			4.6%
Manufacturing Industry's Standard			-

Source: Unpublished official data from JCF

In the above mentioned table, it is observed that the highest and lowest GPM of JCF during the study period are 25.13 percent in FY 2064/65 and 22 percent in FY 2066/67 respectively. Average GPM of the factory is 23.47 percent which is less than the others profit making public manufacturing industries. This shows that GPM of JCF is unsatisfactory over the study period.

From the above table, during the five year study period GPM of JCF from 1<sup>st</sup> three years' study period is in increasing trend then from FY 2065/66 to 2066/67 it has decreasing trend. Standard Deviation (SD) and co-efficient of variation (CV) of the concern are 1.080 and 4.6 percent respectively which indicates that GPM of JCF has not fluctuated so widely.

#### 4.1.1.2. Net Profit Margin (NPM)

Net profit margin establishes the relationship between net profit and sales of a firm and measures the firm's ability to turn each rupee of sales into net profit. This ratio provides considerable insight into the overall efficiency if the business.

This ratio can be calculated as following formula,

$$\text{Net Profit Margin} = \frac{\text{Net profit after tax}}{\text{Sales}} \times 100$$

A higher net profit margin indicates management efficiency in manufacturing, administering and selling the products.

The NPM of JCF for the study period is presented in the following table.

Table No. 4.2  
Net Profit Margin (NPM)

Fiscal Year	Net Profit	Net Sales	NPM (%)
2062/63	14,814,582	1,161,013,821	1.276
2063/64	7,125,653	1,136,139,681	0.627
2064/65	14,711,286	1,153,879,282	1.275
2065/66	9,096,532	1,088,470,085	0.836
2066/67	(160,783,659)	968,713,320	(16.60)
Average (X)			(2.517)
Standard Deviation(SD)			7.046
Co-efficient of Variation (CV)			(279.936%)
Manufacturing Industry's Standard			15.00

Source: Unpublished official data from JCF

From the above table, it is observed that the highest and lowest NPM of JCF is 1.276 in FY 2062/63 and (16.60) in FY 2066/67 respectively. The average NPM is appeared as negative (2.517) percent. It is highly lower than the average NPM of manufacturing industries standard i.e.15 percent. Negative NPM of JCF shows that profitability record of the concern is highly unsatisfactory over the study period. It is a sign of failure of overall operational management as well as planner and policymaking level of the concern. The evidence shows that the NPM of JCF is highly unsatisfactory in the study period.

During the study period NPM of JCF has a very fluctuating trend. Standard Deviation (SD) and Co-efficient of Variation (C.V.) of NPM are 7.046 and (279.936) percent in study period respectively. The trend of NPM cannot take any particular direction during the study period and in the FY 2066/67 NPM of JCF is negative as well.

#### **4.1.1.3. Return on Assets**

Return on assets evaluates how far the management is efficient in using resources invested in assets (fixed assets and total assets) whatever the source of financing may be. Following types of return on assets are calculated.

##### **a. Return on Fixed Assets Ratio**

Return on Fixed Assets Ratio (ROFAR) measures the profitability of all the financing resources that invested in the fixed assets by the firm. A high ratio is favorable and vice-versa. ROFAR is calculated by dividing net profit/loss by fixed assets. The ratio of JCF for the study period is given below.

Table No. 4.3

## Return on Fixed Assets Ratio (ROFAR)

Fiscal Year	Net Profit/loss	Fixed Assets	ROFAR (%)
2062/63	14,814,582	51,750,023	28.63
2063/64	7,125,653	46,671,332	15.27
2064/65	14,711,286	46,365,334	31.73
2065/66	9,096,532	49,222,284	18.48
2066/67	(160,783,659)	49,958,100	(321.8)
Average (X)			(45.54)
Standard Deviation(SD)			138
Co-efficient of Variation (CV)			(303.6%)
Manufacturing Industry's Standard			-

Source: Unpublished official data from JCF

From the above mentioned table, it is observed that the highest and lowest ROFA ratios are 31.73 percent in FY 2064/65 and (321.8) in FY 2066/67 respectively. The average of ROFAR is (45.54) percent that is negative return and it shows unsatisfactory return on fixed assets. It reveals that JCF fails to mobilize its fixed assets properly during the study period.

During the study period, the ROFAR of JCF has decreasing-increasing-decreasing trend and it has negative ROFAR in FY 2066/67 as well.

#### **b. Return on Total Assets Ratio (ROTAR)**

Return on total assets (ROTA) measure the profitability of the total funds invested in the firms assets. In other words, it evaluates the efficiency of the company in utilization and mobilization of its assets. The return on total assets is net profit divided by total assets.

$$\text{Return on Total Assets} = \frac{\text{Net Profit after taxes}}{\text{Total assets}} \times 100$$

This ratio judge's effectiveness in using the 'pool' of funds which is useful to measure the profitability of all the financial resources invested in the firm's assets. Return on Total Assets Ratio (ROTAR) of the concern for the study period is calculated in the following table.

Table No. 4.4  
Return on Total Assets Ratio (ROTAR)

Fiscal Year	Net Profit/loss	Total Assets	ROTAR (%)
2062/63	14,814,582	591,252,738	2.50
2063/64	7,125,653	575,129,856	1.24
2064/65	14,711,286	501,258,415	2.93
2065/66	9,096,532	465,272,439	1.95
2066/67	(160,783,659)	443,713,576	(36.23)
Average (X)			(5.522)
Standard Deviation(SD)			15.36
Co-efficient of Variation (CV)			(278%)
Manufacturing Industry's Standard			10 to 12%

Source: Unpublished official data from JCF

The above table shows that the highest and lowest ROTAR are 2.93 percent in FY 2064/65 and (36.23) percent in FY 2066/67 respectively. Average ROTAR of JCF is (5.522) which is lower than the average ROTAR of manufacturing industries standard i.e. 10 to 12 percent. This shows that JCF is unable to utilize its total assets during the study period.

The ROTAR during the study period has decreasing- increasing-decreasing trend. SD & CV of ROTAR are 15.36 and 278 percent respectively which show that ROTAR fluctuated widely during the study period. This whole thing shows that the utilization of total assets by JCF during the study period is unsatisfactory.

### **c. Return on Shareholders Equity Ratio (ROSER)**

Return on shareholders equity ratio (ROSER) is an indicator of firm's ability of mobilizing resources of the owners. This ratio helps us to judge whether the firm



has earned a satisfactory return to its equity holders or not. It is calculated as follows:-

$$\text{Return on Shareholders Equity} = \frac{\text{Net Profit after Taxes}}{\text{Shareholders Equity}} \times 100$$

Generally, high ratio shows the efficient utilization of owners' funds. The ratio of JCF for the study period is given below.

Table No. 4.5  
Return on Shareholders Equity Ratio (ROSER)

Fiscal Year	Net Profit/loss	Equity Capital	ROSER (%)
2062/63	14,814,582	261,128,200	5.67
2063/64	7,125,653	258,079,215	2.76
2064/65	14,711,286	256,469,217	5.73
2065/66	9,096,532	173,850,680	5.23
2066/67	(160,783,659)	95,320,218	(168.67)
Average (X)			(29.85)
Standard Deviation(SD)			69.41
Co-efficient of Variation (CV)			(232.54%)
Manufacturing Industry's Standard			13.15%

Source: Unpublished official data from JCF

The above mentioned table shows that the highest and lowest of ROSER are 5.73 percent in FY 2064/65 and (168.67) percent in FY 2066/67 respectively. The average of ROSER is (29.85) percent which is highly lower than the average of ROSER of manufacturing industries standard i.e. 13.15 percent. This shows that JCF is unable to use its shareholders equity capital.

ROSER of JCF during the study period does not follow any certain trend. ROSER has decreased in FY 2063/64 as compared to the ROSER in FY 2062/63 then again in FY 2064/65 it has increased then after it has decreased and in FY 2066/67 it has remained as negative. SD & CV of ROSER are 69.41 and (232.54%) respectively. It is clear that profitability of JCF in terms of equity capital is highly unsatisfactory. JCF does not seem to have utilized its resources properly during the study period.

#### **d. Operating Expenses Ratio (OER):**

Operating Expenses ratio expresses the relationship between operating expenses and sales and reflects the firm's operational efficiency i.e. lower ratio higher the operational efficiency and vice-versa. This ratio indicates the profitability of sales before taxes and interest expenses. It is computed by using following formula:-

$$\text{Operating Ratio} = \frac{\text{Operating expenses}}{\text{Sales}} \times 100$$

Operating expenses = Cost of goods sold + selling expenses at general and administrative expense (excluding interest)

Table No.4.6  
Operating Expenses Ratio

Fiscal Year	Operating Expenses	Net Sales	OER (%)
2062/63	1,140,483,803	1,161,013,821	98.23
2063/64	1,128,022,006	1,136,139,681	99.28
2064/65	1,129,531,725	1,153,879,282	97.88
2065/66	1,086,944,869	1,088,470,085	99.86
2066/67	1,087,117,245	968,713,320	112.22
Average (X)			101.49
Standard Deviation(SD)			5.41.
Co-efficient of Variation (CV)			5.33%
Manufacturing Industry's Standard			85%

Source: Unpublished official data from JCF

From the above mentioned table, it is observed that the highest and lowest OER of JCF during the study period are 112.22 percent in FY 2066/67 and 97.88 in FY 2064/65 respectively. Average OER of the concern is 101.49 percent, which is very high than the average OER of manufacturing industries standard i.e.85 percent, therefore the ratio shows inefficient management in terms of cost reduction of operating expenses. The fluctuation of OER is not so wide than the other profitability ratios because SD & CV are 5.41 and 5.33 percent respectively.

#### **4.1.2 Liquidity Ratio**

Liquidity ratio is the relationship between current assets and current liabilities. These ratios are calculated to judge the financial position of the firm short-term as well as long-term solvency point of view. It is also known as financial ratio.

Some important liquidity ratios are stated below.

##### **4.1.2.1. Current Ratio**

The current ratio of a firm measures its short-term solvency through establishing the relationship between total current assets and total current liabilities. The current ratio is computed by dividing current assets by current liabilities. It is given as following formula.

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

The current ratio (CR) of JCF during the study period is given in the following table.

Table No. 4.7  
Current Ratio (CR)

Fiscal Year	Current Assets(Rs)	Current Liabilities(Rs)	CR in times
2062/63	421,318,232	262,612,139	1.60
2063/64	415,201,524	228,956,372	1.81
2064/65	344,763,581	179,231,048	1.92
2065/66	309,780,655	136,310,034	2.27
2066/67	294,040,976	281,296,236	1.04
Average (X)			1.728
Standard Deviation(SD)			0.46
Co-efficient of Variation (CV)			23.50%
Manufacturing Industry's Standard			2:1

Source: Unpublished official data from JCF

From the above mentioned table, it can be observed that the highest and lowest current ratios are 2.27 in FY 2065/66 and 1.04 in FY 2066/67 respectively. The average of CR of JCF is 1.728 times which is lower than the average CR of manufacturing industries standard i.e.2:1 time. It indicates that short-term solvency position of JCF during the study period is not considerable.

The CR of JCF during the study period has increasing trend till FY 2065/66 then after in FY 2066/67 CR of JCF has decreased. SD & CV during the study period are 0.406 and 23.50 percent respectively which show that there is no wide fluctuation in CR. But its average CR is lower than the manufacturing industries standard, therefore it can be said that this CR cannot be taken as a satisfied CR.

#### **4.1.2.2 Quick Ratio**

Quick ratio establishes a relationship between quick assets and current liabilities and shows the better picture of the company's ability to meet its short-term liabilities out of short-term assets. This ratio is found out by dividing the total of the quick assets by total current liabilities.

It is given as following formula.

$$\text{Quick/Acid test ratio} = \frac{\text{Quick or liquid assets}}{\text{Current liabilities}}$$

A quick ratio of 1:1 has usually been considered favorable. But the standard for the quick ratio varies from company.

The quick ratio of the JCF for the study period is presented below.

Table No. 4.8  
Quick Ratio (QR)

Fiscal Year	Quick Assets(Rs)	Current Liabilities(Rs)	QR in times
2062/63	242,329,223	262,612,139	0.922
2063/64	260,549,911	228,956,372	1.138
2064/65	201,688,688	179,231,048	1.125
2065/66	194,488,572	136,310,034	1.427
2066/67	176,475,643	281,296,236	0.627
Average (X)			1.0478
Standard Deviation(SD)			0.2648
Co-efficient of Variation (CV)			25.27%
Manufacturing Industry's Standard			1:1

Source: Unpublished official data from JCF

From the above mentioned table, it is known that the highest and lowest quick ratio of JCF during the study period are 1.427 in FY 2065/66 and 0.627 in FY 2066/67 respectively. The average of the quick ratio of the concern is 1.0478 times which is lower than the average of the quick ratio of manufacturing industries standard i.e. 1:1 times. Therefore, during the study period QR of JCF has been found satisfactory. The ratio is normally fluctuated because SD & CV of the QR are 0.2648 and 25.27 percent respectively.

### 4.1.3 Leverage Ratio

Leverage ratio also known as capital structure ratio judged the long-term financial position of the firm. Capital structure ratio measures the contribution of financing by owners compared with financing provided by creditors. It indicates the firm's debt and fixed charge paying ability also.

Leverage Ratios are as follows,

#### 4.1.3.1 Debt to Equity Ratio

Debt to shareholders equity ratio measure the firm's long-term solvency. Debt to equity ratio relates all recorded creditors on assets to the owner's recorded claims in order to measure the firm's obligation to creditors in

Relating to funds provided by the owners.

It is calculated by dividing firm's total debt (long term as well as short-term debt) by shareholders equity.

$$\text{Debt to Equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

Generally, a high ratio shows that the claims of creditor are greater in comparison to owners and during the time of low profit level company may suffer from the problem of paying fixed charges to creditor and vice-versa. The ratio of the JCF is presented in the following table.

Table No. 4.9  
Debt to Equity Ratio (DER)

Fiscal Year	Debt Capital	Equity Capital	DER (%)
2062/63	330,124,541	261,128,200	126.4
2063/64	317,050,640	258,079,215	122.8
2064/65	244,789,198	256,469,217	95.4
2065/66	225,979,840	173,850,680	129.9
2066/67	328,308,275	95,320,218	344.4
Average (X)			163.78
Standard Deviation(SD)			91.13
Co-efficient of Variation (CV)			55.91%
Manufacturing Industry's Standard			100%

Source: Unpublished official data from JCF

Form the above mentioned table; it is observed that the highest and lowest DERs are 344 percent in FY 2066/67 and 95.4 percent in FY 2064/65 respectively. The average of the ratio is 163.78% which is higher than the average of the manufacturing industries standard i.e.100%, therefore it is unsatisfactory to the creditors as well as business point of view. The long-term solvency position of the firm is very poor. It indicates the greater risk from the long-term solvency point of view.

#### **4.1.3.2 Long-term Debt to Total Capital Ratio (LTD to TCR)**

LTD to TCR indicated the contribution of proportionate share of the long-term debt to total capital employed. A higher ratio represents a greater risk and higher profitability and vice-versa. The ratio is calculated by dividing long-term debt by total capital employed. The ratio of JCF for the study period is given bellow.

Table No. 4.10

## Long-term Debt to Total Capital Ratio (LTD to TCR)

Fiscal Year	Long-term Debt	Total Capital	LTD to TCR (%)
2062/63	67,512,402	328,640,603	20.54
2063/64	88,094,268	346,173,484	25.45
2064/65	65,558,150	322,027,368	20.36
2065/66	65,441,919	328,962,406	19.89
2066/67	65,308,214	207,640,472	31.45
Average (X)			23.54
Standard Deviation(SD)			4.4
Co-efficient of Variation (CV)			18.87%
Manufacturing Industry's Standard			-

Source: Unpublished official data from JCF

From the above mentioned table it can be revealed that the highest and lowest ratios are 31.45 percent in FY 2066/67 and 19.98 percent in FY 2065/66 respectively. The average ratio is 23.54 percent which indicates that the part of long-term debt on total capital is only 23.54 percent which is less and the lower ratio shows that the risk of the concern is very low which in turn presents low profitability of the firm as well. SD & CV of the ratios are 4.4 and 18.87 percent respectively which indicate that there is no wide fluctuation in the ratios during the study period

#### 4.1.4 Activity/Turnover/Efficiency Ratios

Turnover ratio is highly used to analyze the financial performance of each and every type of enterprises. This ratio measures the effectiveness of the employment of resources in a company through establishing the relationship between sales and various assets. The turnover is determined by inventory turnover ratio, debtors' turnover, current assets, fixed assets and total assets turnover.



#### 4.1.4.1 Inventory Turnover Ratio (ITR)

The inventory turnover shows how fast the turnover is turning into receivable through sales. Thus, this ratio is used to examine whether inventory policy of the company is efficient or not. Inventory turnover ratio is computed by dividing the cost of goods sold by the average inventory.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

Generally, a high inventory turnover is indicative of good inventory management and a lower inventory turnover suggest as inefficient inventory management. The ratio of JCF for the study period is given in the following table.

Table No. 4.11

Inventory Turnover Ratio (ITR):

Fiscal Year	Cost of goods sold	Closing Inventory	ITR (Times)
2062/63	885,484,852	178,989,009	4.9
2063/64	864,831,128	154,651,613	5.6
2064/65	863,828,283	143,074,893	6.0
2065/66	841,999,181	115,292,083	7.3
2066/67	755,253,710	117,565,333	6.4
Average (X)			6
Standard Deviation(SD)			0.8
Co-efficient of Variation (CV)			13.37%
Manufacturing Industry's Standard			4 times

Source: Unpublished official data from JCF

From the mentioned table, it is observed that the highest and lowest ITR are 7.3 times in FY 2065/66 and 4.9 times in 2062/63 respectively. The average ITR is 6 times which is higher than the average ITR of manufacturing industries standard i.e. 4 times, therefore, the ratio is in considerable position and is satisfactory. The

SD & CV during the study period are 0.8 and 13.37 percent respectively, which reveals that the ratio is normally fluctuated during the study period.

#### 4.1.4.2 Debtors Turnover Ratio (DTR)

The second major turnover ratio is debtors' turnover ratio. The debtors' turnover ratio indicates how rapidly debts are collected. It is a measure of the number of times on the average that receivables turnover each year. A high turnover is indicative of shorter time lag between credit sales and cash collection i.e. efficient debtors management. On the other hand low turnover shows that debts are not being collected rapidly i.e. inefficient management of debtors in the company. It is calculated as follows:-

$$\text{Debtors Turnover Ratio} = \frac{\text{Credit Sales}}{\text{Average Debtors}}$$

The ratio of JCF for the study period is given in the following table.

Table No. 4.12  
Debtors Turnover Ratio (DTR):

Fiscal Year	Sales	Debtors	DTR (times)
2062/63	1,161,013,821	39,959,672	29.05
2063/64	1,136,139,681	52,855,225	21.49
2064/65	1,153,879,282	48,906,390	23.59
2065/66	1,088,470,085	54,425,680	19.99
2066/67	968,713,320	49,736,973	19.47
Average (X)			22.72
Standard Deviation(SD)			3.47
Co-efficient of Variation (CV)			15.27%
Manufacturing Industry's Standard			6 times

Source: Unpublished official data from JCF

On the basis of mentioned table, it is observed that the highest and lowest DTR are 29.05 times in FY 2062/63 and 19.47 in FY 2066/67 respectively. Average DTR of JCF during the study period is 22.72 times which is highly greater than the average DTR of manufacturing industries i.e. 6 times. The high DTR shows that JCF has been following better management of its debtors. The higher the value of DTR, the more efficient is the management of the credit. Since, DTR of JCF is satisfactory. The SD & CV of the ratio during the study period are 3.47 and 15.27 percent respectively which indicates that DTR is varied.

#### 4.1.4.3 Average Collection Period (ACP)

Average collection period indicates the average length of time that the firm must wait after making sales before receiving cash. This ratio reflects the credit and collection policies of the firm and the effectiveness of collection machinery. The average collection period is determined by using following formula:

$$\text{Average Collection Period} = \frac{365}{\text{Debtors Turnover}}$$

It indicates the rapidity or slowness of its collection. The shorter the ACP, the better the quality of debtors. The ACP of JCF for the study period is given below.

Table No. 4.13  
Average Collection Period (ACP)

Fiscal Year	Days in a year*Debtors	Sales	ACP in days
2062/63	14,385,481,920	1,161,013,821	12.40
2063/64	19,027,881,000	1,136,139,681	16.75
2064/65	17,606,300,400	1,153,879,282	15.26
2065/66	19,593,244,800	1,088,470,085	18.00
2066/67	17,905,310,280	968,713,320	18.48
Average (X)			16.17
Standard Deviation(SD)			2.18
Co-efficient of Variation (CV)			13.51%
Manufacturing Industry's Standard			60 days

Source: Unpublished official data from JCF

From the above mentioned table, it can be observed that during study period the highest and lowest ACP are 18.48 in FY 2066/67 and 12.40 days in FY 2062/63 respectively. Average of ACP is 16.17 days which is lower than ACP of manufacturing industries standard i.e. 60 days. It indicates that JCF has qualitative debtors during the study period.

The SD & CV of ACP are 2.18 and 13.51 percent respectively which shows ACP during the study period fluctuated less widely.

#### **4.1.4.4 Fixed Assets Turnover Ratio**

Fixed assets turnover ratio is an indicative of the efficiency concerning the profitable use of fixed assets. Thus, this ratio indicates the number of times the fixed assets is turned over during the year. This ratio is defined as sales divided by fixed assets. It measures how well the firm uses its long-term (fixed) assets and shows how many rupees of sales are supported by one rupee of fixed assets.

It can be measured as follows,

$$\text{Fixed Assets Turnover} = \frac{\text{Sales}}{\text{Net Fixed Assets}}$$

A high fixed assets turnover shows that the company utilizes and manages its investment on fixed assets efficiently. But on the contrary low turnover indicates company's inability and inefficiency in its capacity utilization. The ratio of JCF for the study period is given below.

Table No. 4.14

## Fixed Assets Turnover Ratio (FATR)

Fiscal Year	Sales	Fixed Assets	FATR (times)
2062/63	1,161,013,821	51,750,023	22.43
2063/64	1,136,139,681	46,671,332	24.34
2064/65	1,153,879,282	46,365,334	24.88
2065/66	1,088,470,085	49,222,284	22.11
2066/67	968,713,320	49,958,100	19.40
Average (X)			22.63
Standard Deviation(SD)			1.93
Co-efficient of Variation (CV)			8.5%
Manufacturing Industry's Standard			10 times

Source: Unpublished official data from JCF

On the basis of mentioned table, it is observed that the highest and lowest FATRs of JCF for the study period are 24.88 times in FY 2064/65 and 19.40 times in FY 2066/67 respectively. Average FATR is 22.63 times which is higher than average FATR of manufacturing industries standard i.e. 10 times. This shows that the efficiency of the utilization of its fixed assets to generate sales is satisfactory during the study period. The SD & CV of ratio is 1.93 and 8.5% respectively which indicate that the ratio is not widely fluctuated.

#### e. Total Assets Turnover Ratio

The total assets turnover ratio examines the company's efficiency through establishing relationship between the amount invested in the assets and the result accruing in terms of sales. The total assets ratio is calculated as follows:

$$\text{Total Assets Turnover} = \frac{\text{Sales}}{\text{Total Assets (Net)}}$$

The firm's ability to generate more amount of sales in comparison to per rupee investment in total assets promote the firms overall performance. Thus, the high value of total asset turnover shows the proper utilization of all the financial resources committed to the firm and vice-versa. The ratio for JCF during the study period is given below.

Table No. 4.15  
Total Asset Turnover Ratio (TATR)

Fiscal Year	Sales	Total Assets	TATR (times)
2062/63	1,161,013,821	591,252,738	1.96
2063/64	1,136,139,681	575,129,856	1.97
2064/65	1,153,879,282	501,258,415	2.30
2065/66	1,088,470,085	465,272,439	2.34
2066/67	968,713,320	443,713,576	2.18
Average (X)			2.15
Standard Deviation(SD)			0.16
Co-efficient of Variation (CV)			7.44%
Manufacturing Industry's Standard			2 times

Source: Unpublished official data from JCF

From the above mentioned table, it is observed that the highest and lowest TATRs of JCF for the study period are 2.34 times in FY 2065/66 and 1.96 in FY 2062/63 respectively. Average of TATR is 2.15 times which is slightly higher than average of TATR of manufacturing industries standard i.e. 2 times. It indicates that the TATR of JCF during the study period is normally satisfactory. Therefore, the efficiency of utilization of its total assets to generate sales is satisfactory. The fluctuation of the TATR is not very wide because its SD & CV are 0.16 and 7.44% respectively.

#### **4.2Cash Flow Analysis:**

Cash is the most important current assets for the operation of business. The cash flow statement makes cash flow analysis. It shows a clear picture of cash inflows,

outflows and opening and closing balance of the business firm in a particular period of time. It shows that the cash flow of operating activities, investment activities and financing activities of business concern.

The statement of cash flow explains where cash come from and where it was spent during a period. It is generally defined as changes in cash and cash equivalents. Basically, the methods of developing cash flows starting with net income. Adjustments to net income are made for non-cash items effecting accurate basis net income. Essentially net income is converted from the accrual basis to a cash basis (e.g. cash flow from operation). The other cash inflows and out flows are estimated for non-operating items such as sales of fixed assets, capital additions and payment of debt and dividends.

Improving cash flow basically involves increasing the amount of available cash on a day-to-day basis to accomplish these objectives. The management should focus on the cash collection process to speed up cash collections and the cash payment process to slow down the payment of cash. Investment policies should focus for the immediate investment of idle cash balance to minimize interest earning.

By considering these above objectives, JCF tries to improve its current cash flow position honestly. The cash flow statements of JCF during the study period i.e. 2062/63 to 2066/67 is given below.

**Table No. 4.16**  
**Cash flow statement of Janakpur Cigarette Factory Limited**  
**For the fiscal year 2062/63**

Sr. No.	Particular	FY 2062/63
<b>A.</b>	<b>Cash flow from Operational Activities:</b>	
	1) Total Operating Income	1,166,713,290
	2) Less: Total operating expenses	(1,140,483,803)
	3) Operational profit before change in current capital	26,229,487
	4) Increase in current assets	(1,379,382)
	5) Decrease in current liabilities	(20,087,683)

<b>B.</b>	<b>Net Cash from Operational Activities</b>	<b>4,762,422</b>
	<b>Cash flow from Investment Activities:</b>	
	1) Interest on Investment	2,167,765
	2) Increase in Investment	(668,295)
	3) Less: Increase in Fixed Assets	(645,906)
	<b>Net Cash from Investment Activities</b>	<b>853,564</b>
<b>C.</b>	<b>Cash flow from Financial Activities:</b>	
	1) Increase in loan	22,779,490
	2) Decrease in sancahya kosher	(643,427)
	<b>Net cash from Financial Activities</b>	<b>23,422,917</b>
	Net change in cash or cash equivalent (A+B+C)	29,038,902
	Opening cash Balance	26,885,338
	<b>Closing cash Balance</b>	<b>55,924,241</b>

From the above mentioned table, it is observed that sources of cash inflow from operational activities is total operating income and sources of cash outflow from operational activities are total operating expenses, increase in current assets and decrease in current liabilities. Similarly, cash inflow from investment activities is being made by interest on investment and cash outflow are made by increase in investment and increase in fixed assets. And cash inflow from financing activities is made by increase in loan and decrease in stanches kosher.

The highest portion of cash inflow of JCF in FY 2062/63 is made by total operating income i.e. RS. 1,166,713,290 and the lowest portion of cash inflow is made by interest on investment i.e. RS. 2,167,765. Similarly, the highest portion of cash outflow of JCF in FY 2062/63 is made by total operating expenses i.e. RS. 1,140,483,803 and the lowest portion of cash outflow is made by increase in fixed assets i.e. RS. 647,906.



**Table No. 4.17**  
**Cash flow statement of Janakpur Cigarette Factory Limited**  
**For the fiscal year 2063/64**

Sr. No.	Particular	FY 2063/64
<b>A.</b>	<b>Cash flow from Operational Activities:</b>	
	1) Total Operating Income	1,142,973,377
	2) Less: Total operating expenses	(1,128,022,006)
	3) Operational profit before change in current capital	14,951,370
	4) Decrease in current assets	1,450,882
	5) Decrease in current liabilities	(41,767,399)
	<b>Net Cash from Operational Activities</b>	<b>(25,365,146)</b>
<b>B.</b>	<b>Cash flow from Investment Activities:</b>	
	1) Interest on Investment	2,186,250
	2) Decrease in Investment	4,927,486
	3) Less: Increase in Fixed Assets	(1,851,604)
	<b>Net Cash from Investment Activities</b>	<b>5,262,132</b>
<b>C.</b>	<b>Cash flow from Financial Activities:</b>	
	1) Increase in loan	20,581,866
	2) Increase in sancahaya kosher	(5,144,677)
	<b>Net cash from Financial Activities</b>	<b>15,437,188</b>
	Net change in cash or cash equivalent (A+B+C)	(4,665,825)
	Opening cash Balance	55,924,241
	<b>Closing cash Balance</b>	<b>51,258,415</b>

From the above mentioned table, it is observed that sources of cash inflow from operational activities are total operating income and decrease in current assets and sources of cash outflow from operational activities are total operating expenses and decrease in current liabilities. Similarly, cash inflow from investment activities is being made by interest on investment and decrease in investment and cash outflow is made by increase in fixed assets. And cash inflow from financing

activities is made by increase in loan and the source of cash outflow is made by increase in stanches kosher.

The highest portion of cash inflow of JCF in FY 2063/64 is made by total operating income i.e. RS. 1,142,997,377 and the lowest portion of cash inflow is made by interest on investment i.e. RS. 2,186,250.7 Similarly, the highest portion of cash outflow of JCF in FY 2063/64 is made by total operating expenses i.e. RS. 1,128,022,006 and the lowest portion of cash outflow is made by increase in fixed assets i.e. RS. 1,851,604.

As compared to FY 2059/60 its operating income is decreased by RS. 23,739,913 (i.e.1,166,713,290 -1,142,973) and its operating expenses is decreased by RS. 12,461,797 (i.e. 1,140,483,803 -1,128,022,006). According to operational activities it can be said that in FY 2063/64 JCF has been able to pay its current liabilities by RS. 41,767,399.

The investing activities show that in FY2063/64 its investment has been decreased by RS. 4,927,483 and it has been able to increase its fixed assets by RS. 1,851,604.

Similarly, the financing activities show that as compared to FY 2062/63 loan of FY 2063/64 has been increased by RS. (i.e. RS. 22,779,490- RS.20,581,866).

**Table No. 4.18**  
**Cash flow statement of Janakpur Cigarette Factory Limited**  
**For the fiscal year 2064/65**

Sr. No.	Particular	FY 2064/65
<b>A.</b>	<b>Cash flow from Operational Activities:</b>	
	1) Total Operating Income	1,158,569,582
	2) Less: Total operating expenses	(1,129,531,725)
	3) Less: Interest expenses	(10,759,409)
	4) Operational profit before change in current capital	18,278,448
	5) Decrease in current assets	67,116,581
	5) Decrease in current liabilities	(65,158,393)
	6) Decrease in profit on current liabilities	(1,084,000)

	<b>Net Cash from Operational Activities</b>	<b>19,152,636</b>
<b>B.</b>	<b>Cash flow from Investment Activities:</b>	
	1) Interest on Investment	1,834,888
	2) Decrease in Investment	3,127,500
	3) Less: Increase in Fixed Assets	(6,401,821)
	<b>Net Cash from Investment Activities</b>	<b>(1,439,433)</b>
<b>C.</b>	<b>Cash flow from Financial Activities:</b>	
	1) Decrease in loan	(22,536,117)
	2) Decrease in sanchaya kosh	1,501,553
	<b>Net cash from Financial Activities</b>	<b>(21,034,564)</b>
	Net change in cash or cash equivalent (A+B+C)	(3,321,361)
	Opening cash Balance	51,258,415
	<b>Closing cash Balance</b>	<b>47,937,053</b>

From the above mentioned table, it is observed that sources of cash inflow from operational activities are total operating income and decrease in current assets and sources of cash outflow from operational activities are total operating expenses, interest expenses, decrease in current liabilities and decrease in profit on current liabilities. Similarly, cash inflow from investment activities is being made by interest on investment and decrease in investment and cash outflow is made by increase in fixed assets. And cash inflow from financing activities is made by decrease in sanchaya kosh and the source of cash outflow is made by decrease in loan i.e. payment of loan.

The highest portion of cash inflow of JCF in FY 2064/65 is made by total operating income i.e. RS. 11,158,569,582 and the lowest portion of cash inflow is made by decrease in sanchaya kosh i.e. RS.1, 501,553. Similarly, the highest portion of cash outflow of JCF in FY 2064/65 is made by total operating expenses i.e. RS. 1,129,531,725 and the lowest portion of cash outflow are made by decrease in profit on current liabilities i.e. RS. 1,084,000.

From operating activities it can be analyzed that, as compared to FY 2060/61 operating income in FY 2064/65 has been increased by RS. 15,596,205 (i.e. RS. 1,158,569,582 - RS.1, 142,973,377) and operating expenses has been increased by RS. 1,509,719 i.e. (RS. 1,129,531,725 – RS.1, 128,022,006). Operational activities shows that in FY 2064/65 JCF has been able to pay its current liabilities of RS.65, 158,393.

From investing activities it can be analyzed that, as compared to FY 2063/64 interest on investment on FY 2064/65 has been decreased by RS. 351,362 i.e. (RS. 2,186,250 – 1,834,888) and investment in FY 2061/62 has been decreased by RS. 1, 799,986 i.e. (RS. 4,927,486 – 3,127,500) as compared to investment decrease in FY 2063/64.

From financing activities it can be analyzed that in FY 2064/65 loan has been decreased. And amount of sanchaya kosh has been decreased as compared to last FY.

**Table No. 4.19**  
**Cash flow statement of Janakpur Cigarette Factory Limited**  
**For the fiscal year 2065/66**

Sr. No.	Particular	FY 2065/66
<b>A.</b>	<b>Cash flow from Operational Activities:</b>	
	1) Total Operating Income	1,095,649,112
	2) Less: Total operating expenses	(1,086,944,869)
	3) Operational profit before change in current capital	(11,462,974)
	4) Decrease in current assets	30,427,453
	5) Decrease in current liabilities	(49,750,106)
	6) Decrease in profit on current liabilities	(1,668,000)
	<b>Net Cash from Operational Activities</b>	<b>(23,749,385)</b>
<b>B.</b>	<b>Cash flow from Investment Activities:</b>	
	1) Interest on Investment	1,494,607
	2) Decrease in Investment	3,860,000
	3) Less: Increase in Fixed Assets	(10,125,819)
	<b>Net Cash from Investment Activities</b>	<b>(4,771,212)</b>

<b>C.</b>	<b>Cash flow from Financial Activities:</b>	
	1) Increase in loan	24,111,655
	2) Increase in sanchaya kosh	(146,530)
	<b>Net cash from Financial Activities</b>	<b>23,965,124</b>
	Net change in cash or cash equivalent (A+B+C)	(4,555,472)
	Opening cash Balance	47,937,053
	<b>Closing cash Balance</b>	<b>43,381,581</b>

From the above mentioned table, it is observed that sources of cash inflow from operational activities are total operating income and decrease in current assets and sources of cash outflow from operational activities are total operating expenses, decrease in current liabilities and decrease in profit on current liabilities. Similarly, cash inflow from investment activities is being made by interest on investment and decrease in investment and cash outflow is made by increase in fixed assets. And cash inflow from financing activities is made by increase in loan and the source of cash outflow is made by increase in stanches kosher.

The highest portion of cash inflow of JCF in FY 2065/66 is made by total operating income i.e. RS. 1,095,649,112 and the lowest portion of cash inflow is made by interest on investment i.e. RS. 1,494,607. Similarly, the highest portion of cash outflow of JCF in FY 2060/61 is made by total operating expenses i.e. RS. 1,086,944,869 and the lowest portion of cash outflow are made by increase in sanchaya kosh i.e. RS. 146,530.

From operating activities it can be analyzed that, as compared to FY 2064/65 operational income in FY 2065/66 has been decreased by RS. 62,920,470 (i.e. RS. 1,158,569,582 - RS.1, 095,649,112) and operating expenses has been decreased by RS. 42,586,856 i.e. (RS. 1,129,531,725 – RS.1, 086,944,869). And in this FY JCF has been able to pay its current liabilities of RS. 49,750,106.

From investing activities it can be analyzed that in FY 2065/66 interest on investment has been decreased by RS. 340,281 i.e. (RS. 1,834,888 – RS. 1,494,607) as compared to FY 2064/65. But investment in FY 2065/66 has been increased by

RS. 732,500 i.e. (RS. 3,860,000 – RS. 3,127,500) as compared to FY 2064/65. And fixed assets have also been increased as compared to last year.

From financing activities it can be analyzed that loan has been increased but amount of stanches kosher has been decreased as compared to last FY.

**Table No. 4.20**  
**Cash flow statement of Janakpur Cigarette Factory Limited**  
**For the fiscal year 2066/67**

Sr. No.	Particular	FY 2066/67
<b>A.</b>	<b>Cash flow from Operational Activities:</b>	
	1) Total Operating Income	976,906,714
	2) Less: Total operating expenses	(1,087,117,245)
	3) Less: Interest expenses	(11,007,776)
	4) Operational profit before change in current capital	(121,218,307)
	5) Decrease in current assets	20,233,628
	5) Increase in current liabilities	145,986,202
	6) Decrease in profit on current liabilities	(1,000,000)
	<b>Net Cash from Operational Activities</b>	<b>44,001,523</b>
<b>B.</b>	<b>Cash flow from Investment Activities:</b>	
	1) Interest on Investment	1,898,527
	2) Decrease in Investment	6,555,000
	3) Less: Increase in Fixed Assets	(5,169,629)
	<b>Net Cash from Investment Activities</b>	<b>3,283,897</b>
<b>C.</b>	<b>Cash flow from Financial Activities:</b>	
	1) Decrease in loan	(42,657,767)
	2) Increase in sanchaya kosh	(133,704)
	<b>Net cash from Financial Activities</b>	<b>(42,791,471)</b>
	Net change in cash or cash equivalent (A+B+C)	4,493,949
	Opening cash Balance	43,381,581
	<b>Closing cash Balance</b>	<b>47,875,530</b>

From the above mentioned table, it is observed that sources of cash inflow from operational activities are total operating income, decrease in current assets and increase in current liabilities and sources of cash outflow from operational activities are total operating expenses, interest expenses, and decrease in profit on current liabilities. Similarly, cash inflow from investment activities is being made by interest on investment and decrease in investment and cash outflow is made by increase in fixed assets. And the source of cash outflow in financing activities are made by decrease in loan i.e. payment of loan and increase in the amount of sanchaya kosh.

The highest portion of cash inflow of JCF in FY 2066/67 is made by total operating income i.e. RS. 976,906,714 and the lowest portion of cash inflow is made by interest on investment i.e. RS.1, 898,527 501,553. Similarly, the highest portion of cash outflow of JCF in FY 2066/67 is made by total operating expenses i.e. RS. 1,087,117,245 and the lowest portion of cash outflow are made by decrease in profit on current liabilities i.e. RS. 1,000,000.

From operating activities it can be analyzed that, as compared to FY 2062/63 operating income in FY 2066/67 has been decreased by RS. 118742398 (i.e. RS.1, 095,649,112 – 976,906,714) and operating expenses has been increased by RS. 172,376 i.e. (RS. 1,087,117,245 – 1,086,944,869). Operational activities show that in FY 2066/67 JCF has less operating income than its operating expenses and it has not been able to pay its current liabilities.

From investing activities it can be analyzed that, as compared to FY 2062/63 interest on investment on FY 2066/67 has been increased by RS. 403,920 i.e. (RS.1, 898,527 – 1,494,607)) and investment has been decreased by RS. 2,695,000 i.e. (RS.6,555,000 - 3,860,000) as compared to investment decrease in FY 2065/66.

From financing activities it can be analyzed that in FY 2066/67 loan has been decreased i.e. repayment of loan. And amount of sanchaya kosh has been less increased as compared to last FY.

# **CHAPTER- V**

## **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Summary**

Most of the countries in the world had developed public enterprises in order to achieve the desired national objective keeping on the economic and industrial development of the economy. Public enterprises are established as means of overall development of the economy because they meet the national goals by establishing basic industries despite various constraints like unattractive profit, high risk, long gestation period etc. In Nepal, PEs has accepted institutional mechanism for the rapid socio-economic development through the generation of the internal resources since second three years plan (2018-2021 B.S.). The same trend of establishment of PEs is effective during the fifth plan (2027-2032 B.S.). After, the fifth plan, the number of PEs did not increase considerably because of the government policy emphasizing on private sector as well as qualitative improvement of the existing PEs rather than their quantitative growth.

The wave of privatization is rising all over the world. Nepalese economic policy makers and politicians could not be the exception of this wave, the PEs are being handed over to private sector through the Privatization Act 2052. The role of PEs in developing countries like Nepal is still inevitable machinery and in integral means for rapid socio-economic development in the economy. So, no matter of privatization of the public enterprises has been the remedial solution of suffering PEs from huge negative profitability.

Keeping that fact in mind, the present study was undertaken to examine the financial performance of one of the public enterprises in manufacturing sector that is Janakpur Cigarette Factory Limited (JCF) in terms of profitability with a view to recommend the improvements for the responsible in the time to come. Financial statement of the latest five years from 2062/63 to 2066/67 has been selected for the analysis. In the study, secondary data are used for the significant analysis. They are processed into comparative financial statement, master schedule of item for



relevant analysis. They are presented at appropriate percent and table. Similarly, standard of deviations, coefficient of variation are used as statistical tools.

A literature review has been made with a view to re-capitulate the basic theme and concept of these literatures and to show how to complete the present line of study. They have analyzed and searched using appropriate tools and techniques so that the performance of an enterprise would evaluate measures for improvement suggestion. A brief introduction of JCF has been also enclosed in the section.

## **5.2 Conclusion**

From the analysis of the basic financial data of JCF, following conclusions are made.

- ) The profitability record of JCF is highly unsatisfactory and unfavorable because six measures of profitability ratios indicate that JCF has been suffering from heavy loss. Only GPM of JCF is positive. Among the six profitability ratios, remaining four (namely NPM, ROTAR, ROFAR, ROSER,) are negative. The trends of profitability ratios are widely fluctuated in the negative region to downward direction. The reason for such poor profitability is high cost of production, administration and selling expenses, mismanagement of resource allocation and poor performance of financial management.
- ) The effect of unsatisfactory profitability record is reflected in the overall financial health of the enterprise. So, the short term solvency position of JCF is also unsatisfactory. Average current and quick ratio is hardly in considerable position. The trend of current ratio and quick ratio is fluctuating every year.
- ) The capital structure ratios of JCF during the study period show unsatisfactory result. Average Debt to Equity ratio is higher than the standard therefore, it seems unsatisfactory to creditors as well as business point of view. Similarly, average Long-term debt to Total Capital ratio is low which in turn present low profitability of the firm.

- ) All the efficiency ratios are in good position in comparison to other ratios. The ratios (inventory turnover debtor turnover, average collection period, fixed assets turnover, total assets turnover, etc.) are higher than the manufacturing industries standard.
- ) Cash flow analysis during the study period shows that JCF has been using the increasing amount of loan and the highest portion of cash inflow is made by total operating income and the highest portion of cash outflow is made by total operating expenses.
- ) Capacity utilization of the JCF is found unsatisfactory. JCF has not been utilizing its full capacity during the study period. The underutilization of the capacity is the most important cause of such financial position.
- ) Demand of products of JCF (namely YAK, DAINDA etc) is lower than other competitor of the cigarette industry because JCF cannot identify the customer's need and wants and its marketing policy and market penetration policy are weak in comparison to its competitors.
- ) Lack of higher quality of its products, absence of proper pricing policy and particular guidelines from government has led JCF to confusing price decisions. Profitability of any concern highly depends on its pricing policy. So, lack of pricing policy is another cause of such negative profitability.
- ) As regards labor management, there is no transparent system of reward and punishment. As a result, performance evaluation of employee is based on nepotism and favoritism.
- ) JCF has not yet taken serious attention to proper planning, controlling and budgeting aspects.

It is therefore necessary to have a number reform in JCF to make it viable and objective oriented.

### 5.3 Recommendations

After the detail financial analysis, the profitability of JCF was found extremely negative and widely fluctuating during the study periods, keeping the facts in mind, the following points can be recommended.

- ) The existing position of JCF enforces the industries to initiate a systematized program of sound general financial and cost reduction management system immediately. Only after applying sound management system, there will be the chance of improvement.
- ) Unnecessary formalities and political intervention should be corrected and avoided which create delays on decision making and planning process. Management should be given full autonomous responsibilities on policy making and its implementation as well.
- ) The factory should utilize its utmost annual production capacity. This can solve the problem of overstaffing and thereby increase sales as well as profit.
- ) Effective program should be initiated to improve the productivity of labor and personnel. Moral of management, personnel and labor should be increased and to motivate them different incentive plan should be operated. The reward and punishment should be systemized on the basis of work performance.
- ) The concern should have its own pricing manual that guides its pricing decisions staying from the government intervention. Price should be set up on the basis of demand as well as quality of its products.
- ) Low sales turnover and low growth trend of sales reveals that JCF is not successful to compete in the market. To correct such problems, JCF should improve its product quality and should launch new products to meet demand of different market group.

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**APPENDIX A**  
**A LIST OF SOME RELEVANT STANDARD OF OVERALL**  
**MANUFACTURING PUBLIC ENTERPRISES**

S.No.	Financial Analysis Tools	Manufacturing Industry Standard
1.	Gross Profit Margin	-
2.	Net Profit Margin	15%
3.	Return on Total Asset	10-12 times
4.	Return on Shareholders Equity	13-15 times
5.	Operating Expenses Ratio	85.00
6.	Current Ratio	2:1
7.	Quick Ratio	1:1
8.	Debt to Equity Ratio	100%
9.	Debt to Total Asset Ratio	50%
10.	Inventory Turnover Ratio	4 times
11.	Debtor Turnover Ratio	6 times
12.	Total Asset Turnover Ratio	2 times
13.	Average Collection Period	60 days
14.	Fixed Assets Turnover Ratio	10 times
15.	Equity Turnover Ratio	3 times

## APPENDIX B

Calculation of Mean, Standard Deviation and Co-efficient of variation for Gross Profit Margin (GPM).

Fiscal Year	GPM(X)	$x = X - \bar{X}$	$x^2 = (X - \bar{X})^2$
2062/63	23.73	0.267	0.067
2063/64	23.88	0.41	0.168
2064/65	25.13	1.66	2.756
2065/66	22.64	-0.83	0.688
2066/67	22.00	-1.47	2.161
N=5	$\bar{X}=117.38$	$\sum x = 0$	$\sum x^2 = 5.8409$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{117.38}{5} = 23.47$$

$$\begin{aligned}
 2) \text{ Calculation of Standard Deviation } (s) &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\
 &= \sqrt{\frac{5.8409}{5}} \\
 &= 1.168 \\
 &= 1.080
 \end{aligned}$$

$$\begin{aligned}
 3) \text{ Calculation of co-efficient of variation (C.V.)} &= \frac{s}{\bar{X}} \times 100 \\
 &= \frac{1.080}{23.47} \times 100 \\
 &= 4.6\%
 \end{aligned}$$



Calculation of Mean, Standard Deviation and Co-efficient of variation for Net Profit Margin (NPM).

Fiscal Year	NPM(X)	$x = X - \bar{X}$	$x^2 = (\bar{X} - X)^2$
2062/63	1.276	3.793	14.386
2063/64	0.627	3.144	9.885
2064/65	1.275	3.792	14.379
2065/66	0.836	3.352	11.242
2066/67	(16.60)	(14.083)	198.330
N=5	$\bar{X} = (12.586)$	$\sum x = 0$	$\sum x^2 = 248.222$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{(12.586)}{5} = (2.517)$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\sum (X - \bar{X})^2}}{N}$$

$$= \frac{\sqrt{248.222}}{5}$$

$$= \frac{49.64}{5} = 7.046$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{7.046}{(2.517)} \times 100$$

$$= (279.936\%)$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Current Ratio (CR)

Fiscal Year	CR in times (x)	$x = X - \bar{X}$	$x^2 = (X - \bar{X})^2$
2062/63	1.60	(0.128)	0.016384
2063/64	1.81	0.082	0.006724
2064/65	1.92	0.192	0.036864
2065/66	2.27	0.542	0.293764
2066/67	1.04	(0.688)	0.47334
N=5	$\bar{X} = 8.64$	$\sum x = 0$	$\sum x^2 = 0.827076$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{8.64}{5} = 1.728$$

$$2) \text{ Calculation of Standard Deviation } (6) = \frac{\sqrt{\frac{\sum (X - \bar{X})^2}{N}}}{N}$$

$$= \frac{\sqrt{0.827076}}{5}$$

$$= 0.1654 = 0.406$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{6}{\bar{X}} \times 100$$

$$= \frac{0.406 \times 100}{1.728}$$

$$= 23.50\%$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Quick Ratio (QR)

Fiscal Year	QR in times (x)	$x = X - \bar{X}$	$x^2 = (X - \bar{X})^2$
2062/63	0.922	(0.1258)	0.01582
2063/64	1.138	0.0902	0.008136
2064/65	1.125	0.0772	0.005959
2065/66	1.427	0.3792	0.143792
2066/67	0.627	(0.4208)	0.177072
N=5	$\bar{X} = 5.239$	$\sum x = 0$	$\sum x^2 = 0.350779$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{5.239}{5} = 1.0478$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\sum (X - \bar{X})^2}}{N}$$

$$= \frac{\sqrt{0.350779}}{5}$$

$$= 0.07015 = 0.2648$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{0.2648}{1.0478} \times 100$$

$$= 25.27\%$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Return on Fixed Assets Ratio (ROFAR)

Fiscal Year	ROFAR in % (x)	$x = X - \bar{X}$	$x^2 = (X - \bar{X})^2$
2062/63	28.63	74.17	5501.19
2063/64	15.27	60.81	3697.85
2064/65	31.73	77.27	5970.65
2065/66	18.48	64.02	4098.56
2066/67	(321.8)	(276.26)	76319.58
N=5	$\bar{X}=(227.69)$	$\Sigma x = 0$	$\Sigma x^2 = 95,587.83$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\Sigma x}{N} = \frac{227.69}{5} = 45.54$$

$$2) \text{ Calculation of Standard Deviation } (6) = \frac{\sqrt{\frac{\Sigma (X - \bar{X})^2}{N}}}{N}$$

$$= \frac{\sqrt{95,587.83}}{5}$$

$$= 19,117.5 = 138$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{6}{\bar{X}} \times 100$$

$$= \frac{138}{(45.54)} \times 100$$

$$= (303.6\%)$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Return on Total Assets Ratio (ROTAR)

Fiscal Year	ROTAR in % (x)	$x - \bar{X}$	$x^2 = (X - \bar{X})^2$
2062/63	2.50	8.022	64.35
2063/64	1.24	6.762	45.72
2064/65	2.93	8.452	71.43
2065/66	1.95	7.472	55.83
2066/67	(36.23)	(30.708)	942.98
N=5	$\bar{X}=(27.61)$	$x=0$	$x^2 = 1,180.31$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{(27.61)}{5} = (5.522)$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\frac{\sum (X - \bar{X})^2}{N}}}{N}$$

$$= \frac{\sqrt{1,180.31}}{5}$$

$$= \frac{236.062}{5} = 15.36$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{15.36}{(5.522)} \times 100$$

$$= (278\%)$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Return on Shareholders Equity Ratio (ROTAR)

Fiscal Year	ROSER in % (x)	$x = \overline{X - X}$	$x^2 = (\overline{X - X})^2$
2062/63	5.67	35.52	1,261.67
2063/64	2.76	32.61	1,063.41
2064/65	5.73	35.58	1,265.93
2065/66	5.23	35.08	1,230.61
2066/67	(168.67)	(138.82)	19,271.00
N=5	$\overline{X}=(149.28)$	$x=0$	$x^2 = 24,092.62$

$$1) \text{ Calculation of Mean } (\overline{x}) = \frac{\sum x}{N} = \frac{(149.28)}{5} = (29.85)$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\sum (X - \overline{X})^2}}{N}$$

$$= \frac{\sqrt{24,092.62}}{5}$$

$$= \frac{4,818.52}{5} = 69.41$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\overline{X}} \times 100$$

$$= \frac{69.41}{(29.85)} \times 100$$

$$= (232.54\%)$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Operation Expenses Ratio (OER)

Fiscal Year	OER in % (x)	$x = X - \bar{X}$	$x^2 = (X - \bar{X})^2$
2062/63	98.23	(3.26)	10.63
2063/64	99.28	(2.21)	4.88
2064/65	97.88	(3.61)	13.03
2065/66	99.86	(1.63)	2.66
2066/67	112.22	10.73	115.13
N=5	$\bar{X}=507.47$	$x=0$	$x^2 = 146.33$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{507.47}{5} = 101.49$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\frac{\sum (X - \bar{X})^2}{N}}}{N}$$

$$= \frac{\sqrt{146.33}}{5}$$

$$= 29.26 = 5.41$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{5.41}{101.49} \times 100$$

$$= 5.33\%$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Debt Equity Ratio (DER)

Fiscal Year	DER in % (x)	$x = X - \bar{X}$	$x^2 = (X - \bar{X})^2$
2062/63	126.4	(37.4)	1,398.76
2063/64	122.8	(41.0)	1,681.00
2064/65	95.4	(68.4)	4,678.56
2065/66	129.9	(33.9)	1,149.21
2066/67	344.4	180.6	32,616.36
N=5	$\bar{X}=818.9$	$\sum x = 0$	$\sum x^2 = 41,523.89$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{818.9}{5} = 163.78$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\sum (X - \bar{X})^2}}{N}$$

$$= \frac{\sqrt{41,523.89}}{5}$$

$$= \frac{8,304.778}{5} = 91.13$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{91.13}{163.78} \times 100$$

$$= 55.91\%$$



Calculation of Mean, Standard Deviation and Co-efficient of variation for Long-term Debt to Total Capital Ratio (LTD to TCR)

Fiscal Year	LTD to TCR in % (x)	x = X - $\bar{X}$	x <sup>2</sup> = (X - $\bar{X}$ ) <sup>2</sup>
2062/63	20.54	(3.00)	9.000
2063/64	25.45	1.91	3.648
2064/65	20.36	(3.18)	10.112
2065/66	19.89	(3.65)	13.322
2066/67	31.45	7.91	62.568
N=5	$\bar{X}$ =117.69	x= 0	x <sup>2</sup> = 98.6501

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{117.69}{5} = 23.54$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\sum (X - \bar{X})^2}}{N}$$

$$= \frac{\sqrt{98.6501}}{5}$$

$$= \frac{9.93}{5} = 1.986$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{1.986}{23.54} \times 100$$

$$= 8.44\%$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Inventory Turnover Ratio (ITR)

Fiscal Year	ITR (times)	$x = X - \bar{X}$	$x^2 = (X - \bar{X})^2$
2062/63	4.9	(1.1)	1.21
2063/64	5.6	(0.4)	0.16
2064/65	6.0	0	0
2065/66	7.3	1.3	1.69
2066/67	6.4	0.4	0.16
N=5	$\bar{X}=30$	$\sum x = 0$	$\sum x^2 = 3.22$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{30}{5} = 6$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\sum (X - \bar{X})^2}}{N}$$

$$= \frac{\sqrt{3.22}}{5}$$

$$= \frac{0.644}{5} = 0.8$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{0.8}{6} \times 100$$

$$= 13.37\%$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Inventory Turnover Ratio (ITR)

Fiscal Year	DTR in Times (x)	x = X - $\bar{X}$	x <sup>2</sup> = (X - $\bar{X}$ ) <sup>2</sup>
2062/63	29.05	6.33	40.06
2063/64	21.49	(1.23)	1.5129
2064/65	23.59	0.87	0.7569
2065/66	19.99	(2.73)	7.4529
2066/67	19.47	(3.25)	10.5625
N=5	$\bar{X}$ =113.59	x= 0	x <sup>2</sup> = 60.3452

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{113.59}{5} = 22.72$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\frac{\sum (X - \bar{X})^2}{N}}}{N}$$

$$= \frac{\sqrt{60.3452}}{5}$$

$$= \frac{12.07}{5} = 3.47$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{3.47}{22.72} \times 100$$

$$= 15.27\%$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Inventory Turnover Ratio (ITR)

Fiscal Year	ACP in days (X)	$x = X - \bar{X}$	$x^2 = (X - \bar{X})^2$
2062/63	12.40	(3.77)	14.21
2063/64	16.75	0.04	0.0016
2064/65	15.26	(0.91)	0.828
2065/66	18.00	1.83	3.349
2066/67	18.48	2.31	5.336
N=5	$\bar{X} = 80.89$	$\sum x = 0$	$\sum x^2 = 23.86$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{80.89}{5} = 16.17$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\frac{\sum (X - \bar{X})^2}{N}}}{N}$$

$$= \frac{\sqrt{23.86}}{5}$$

$$= \frac{4.722}{5} = 2.18$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{2.18}{16.17} \times 100$$

$$= 13.51\%$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Fixed Assets Turnover Ratio (FATR)

Fiscal Year	FATR in times (x)	$x = X - \bar{X}$	$x^2 = (X - \bar{X})^2$
2062/63	22.43	(0.2)	0.04
2063/64	24.34	1.71	2.92
2064/65	24.88	2.25	5.06
2065/66	22.11	(0.52)	0.27
2066/67	19.40	(3.23)	10.43
N=5	$\bar{X} = 113.16$	$\sum x = 0$	$\sum x^2 = 18.72$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{113.16}{5} = 22.63$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\sum (X - \bar{X})^2}}{N}$$

$$= \frac{\sqrt{18.72}}{5}$$

$$= \frac{3.744}{5} = 1.93$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{1.93}{22.63} \times 100$$

$$= 8.5\%$$

Calculation of Mean, Standard Deviation and Co-efficient of variation for Total Assets Turnover Ratio (TATR)

Fiscal Year	TART in times (x)	$x = X - \bar{X}$	$x^2 = (X - \bar{X})^2$
2062/63	1.96	(0.19)	0.0361
2063/64	1.97	(0.18)	0.0324
2064/65	2.30	0.15	0.0225
2065/66	2.34	0.19	0.0361
2066/67	2.18	0.03	0.0009
N=5	$\bar{X} = 10.75$	$\sum x = 0$	$\sum x^2 = 0.128$

$$1) \text{ Calculation of Mean } (\bar{x}) = \frac{\sum x}{N} = \frac{10.75}{5} = 2.15$$

$$2) \text{ Calculation of Standard Deviation } (s) = \frac{\sqrt{\sum (X - \bar{X})^2}}{N}$$

$$= \frac{\sqrt{0.128}}{5}$$

$$= \frac{0.0256}{5} = 0.16$$

$$3) \text{ Calculation of co-efficient of variation (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{0.16}{2.15} \times 100$$

$$= 7.44\%$$