CHAPTER – I

1. INTRODUCTION

1.1 Background of the study

Nepal is a land locked country occupying the total area of 1,97,181 Sq. km. It covers 0.03% area of world and 0.3% of Asia. Nepal extends from east to west with a length of about 885 km. and coverage width of 193 km. Nepal is a sovereign independent democratic republican country lies between 80º4' and 88º12' east longitude and 26º22' and 30º27' north latitude. It is bounded on the north by the Tibet, autonomous region of People's Republic of China, the east, south and west by India. The country can be divided into three main geographical regions such as Himalayan which covers 15%of the total area, hilly region which covers 68% and 17% with Terai region.

Nepal is considered to be one of the most beautiful charming countries in Asia. A chain of snow, bound peaks, teaching of Lord Buddha and courage of Gorkha are the main charms and matters of pride of country. It is a small kingdom, which is rich in natural beauty, situated at the lap of Himalayan. So it has been call the "Switzerland" of the east.

Nepalese people are suffering from poverty, they have low saving capacity. The country has low rate of capital investment for the economic improvement. The promotion in investment on small scale capital scattered through out the nation must be mobilized. The most of idle capital can be fetched into industrial sector.

"Industrialization is the central problem of economic development of back warded countries. It is on of the major tools with aid of which various circle of backwardness and poverty can be broken." 1. Gyorgy

cancer: Strategies for Industrialization in Developing countries, (London) work & co. 1970, P-9.

Economic development of the country depends on its industrialization and establishment of industries and business enterprises. They are essential for the economic development of the developing countries like Nepal. Industrialization is the back bone of economic condition of country.

It helps to uplift the economic standard of the people, creates employment opportunities, earn foreign currency by exporting products to other countries and help in reduction import.

This is an age of industrialization. We have seen many countries like America, Japan, Germany and other countries which established themselves as economic glint because of their industrial thoughts and visions. In this economically competitive and globalization world, industrialization has been proved itself a most unfailing and powerful instrument in speeding up the economic development.

"Modern Manufacturing enterprises in Nepal have a history of about 66 years. In 1963 Nepal had 959 Manufacturing establishments. This number reached 1330 in 1965, reflecting three fold increased over 1965. In 1977, this number reached 2434 reflecting 89 percent increase over 1965. In 1977, this number was 3528 reflecting a growth of 95 percent over 1970. In 1982, this number was 7903, reflecting a growth of only 37 percent over 1977, in 1987, this number declined to 3633, but later declined to 3557 in 1997. These figures indicate that the growth in the number of manufacturing establishments has been slow and uneven. In recent years, it is declining. 2. Dr. Govinda Ram Agrawal, Dynamic of Business Environment of Nepal, M.K. Publishers Kathmandu ,P.n 104.

A world Bank survey of 223 private sector manufacturing firms conducted in 1999, found Dr. Govinda Ram Agrawal 2002; p 103

1) Overall manufacturing productivity is land in Nepal compared to international standards.
2) A large variance in productivity between firms within the county.
3) Average efficiency is the highest in the pharmaceuticals, followed by carpets and garments metal and textiles except garment have the lowest in efficiency.
4) Productivity increases with the increase in firm size. Large times with more than 500 employees have 25 percent greater efficiency than small firms with below 50 employees.
5) Important determinants of productivity are capacity utilization economics of scale, infrastructure and "learning mechanism working training. Technical assistance, exporting etc.
6) Entrepreneur characteristics such as education, experience with multiple businesses are found not significant in determining productivity.
7) Liberalization has negative impact on employment growth in export-oriented sectors.
8) Firms located in Kathmandu were generally growing faster than firm from outer region of the country. Younger firms were growing faster than other firms.
9) There is limited mobility of smaller size firm into the larger size firms.
10) Main factors driving the growth of firms are reports, worker training any foreign ownership.

It is believed that in order to achieve security, stability and high standards of living within the country must proceed towards industrialization. The most important reason for embarking on a performance of industrialization is to increase the national increase.

No country can survive in isolation these days: Nepal must also march in line within other economically advanced countries of the world.

Industrialization is the only way open to her/ his to take her/ his rightful place in the nations.

Industrialization increases production volume and productivity. It creates employment opportunities and uses idle capital of the country. A poor nation becomes rich by raising productivity and employment through industrial development.

Now, slowly the country is stepping towards the industrialization by establishing different kinds of industries and enterprises. Government considering the importance of private sector gives priority to the private industries by reforming many policies. Now state has 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.

There is no debate whether private of public sector is better. It is very important to get effective participation from both public and private sector for economic development of country. The performance and contribution made by these enterprises to the development of economy of the country is vital thing. In the country like Nepal where resources are not utilized properly due to many reasons, both type of enterprises should work, together for the betterment of the national economy.

This research is concerned with the study of financial performance of SSU (Pvt.) Ltd., Sonapur, Sunsari. Only the establishment of industry is not sufficient but the successful operation is also necessary. The success and failure of industries mainly depends upon the financial decision ability of top level management. To know the financial condition, the top level management must study the financial performance of the organization.

1.2 Focus of the study

Various kinds of industries which are set up to service forever should cooperate with various types of activities like manufacturing, selling, production, distribution, financing and so on. To achieve the organization mission, these all activities should be given equal importance and proving but finance is quite important than others.

Finance holds key role in all human activities. It is a guide for regulating investment decisions and expenditures. Its importance is duly recognized in any branch of science. No, business activities can be persued without financial support "financial viability in perhaps the center theme of any business proposition".

However finance is finance for producing and selling for the goods and services as well as their distribution. The efficiency of production and manceting operation are directly influence by the manner in region. The finance function of the business form is performed. Financial functional assume an importance in composition to producing and marketing function.

Financial performance is the over all financial performance of the industries. It is also essential to utilized and manage the sales resources efficiently. So, various financial nature transactions are critically analyzed.

The research is focused on the financial performance at SSU (Pvt.) Ltd. ,Sonapur, Sunsari in Nepal. It was a partnership industry and in the year 2047 it established under the act of private limited company with eighty five lakhs (8500000.00) authorized Capital and eighty five lakhs (8500000.00) issued capital with an objective to work, production of soap.

This is a medium scale private industry and it has its head office at Biratnagar and its plant is located at Sonapur, Sunsari. This company operates on three shifts. Its Shift schedule is as follows :

Shifts	From	To
Morning to Evening	8 A.M.	4 P.M.
Evening to Night	4 P.M.	12 P.M.
Night to Morning	12 P.M.	8 A.M.

The Company has been producing soap and detergent powder of international standard and its supplying in national and international market. This company has provided employment opportunities to nearly 200 people. Except few top levels and some consultants all are Nepalese employee and mainly locals. Considering its scope in Nepal, SSU (Pvt.) Ltd. distributors are all over Nepal. Among them kathmandu, Biratnagar, Dharan, Nepalgunj, Janakpur and Surkhet are major distributors of its product.

The company's main raw materials are palm fatty acid, tallow, caustic soda, soap stone powder, colour, perfume and sodium silicate etc. Sodium silicate are purchase from malaysia and India. Plant, machinery and equipment brought from India.

1.3 Statement of Problems

SSU (Pvt.) Ltd. is established in Nepal with a view to supply soaps and other related goods of various types and qualities in the national and international market. New Sabun industries market seems competitive.

The study is mainly concerned to evaluate the overall financial performance of SSU (Pvt.) Ltd. In other words, this study is concerned to suggest the financial condition of the particular industry. So the area of the study is limited. This study specially deals with the following problems:

i) How is the financial performance of the company?
ii) What is the liquidity and solvency position of the company?
iii) What is the profitability position of the company?
iv) Is the company meeting its debt obligation on time?
v) Are the share holders being benefited by the financial performance of the company?

1.4 Objective of the Study

Financial performance is the significant and important fact of the overall management. Various factories of finance influence the financial position of a company. Objective of the study are guidelines by which the study can be conducted in a systematic manner. This research (study) has been undertaken basically with the primary objectives of analyzing the financial performance and position of SSU (Pvt.) Ltd. The specific objectives of the research are pointed out as under:-

- To know the existing financial position of the company.
- To analyze the composition of capital.
- To judge the interest payment capacity of the company.
- To know the productivity and profitability position of the company.
- To analyze the trend of various financial indications.
- To analyze the risk and return position of the firm using break-even analysis, EPS, leverage and EBIT, EOS analysis.
- To evaluate the sources and application of funds.
- To find out the relationship among the variable.
- To suggest the best option for the additional capital through the EBIT - EPS analysis.
- To suggest for improvement.

1.5 Need of the Study

Industrialization is infra-structured framework of economic development and it provides of employment as well as increase in gross domestic products. The success of an industry depends upon the financial condition. Some industries do not pay their attention to the value of financial condition and are likely to face financial problems in the future.

The researcher wants to find out what the financial performance is in the SSU (Pvt.) Ltd. It helps to show the financial strength and weakness. Financial strength and weakness affects to their effectiveness to earn profit and goodwill. The need of the study of financial performance of SSU (Pvt.) Ltd. is to find out the factors that affect the financial condition and provide necessary suggestion to the management for corrective actions.

1.6 Limitation of the Study

This research explains and analyzed the subject matter with the help of well known or already established analytical methods and techniques; therefore as a conclusion oriented research, it does research. In considering the above matters the followings are the limitations of the present study:

a) The research comes only past five years data (2061/062 to 2065/066).
b) The study is based on the secondary data, so the accuracy of research is based on the quality of the financial statement prepared by the company accountant.
c) It is prepared for the partial fulfillment of MBS. programme of T.U. so, it is not a comprehensive study.
d) Because of the strict policy of the company, detailed personal visits were impossible.

e) Only the selected tools and techniques have been applied to complete the research within the limited time.
f) There are more than hundred manufacturing companies but this study is limited to only manufacturing company to the whole manufacturing companies.

1.7 Significance of the Study

The manufacturing sector of Nepal is expanding day by day. In recent days, nation is facing lots of hurdles. In this situation the manufacturing sector is also running slowly. In this study will be helpful to the companies.

This study is concerned with the financial performance of a manufacturing company i.e. SSU (Pvt.) Ltd. So, that it will try to find out how far the SSU (Pvt.) Ltd. has been successful in mobilizing resources and improving the economic growth. This study will concern whether SSU (Pvt.) Ltd. has been financially performing well or not. So, it will be beneficial for the share holders as well as other parties and general interested public.

1.8 Scope of the Study

Financial position is a major part for financial decision in any business manufacturing industries. This research will help to find out the general trend of financial performance of manufacturing company i.e. SSU (Pvt.) Ltd. It will be helpful for further research. The study may be useful to government for making policy, controlling, supervising and monitoring of this type of companies in Nepal.

1.9 Organization of the Study

This study has been organized into five chapters. The title of each chapter is as follows:

Chapter 1: Introduction

The first chapter deals with the subject matter of the study consisting background of the study, focus of the study, statement of the problem, objectives of the study, need for the study, limitation of the study, significance of the study, scope of the study, research methodology and organization of the study.

Chapter 2: Review of Literature

Chapter two deals with review of literature. It explains the theoretical analysis and review briefly the related and pertinent development of literature. It includes conceptual framework along with review of books, journals, researches work and preview thesis etc.

Chapter 3: Research Methodology

Chapter three deals with research methodology. It explains the research design, population and sample, sources of data, data processing procedures and tools and techniques used.

Chapter 4: Presentation and analysis of Data

Chapter four deals with presentation and analysis of data using the financial and statistical tools described in chapter three.

Chapter 5 : Summary Conclusion and recommendation

Chapter five, the last chapter deals with summary, conclusion and recommendations of the study.

CHAPTER – II

2. REVIEW OF LITERATURE

2.1 Introduction

The second chapter of this thesis is review of literature. It is end of the important chapter of the research. Review of literature not only provides solid information on the topic but also guides along the future stream of action. The main purpose of doing research is reviewing and gaining new knowledge and the reviewing. The literature of the related documents helps the researcher to reach near his purpose.

"Review means thinking again. Studying the documents published or unpublished related to the field of research is a review. But only reading of such materials is not the completion of the review of literature. It must be written and submitted in the researches proposal. It fulfills gap of knowledge relating to the subject matter up to the present time." (Kaul Loiesn; 1998: p.92)

"The review of literature is a continuous task throughout the function of the thesis. It begins with the search for a contribution to knowledge, a careful check should be made that this purposed study has not previously been carried out, although completely new and original problem are rare, a previous study should not be exactly replicated unless the techniques used had been faulty or the findings and conclusions are doubtful or unless same new sources of information had been discovered to shed new light on the problem." Kaul loeish, methodology of education research, delhi: vikash publishing house, 1998 ,p-92.

Anderson Janathan, Berry H. durston and millicent poole, Thesis and assignment writing, New Delhi wile and Eastern limited 1991 p-17.

2.2 Financial Performance

In any organization, any member who is involved with one or the other decision, whether big of small the financial implication may be performing the finance function. So, the financial performance analysis is a heart of the financial decision. The growth and Development of any enterprises is directly influenced by the financial policies. The real picture of financial performance mainly depends upon firm's part, present and anticipated future financial condition. The financial analysis enables us to evaluate and disclose the condition of firm's financial performance which is essential to prepare sound financial policies. At present, financial management in every sector is involved in record keeping, raising necessary facts and maintaining relationship with bank or other financial institution. The mentioning of financial result for corrective action is exercised rarely and the periodic review of budget, development of internal check, control, analysis of generation of funds and its investment in cash are also rarely conducted. This often lead to the situation where management are not aware of the real financial position of the enterprises and industries.

Financial performance as a part of the financial management is the main indicator of the success or failure of the industries or enterprises. There are different institutions which are affected by the decision of the share holders such as owners, managers, creditors, investors, customers, tax authorities etc. are indirectly interested about the financial performance of the industry. Though the type of analysis varies according to the specific interest of the party involved share holders of the enterprises are concerned principally with the present and expected future earning and the stability of the earnings of other industries and enterprises. This shows that they concentrate their analysis on the profitability of the industries. Management of the industries is interested in all aspect of financial analysis to adopt good financial management system and for the internal control of the industries. As the concerned groups are

interested either directly or indirectly about the process of identifying the financial strength and weakness of the firm by properly establishing the relationship between the items of the balance sheet and profit & loss account. In sum, it is a process of evaluating the relationship between compound parts of financial statement to obtain a better understanding of a firm's position and performance.

2.3 Financial Management :

Financial management is the management of the flow of money and any credit instrument in an organization. Finance interfaces with management function like production, marketing, personnel etc. All the function interacts with each other and forces in the external environment to accomplish desired goods. The financial management is a business activity which is concerned with the acquisition and utilization of capital funds in meeting the financial needs and overall objectives of the business organization. It stresses the analytical approach for solving the financial problems. It is considered as an integral part of overall management and decision of each and every functional area as contribution to achieve the financial objective of the business organization.

"Financial management is that managerial activity which is concerned with the planning controlling of the firm's financial resources." 7 (I.M. Pandey: 1991).

" The main thing is that the financial manager relate each decision to its effect on the valuation of the firm." 8 (James C.van Horne: 1997; p.6).

The Function and scope of financial management comes the three major decision making area: the investment decision, the financing decision and the dividend decision. These above financial decision are not sequential; they are performed by he firm simultaneously and continuously. Thus the processes of raising fund, investing them in the required assets are the key point of the financial management.

2.4 Financial Statement :

A Firm communicates financial information to the users through financial statements and reports. The financial statements contain summarised information of the firm's financial affairs, organised systematically. They are means to present the firm's financial situation to user. Preparation of the financial statements is the responsibility of top management. As these statements are used by investors and financial analyst to examine the firm's performance in order to make investment decisions, they should be prepared very carefully and should contain as much information as possible.

Financial statements are periodical document prepared by the organization for periodical review as regards progress made by the management. They basically relate to the past period normally for one year duration. They are prepared in financial or monetary terms and indicate the financial health of the firm.

Financial statement is done to obtain a better insight into a firm's position and performers. Financial statement analysis is the key tools for financial successions of a firm because the firm is directly influenced by the financial policies during their growth and development period. In fact, financial statements are historical documents and relate to the past period and are expressed in monetary terms to indicate the financial position in terms of assets and liabilities through balance sheet.

"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 date and the income statement showing the results of operations during a certain period." 9 (John Myer; 1974, p.95)

"Financial statement attempts to do several things. First they portray the assets and liabilities of a business firm at moment in time, usually at the end of a year. This portrayal is known as the balance sheet. On the other hand, an income statement portrays the revenues, expenses, taxes and profit of the firm of a particular period of time, again annually a year.

While the balance sheet represents and snapshot of the firms financial position at a movement in time, the income statement depicts its profitability over time." 10 (James c Van Horne; 1984, p-2)

Financial statements are annual documents prepared by the organisation. They are prepared for the periodical review on the progress made and results achieved during the period review. Two basic financial statements prepared for the purpose of external reporting of owner's investors and creditors are:

I. Balance Sheet of statement of financial position.
II. Profit and loss account or income statement.

These statements are contained in the annual report of the company. These two basic financial statements are described as follows:

Balance Sheet

Balance sheet is an important component of financial statement. It is a statement of assets and liabilities of the firm at a given date generally at the end of year. It is the mirror of the financial position of the firm at the close of the accounting period.

"It is called a balance sheet because it is a sheet ledger account balance which was not tramerred to trading and profit and loss account." 11 (Narendra Sharma and Gopal Pradhan; 2000, p-212).

The Balance Sheet is a significant financial statement. In fact, it is called the fundamental accounting report. Balance Sheet provides the value of firm's assets, liabilities and equity on a particular date. The value of assets will equal the value of liabilities plus owner's equity.

Profit and Loss Account

Profit and loss account is another important financial statement. It is also known by several other titles such as income statement. It shows the result of trading and non-trading operations during a period of time. It presents the summary of revenue earned and costs incurred. The difference is the net profit or net loss. In operational terms, the accounting report that summarises the revenue items, the expenses items and difference between them for an accounting period is call the profit or loss and the whole statement is known as income statement.

"The income statement/ Profit and loss account of a firm reports the result of operations in terms of incomes net profit in a year." 12(M.Y. Khan and P.k. Jain; 2000, p-2-8).

"The earning capacity and potential of the firm are reflected by income statement and it is the 'Scores-board' of the firm's performance during a particular period at time".

Thus, Profit and loss account reflects the efficiency of the firm. However, it may not be the true representative of the efficiency. The profit and loss account is the reflection of the firm's performance during the particular period of time.

2.5 Analysis of Financial Statement

Analysis of financial statement refers to the process at the critical examination of the financial information contained in the financial statements in order to understand and make decisions regarding the operations of the firm. The analysis of financial statement is basically a study of the relationship among various financial facts and figures as given in a set of financial statements. The basic financial statements i.e. the balance sheet and the income statement discussed in the preceding section contain a whole lot of historical data. The complex figures as given in these financial statements are broken up into simple and valuables elements and significant relationships are established between

the elements of the same statement of different financial statements. This process of dissecting, establishing relationship and interpretation there of to understand the working and financial position of a firm is called the analysis of financial statement.

"The analysis of financial statements is done to obtain a better insight into a firm's position and performance." 12(Shiva prasad Munakarmi; 2002, p-461)

"The analysis of financial statement is a process of evaluating relationship between component parts of financial statement to obtain a better understanding of the firm's position and performance." 15(R.W.Metcalt; 1976, p.n.107)

Thus, analysis of financial statement is the process of establishing and identifying the financial weakness and strength of the firm. It is indicative of two aspects of a firm i.e. the profitability and the financial position and it is what is known as the objectives of the analysis of financial statement.

Broadly the objective of the analysis of financial statement is to understand the information contained in financial statements with a view to know the weakness and strength of the firm and to make a forecast about the future prospects of the firm and there by enabling the financial analyst to take different decision regarding the operation at the firm. The objectives of analyzing the financial statement can be identified as:

i) To assess the present profitability and operating efficiency of the firm as whole as will as for its different department.
ii) To find out the relative importance of different components of the financial position of the firm.
iii) To identify the reasons for change in the financial position of the firm and,
iv) To assess the short term as well as the long term liquidity position of the firm.

The analysis of financial statement for a firm can be undertaken in different ways. There is not the best technique of the analysis of financial statement, which can be applied to all firms under all the situation. The type of the analysis of financial statement undertaken depends upon the person doing the analysis of financial statement has been undertaken. Different person/ parties may undertake the analysis of financial statement for different purpose. The persons/ parties which are usually interested in the analysis of financial statements may be the share holders, the creditors, the financial institutions, the investors and the management itself. The analysis of financial statement can be classified into different categories as follows:-

2.5.1 Internal Analysis of Financial Statement

The analysis of financial statements by the executives and employees of the business organization who have access to the books of accounts and other related information is called internal analysis of financial statements. This type of analysis of financial statement is conducted for measuring the operational and managerial efficiency at different hierarchy levels of the firm. This type of analysis is quite comprehensive and reliable

2.5.2 External Analysis of Financial Statement

External analysis of financial statement is one which is conducted by an outsider without having any access to the basic accounting record of investors, the shareholders, the credit rating agencies etc. on the published financial data of the firm and consequently and serve only limited purpose. Such as invertors are interested to analysis. The current and future level at risk and returns of the business organisation. Likewise, creditors are interested in the profitability and liquidity to be succeeded in payment of scheduled interest and principal.

2.5.3 Dynamic Analysis of Financial Statement

Dynamic analysis of financial statement is said to be dynamic if it covered a period of several years. Financial information for different years is incorporate in the external analysis of financial statement to assess the progress of the firm. This type of external analysis of financial statement is also called the horizontal analysis. The dynamic external analysis of financial statement is useful for long term trend analysis and planning. In dynamic external analysis of financial statement, the figures data for a year are placed and compared with the figures for several other years and changes from 1 year to another are identified. Since the dynamic analysis covers a period of more than 1 year (may be up to 5 years or 10 years), it gives a considerable insight into areas of financial weakness and strength of the firm.

2.5.4 Static Analysis of Financial Statement

The static external analysis of financial statement covers a period of 1 year only and analysis is made on the basis of only one set of financial statements. So, it is the study in terms of information at a particular date only. It is also called the vertical external analysis of financial statement.

2.6 Assets – Liabilities Analysis

To run a company, assets and liability is the most important. Assets are shown in the assets side (left side) of balance sheet whereas liability appears on the capital and liability side (right side) of balance sheet. Therefore, to evaluate the assets and liabilities of a company, the balance sheet should have to be evaluated.

2.6.1 Assets

Assets representing economic resources are the valuable position owned by the company. Their possession should be capable of being measured in monetary terms. Assets are the future benefits. They represent a stored purchasing power e.g. cash money claims, receivable, stock, tangible and intangible items that can be sold or used in business to generate earning.

2.6.1.1 Current Assets

Current assets are those assets that are normally converted into cash within an accounting period. Accounting period means a year (360 or 365 days or 12 months). Current assets generally include cash. Marketable securities, prepaid expenses, sundry debtors, bills receivable, inventory, etc.

2.6.1.2 Account Receivable

Account receivable is one of the important current assets representing the amount owed to the firms by the customer as a result of the sale of good or service on credit in the ordinary cerise of business. This term is also applicable to prepaid expenses and short-term loans and advances to subsidiaries and employees and supplies of raw materials of stores, spares and equipment receivable like inventories, involve costs, it should be kept in mind that these costs should not exceed the profit earned on sale generated by receivables.

2.6.1.3 Inventory

Inventory includes raw materials, work in process and finished goods. "Adequate inventories facilitate smooth production activities and help to provide of self delivery to customers or other hand, excessive inventory is ideal resource of the firm and can prove costly because it lies up working

capital unnecessarily which could have been better used it been utilized for some other purpose. The major problem of inventory management therefore to arrive at an optional balance between too much inventory and too little inventory. The optimum level of inventory is decided to keep in view the costs associated with holding inventories. There are two types of these cost, ordering cost and carrying cost. A system for effective management of inventories involves there sub system for effective management involves there sub system economic after quantity record point and stock level. 16(M.Y. khan and P.K. Jain; 1991, p-176)

2.6.1.4 Long – term Assets

Long term assets are that assets which are used for periods longer the accounting period. Such as fixed assets, long term investment and other non-current assets.

2.6.1.5 Fixed Assets

Fixed assets are permanent assets without which an organization can't exist in the world. Such as furniture, buildings, machinery etc. for the regular operation of the firm.

2.6.1.6 Investment

According to nature investment may be in government or securities or in commercial securities. According to objectives, investment may be for investing surplus found may be to obtain a trade interest in any other concern may be for some other purposes.

2.6.1.7 Other Assets

All other assets which can not be included in any of categories of groups are recognized as other assets.

2.6.2 Liabilities

Liabilities are debts payable in future by the firm to its creditors. They represent economic obligations to pay cash or provide goods or service in some future period. Generally, liabilities are created by borrowing money of purchasing goods or services on credit. Examples payable, interest payable, taxes payable, bonds, debentures, borrowing from banks and financial institutions, public deposits etc.

2.6.2.1 Current Liabilities

Current liabilities are debts payable within an accounting period. Current assets are converted into cash to pay current liabilities sometimes new current liabilities may be incurred to liquidate the existing current liabilities. The typical examples of current liabilities are creditors, bills payable, bank, overdraft, tax payable, outstanding expenses any incomes receiving in advance.

Sundry Creditors: It represents current liability towards suppliers from whom the firm has purchased raw materials on credit. This liability is also known as accounts payable, and is shown in the balance sheet till the payment has been mad to the creditors.

Bills Payable: Bills payable are the promises made in writing by the firm to make payment at a specified sum to creditors at some specific date. Bills are written by creditors over the firm and become bills payable. Once

they are accepted by the firm. Bills payable have a life of less than a year. Therefore, they are shown as current liabilities in the balance sheet.

Bank Borrowing: Bank, borrowing forms a substantial part of current liabilities. Commercial banks advance short-term credit to firms for financing their current assets. Banks may also provide funds for financing a firm's fixed assets. Such loans will be grouped under long-term liabilities.

Provision: Provision are other types of current liabilities. They include provision for taxes or provision for dividends. Every business has to pay taxes on its income. Usually, it takes sometime to finalize the amount of tax with the tax authorities. Therefore, the amount of tax is estimated and shown as provision for taxes of tax liability in the balance sheet. Similarly provision for paying dividends to shareholders may be created and shown as current liability.

Expenses payable (outstanding Expenses): are also current liabilities. The firm may owe payments to its employees, suppliers and others at the end of accounting period for the services received in the current year. These payment are payable within a very short period. Examples of outstanding expenses are wages payable, rent payable or commission payable.

2.6.2.2 Long – Term Liabilities

Long-term liabilities, sometime also called fixed liabilities, are the obligations or debts payable in a period of time greater than the accounting period. Long-term liabilities usually represent borrowing for a long period of

time. They include debentures, bonds and secured long-term loans (mortgages) from financial institutions.

Debentures of Bonds: Debentures or bonds are used by a firm to the public to raise debt. A debenture or a bond is a general obligation of the firm to pay interest and return principle sum as per the agreement. Loan raised through issue of debentures or bonds.

Secured loans or mortgages: Secured loans or mortgages are the long-term borrowing with fixed assets pledged as security. Mortgages are shown as secured long-term liabilities in the balance sheet. Term loans from financial institutions and commercial banks are secured against the assets of the firm.

2.7 Tools and Techniques of Financial Analysis

Financial analysis is the process of identifying the financial strengths and weakness of firm by properly establishing relationship between items of the financial statement (i.e., balance sheet and income statement.) Financial performance of an organization can be evaluated by using relevant financial tools and techniques. A financial analyst can adopt different tools for analysis of the financial statement and tools are necessary to have complete understanding of the figure of financial statement in full significance. After the evaluation of the result and interpretation, analysis in detail could be made of every items, value and relationship. The analytical tools of financial management are ratio analysis, cash flow analysis, trend percentage analysis etc.

By the help of these tools we can identify the actual position of the related concern. These tools have been given below:-

2.7.1 Ratio Analysis

Ratio analysis is the universally used technique of financial analysis, which was pioneered by Alexander in 1919. It is the principle technique used in judging. It is a tool of scanning the financial statements of the firm. Through this, one comes to know in which area of the operation the organization is strong and in which areas it is weak. Ratio analysis is the numerical relationship between any two variables of financial statements, which should serve some meaningful purpose. Ratios are expressions of logical relationships between items in the financial statements of a single period. A ratio can show a relationship between tow items on the same financial statement or between two items on different financial statements (e.g. balance sheet and income statement). The primary purpose at ratio is to point out area for further investigation.

"Ratio analysis is the systematic use of ratios to interpret the financial statements so that the strengths and weakness of a firm as well as its historical performance and current creditors can be determined.

"Ratio is the numerical or an arithmetical relationship between two figures. It is expressions of one number in term of another. i.e. one figure divided by another in order to calculate the ratio."

The relationship between two accounting figures expressed mathematically is known as a financial ratio. But in business point of view, ratio analysis is the tools that determine the relationships between different business statements in terms of minimum mathematical language. It is expressed in percentage or in proportion or in times.

Ratio analysis is classified into four important categories:-

A) Liquidity Ratio
B) Leverage Ratio
C) Activity Ratio
D) Profitability Ratio

In this study following ratios will be taken into consideration:

A) Liquidity Ratio

Liquidity ratios are the ratios that provide the quick measure at the liquidity position or the ability of the firm to meet its current obligation. In other words, liquidity ratios are the indicator of short-term solvency or financial strength of the firm.

A firm should ensure that it does not suffer from lack of liquidity and also that it does not have excess liquidity, will result in a poor credit worthiness, loss of creditors confidence, or even in legal tangles resulting in the closure of the company. A very high degree of liquidity is also bad; idle assets earn nothing. The firm's funds will be unnecessarily tied in current assets. Therefore, it is necessary to strike a proper balance between high liquidity and lack of liquidity.

"Liquidity ratios are used to judge a firm's ability to meet short obligation, from them, much insight can be obtained into the present cash solvency of a company and its ability to remain solvent in the event adversities. essentials, we wish to compare short-term resources available to meet there obligation.

Liquidity ratios measure the ability of the firm's to meet its current obligation. The most common ratios which indicate the extent of liquidity or lack of it are:-

i) Current ratio
ii) Quick ratio

i) Current Ratio

Current ratio shows the relation between assets and current liabilities. The current ratio is calculated by dividing current assets by current liabilities. The objective of this ratio is to measure the ability of the firm to meet its short term

obligation. The following formula can be used to ascertain this ratio:-

$$\text{Current Ratio} = \frac{\textit{Current Assets}}{\textit{Current Liabilities}}$$

Current assets include cash and those assets which can be covered into cash within year, such as marketable securities, debtors and inventories. Prepaid expenses are also included in current assets as they represent the payments that will not be made by the firm in the future.

Current liabilities include creditors, bills payable, accrued expenses, short term bank, loan, income tax liability and long-term debt maturing in current year. The current ratio is a measure of the firm's short-term solvency. It indicates the availability of current assets in rupees for every one rupee of current liability.

Current ratio has a standard measure of 2:1 or that the current assets should be two times or 200% of the total current liabilities. Less or more than standard ratio is not preferable. If it is less than standard ratio. It shows the solvency position is not better and vice versa.

ii) Quick ratio

The quick ratio is also called acid test ratio. It measures the short term liquidity of the firm. This is the ratio of very quick, assets to current liabilities. All current assets are not equally liquid, inventory and prepaid can not be termed to be a liquid assets. This ratio is the better test of financial strength than the current ratio as it gives no consideration to inventory, which may be very slow moving. The quick ratio can be calculated by the following formula:

$$\text{Quick Ratio} = \frac{Quick\ Assets}{Current\ Liabilities}$$

Higher the current ratio better is the liquidity position. Quick assets include all current assets accept inventory and prepaid expenses, which can be converted into cash immediately without loosing a value. A quick ratio of 1:1 has usually been considered favourable but the standard for the quick ratio various from company to company.

B) Leverage Ratio

The use of finance is referred by financial leverage. These ratios are also called solvency ratio of capital structure ratio. To judge the long term financial position of the firm, these ratio help to measure the financial contribution of owners and creditors comparatively. These ratios indicate the situation of the capital structure, which is calculated to measure the company's ability of using debt for the benefit of shareholders.

Leverage ratios are calculated from the balance sheet items and also from the income statement which is useful to find out operating profit. It is useful to find out whether an enterprise or company is successful to cover the fixed charge or not.

At least in conclusion it can be said that the firm's with high leverage ratio run the risk of larger losses but also have a enhance of gaining high return and vice versa. Leverage ratio indicates whether or not the firm's revenue can support interest and other fixed changes as well as whether or not there are sufficient assets to pay off the debt it firm. It includes the following ratios:

i) Long – Term Debt to New Worth Ratio :

Long term Debt to Net worth ratio indicates the relationship between the borrowed funds and shareholders equity (Net Worth). This is commonly used to measure the degree of financial leverage of the company. A high ratio shows the large amount of financing by creditors as compare to the owner's. This ratio is calculates in following formula:

$$\text{Long – term debt to net worth ratio} = \frac{Total\ \ Long-Term\ \ Debt}{Net\ worth}$$

ii) Total Debt to Total Assets Ratio (TDITA)

This ratio indicates what portions of the capital assets are financed by outsiders funds. A high debt ratio implies a banks success in exploiting debt to be more profitable as well as riskier capital structure. It can be calculated as:

$$\text{TDITA Ratio} = \frac{Total\ \ Debt}{Total\ \ Assets}$$

High debt to total assets ratio represents a greater risk of liquidity and also to shareholders and vice versa.

iii) Interest Coverage Ratio

The IC ratio shows how many firm's the interest charges are covered by funds that are ordinarily available to pay the interest. This is calculated as:

$$\text{Interest coverage ratio} = \frac{EBIT}{Interest} \times 100\%$$

C) Activity Ratio

Activity ratios reflect the firm's efficiency in utilizing its assets and profitability ratio measure overall performance and effectiveness of the firm. These ratios are called efficiency or turnover ratio. The relationship between sales and assets are indicated by turnover ratio. These ratios can be used to know the efficiency of the differe3nt assets. With the help of these ratios, analyst can know whether the assets are utilized effectively or not. Therefore, those ratios indicate the efficiency with which a corporation employee utilizes its resources. Activity ratios involve a relationship between sales and assets. A proper balance between sales and assets generally reflects that assets are managed well. Several activity ratios can be calculated to judge the effectiveness of asset utilization.

i) Inventory Turnover Ratio

This ratio is also called stock, turnover ratio. The analyst used this ratio for the measurement of efficiency of the firm inventory management. This ratio means how many times the stock has turned over during the year.

"Inventory turnover ratio, it may be recanted, indicates the number of times inventory is replaced during the year. It measures the relationship between the cost of goods sold and the inventory level.

Inventory turnover ratio indicates the efficiency of the firm in selling its products. In other word the inventory turnover ratio shows how rapidly the inventory is turning into receivable through sales. It can be calculated as follows:

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

Where,

Cost of goods sold = Sales - Gross Profit

$$\text{Average Inventory} = \frac{Opening\ \ Stock + Closing\ \ Stock}{2}$$

If inventory turnover is too low, excess inventory ties up resources productively. On the other hand if inventory turnover is too high, inventories are too small and it may be that the firm is constantly running from shortage of inventory there by loosing customer & generally, a high inventory turnover is indicative a good inventory management but the objective must be to maintain a level of inventory relative to sales that is not excessive but at the sometime is sufficient to meet customer needs.

ii) Total Assets Turnover Ratio

Total Assets turnover ratio is calculated by comparing the net sales to total assets. This ratio is a measurement of generating sales per rupee of investment in total assets. Total assets contribute not only to the sales but it also contributes to the production. High assets turnover is the result of a corporation to reduce financing cost and increase profit. Therefore, high ratio is favourable to the corporation. Increasing total assets turnover ratio indicates the increasing overall efficiency of total assets utilizing or some assets should be displayed. It is calculated as follows:

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

This ratio indicates the sales generated per rupee of investment in total assets. Generally a high ratio indicates over trading on fixed assets, while a low ratio shows excessive investment is a symptom of ideal capacity.

iii) Fixed Assets Turnover Ratio

This ratio is helpful in determining the efficiency of the fixed assets. This ratio can be calculated by dividing sales by net fixed assets. Net fixed assets mean total fixed assets minus accumulated depreciation. It shows how will the fixed assets are being used in the business. This ratio is important in case of manufacturing concern because sales are produced not only by use of current assets but also by amount invested in fixed assets:

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

Generally, high fixed assets turnover ratio indicates efficient utilization of fixed assets in generating sales. It includes how often the net fixed assets turnover during the year, but the lower ratio indicates inefficient management and utilization of fixed assets. It means decline is the capacity utilization of the business concern.

iv) Capital Employed Turnover Ratio :

It is the ratio of sales to capital employed. Capital employed includes non current liabilities and owners equity. This ratio measures the effectiveness of the utilization of capital employed. This ratio also indicates the firms ability of generating slides per rupees of long term investment. High ratio is favourable for the corporation because it indicates efficient utilization of long term creditors fund and owners equity. Decreasing ratio shows that either sales should be increased or investment in capital should be disposed off. It can be calculated as

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

D) Profitability Ratio :

Profit is the main objectives of each business concern. Profit is essential for the survival of business. Profitability ratio shows the overall efficiency of the business concern. These ratios give final answer about efficiency of the firm's effectiveness. It is control measure of the earning power and operating efficiency of a firm.

Not only a business concern has to earn profit but also it has to remember the social responsibility. Here, two contrast things has been arisen, a good enterprises must make proper balance between them.

The difference between total revenues and total expenses is known as profit. Efficient operation of a firm and its ability to pay and adequate return to different parties depends upon firm's profit. Profitability ratios are calculated to measure the operating efficiency of the firm.

The ratio examined thus reveals interesting things about the way the firm is operating, but the profitability ratio gives final answers about how effectively the firm is being managed, for the analytical purpose, different measurement, tools of profitability has used in this study. Mainly gross profit margin ratio, net profit margin ratio, operating ratio and return on assets ratio are used in this study.

i) Gross Profit Margin Ratio :

Gross profit margin reflects the efficiency with which management produces each unit of product. This ratio is generally expressed in terms of percentage. Gross profit margin is a measure of production efficiency. Gross profit is the result of the relationship between prices, sales, volume and cost. If profit margin falls down, the cost of production will increase. It can be calculated as follows:

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

Where, Gross profit margin = Sales – Cost of goods sold.

High gross profit margin implies that the firm is able to produce at relatively in lower cost. A low gross profit margin ratio should be carefully investigated.

ii) Net Profit Margin Ratio :

Net profit margin is the relationship between net profit and net sales. Net profit is obtained when operating expenses and income tax are subtracted from the gross profit. Net profit margin ratio is the overall measure of the firm's ability to each rupee of sales in the net profit. It is very useful to the proprietors and prospective investors because it reveals the overall profitability of the concern party. This can be calculated as :

$$\text{Net Profit Margin Ratio} = \frac{Net\ \text{Pr}ofit}{Net\ Sales} \times 100$$

High ratio is favourable because it ensures adequate return to the owner. Lower result is unfavourable for the company's point of view.

iii) Operating Expenses Ratio :

The operating expenses ratio is an important ratio that explains the changes in the profit margin ratio. The ratio is calculated to ascertain the relationship that exists between operating expenses and volume of sales. This can be calculated as follows :

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

Where,

Operating expenses = Cost of goods sold + Administrative expenses + Selling expenses

The lower ratio is better. Higher ratio is unfavourable because it shows few operating expenses have been incurred.

iv) Return on Assets Ratio :

This types of ratio is calculated to measure the profit after tax against the amount invested in total assets, it is to ascertain whether assets are using utilized property or not. It can be calculated as follows :

$$\text{Return on Assets Ratio} = \frac{Net\ profit\ after\ tax}{Total\ Assets} \times 100$$

High ratio is favourable and low ratio is unfavourable which is useful to measure the profitability of all the financial research interested in the firm's assets.

v) Basic Earning Power Ratio :

Profit generating power of the total assets invested in a firm is known as basic earning power. This is measured either in rupee for each rupee total assets invested or in percentage. It can be calculated as follows :

$$\text{Basic Earning Power Ratio} = \frac{EBIT}{Total\ Assets}$$

vi) Return on Shareholder's Equity Ratio :

The return on equity indicates the profitability of the owner's investment. It reflects the extent to which the objective of profit maximization has been achieved. It can be calculated as follows :

$$\text{Return on Assets Ratio} = \frac{EAT}{Net\,Worth} \times 100$$

2.8 Break Even Analysis:

The break even analysis also known as between sales valume and profitability. It can be calculated as follows

$$\text{Break Even Point (in Rs)} = \frac{Fixed\ cost}{P/V\ ratio}$$

Where,

$$\text{P/V ratio} = \frac{Contribution\ Margin}{Sales}$$

or,

$$= \frac{Sales - variable\ cost}{Sales}$$

or,

$$= \frac{1 - variable\ cost}{Sales}$$

Here, for break even point analysis, the interest expenses is taken as the important variable, since the interest rate are fixed in nature and they must researcher first wants to see the effect of interest expenses in the fixed cost and second removing interest expenses from the total fixed cost.

2.9 Leverage Analysis :

Leverage and capital structure are closely related. The risk of business is measured in terms of leverage, viz operating and financial, the leverage association with investment activities is preferred with financial activities is called financial leverage. The product of operating and financial leverage is total leverage. It can be calculated as follows :

A) Degree of Operating Leverage (DOL) :

$$\frac{Percentage\ Changes\ in\ EBIT}{Percentage\ Changes\ in\ Sales}$$

B) Degree of Financial Leverage (DFL) :

$$\frac{Percentage\ Changes\ in\ EPS}{Percentage\ Changes\ in\ EBIT}$$

C) Degree of Total Leverage (DTL) :

$$\frac{Percentage\ Changes\ in\ EPS}{Percentage\ Changes\ in\ Sales}$$

Generally increase in leverage result in increase in return and risk, where as decrease in leverage result in decrease in return and risk.

2.10 EBIT – EPS Analysis :

The prime objective of a company in using financial leverage is to magnify the shareholders return. The EBIT – EPS analysis is a method to study the effect of leverage on EPS and it involves the comparison of alternative method of financial under various assumption of EBIT.

EBIT can be calculated by following formula :

	Sales Revenus	xxx
Less :	variable cost	xxx
	Contribution margin	xxx
Less :	fixed cost	xxx
	EBIT	xxx

In similar way EPS can be calculated by following formula :

	EBIT	xxx
Less :	Interest	xxx
	EBT	xxx
Less :	Taxes	xxx
	EAT	xxx
Less :	Percentage dividend	xxx
	EAS	xxx

2.11 Statistical Analysis :

2.11.1 Average (Arithmetic Mean) :

The arithmetic mean is the most popular and commonly used measured of central tendency, which represents the entire data by a single value. The arithmetic mean of values of a variable is defined as the ratio of the total values to the number of values. It can be calculated as follows :

$$\text{Arithmetic mean} = \frac{Sum\,ofcalue}{Number\ of\ values}$$

or,

$$\overline{X} = \frac{\Sigma X}{N}$$

2.11.2 Standard Deviation :

A commonly used measure of risk is the standard deviation. It measures the absolute dispersion or variability for a distribution. The greater the standard deviation, for the greater will be the magnitude of the deviation of the values from the mean. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series, a large standard deviation means just the opposite. Standard deviation is extremely useful in judging the representative of the mean. We can find the standard deviation from the following formula :

¢

Where,

¢ = Standard deviation

X = variables

N = Number of years

$\overline{X}$ = Actual mean of the variable

2.11.3 Co-efficient of Variation :

The co-efficient of variation is the measure of dispersion comparable across distribution, which is defined as the rate of the standard deviation to the mean expressed in percent. In other words, when the relative dispersion is stated in terms of the arithmetic mean and the standard deviation, the resulting percentage is known as the co-efficient of variation. The value of coefficient of variation is calculated as follows :

$$\text{Co-efficient of variation (C.V.)} = \frac{¢}{\overline{X}}$$

2.11.4 Correlation Co-efficient (r) :

The most important method of measuring the correlation between the two variables is Karl Pearson's coefficient measuring the degree of association between the two variables. The formula for calculating simple correlation co-efficient (r) by Karl Pearson's method is

$$r = \frac{N\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{N\Sigma x^2 - (\Sigma x)^2}\ \sqrt{N\Sigma y^2 - (\Sigma y)^2}}$$

To interpret the value of correlation the relationship between variables is positive if the value of 'r' is greater than O and it is negative if the relationship between variables is less than b. similarly, if the value of 'r' is 1, the relationship is perfect positive and if it is the relationship is perfectly negative. If the value of 'r' is 0, the relationship between variable is zero (0), close the value of 'r' is to +1 or -1, the higher the relationship between the variables.

2.11.5 Probable Error (PE) :

To determine the significance of the correlation co-efficient 'probable error' is computed. The probable error of the co-efficient of correlation helps in judging the significance of its value. It is worked out as under for Kerl Pearson's coefficient of correlation. It can be calculated by the following formula :

$$\text{P.E.} = \frac{0.6745(1-r2)}{\sqrt{N}}$$

Where,

r = co – efficient of correlation

N = no. of observation

Interpretation :

If the value of r<PE, there is no evidence of correlation, i.e., the value of r is not at all significant. If the value of r>c times PE and r>0.5, the coefficient of correlation is practically certain i.e. The value of r is significant. If the value of r is not more than 6 times, PE there does not exists in the significant relationship between the given variables.

The probable error is used to test whether the calculated value of simple correlation co-efficient is significant of not. In this regard the correlation between some of the variables are analyzed, they are:

a) Total long term debt and net worth.
b) Total long term debt and total capital employed
c) Total Assets and Sales
d) Sales and EBIT
e) Cost of goods sold and sales

2.11.6 Regression Analysis :

With regard to regression analysis, the simple regression model has been used in this study. The researcher wants to forecast the value of NPAT and cost of goods sold as dependent variable with the help of known variable i.e. sales. For this purpose, three additional fiscal years (i.e. from F/Y 066/067 to 068/069) are taken for consideration. The specific value of sales for those additional fiscal years has been calculated using time series analysis.

2.11.7 Trend Analysis :

In financial analysis, the direction of changes over the period of years is of crucial importance. Trend analysis given an indication of the direction of change and reflects whether the firms financial position has improved, deteriorated or remained constant over time. In this analysis, the trend of various related variables are presented and analyzed such as;

a) Total debt, Net worth and capital employed.
b) EBIT, Interest and NPAT
c) Total Revenue, Total expenditure and NPAT
d) Sales, Cost of goods sold and gross profit
e) Sales and fixed assets.

2.12 Cash Flow Analysis :

Any firm needs cash to invest in inventories, receivable and fixed assets to make payment to operating expenses to maintain growth in sales earn cash. Cash is the lifeblood of business, without cash, no activities can be taken place. So, a business must have an adequate of cash to operate. As such the decision makers must pay close attention to the firm's cash position and events and transaction that effect the position of the company is termed as cash flow analysis.

"The projected cash flow statements prepared month wise or so (which are constructed information funds statement) can be useful in presenting information of excess cash is some months and shortage of cash in others." (Manson Perry; 1961: P. 49-50)

2.13 Review of Related Study :

Review of related study is also important of the study. There are so many studies, which are related on financial performance of public enterprises. They might be useful to this research about those valuable inputs to this study.

There is no more study about the private as well as multinational company rather than the public sector companies and enterprises. The overall financial performance of private as well as multinational company is better than that of pubic sector enterprises. The financial score of private sector enterprises is higher than that of public enterprises, which can be calculated by observing the different studies.

2.13.1 Review from books:

Public corporation of Nepal : A study of Financial Ratio :

This study was done by Dr. Radheshyam Pradhan on sick and non sick corporation. The study was done to compute analysis and interpret the financial ratios of different twenty corporations. The study has covered a period of twelve years from 1973 to 1984.

Liquidity ratios have declined in all corporations ever the period. Generally, the manufacturing corporation has higher liquidity than manufacturing corporations. Mean value of liquidity ratios were fund higher in non-sick, period than sick, period. But student's test computed in each of the year indicates that the two groups differ significantly with regard to turnover of receivables, inventories, fixed assets and total assets. The mean values of turnover ratios were higher in non-sick group differs significantly. With regards to inventory turnover, all selected turnover of the non sick, periods were higher however students test indicates that non-sick periods of the corporation. (Dr. Radhe Shyam Pradhan, P-73)

Management Problem in Public Sectors manufacturing Enterprises in Nepal

This study is conducted by research team of Pushkar Bajracharya na dBalkrishna Shrestha with the objective of identifying the management problems, management practice and weakness of the Nepalese public sector manufacturing enterprises. Measurement of efficiency is difficult task for any organization. The basis of various efficient indicates; performance of manufacturing public enterprises in Nepal was generally poor as displayed by low or negative return. The study indicates that there was no adequate understanding and realization of objective even among top and middle level management. Profit followed by an organization growth and development has been prescribed but existing objectives were not adequate and clear. The appointment system of chief executive was not satisfactory. The study shows the appointment system was interfaced politically and other causes. Public enterprises were perceived to attain the objectives moderately. The major constraints in the attained of the objectives were government policies, limitations of sources, environmental factor and management responsibility. In the planning procedure of public enterprises the great interference was perceived by HMG. Degree of autonomy was very low in the view of various kinds of interference. (Pushkar Bajracharya : 1981 P.n. 51)

2.13.2 Review from Thesis :

Mr. Yadav Prasad Pokhrel

He had done research on "Financial Performance of Agricultural Development Bank Nepal." (Yadav Prasad Pokhrel, 1998 : p.n. 16)

On the study, the result come of the funds flow analysis shows the precaution care of fund in the bank for future growth of the bank. The liquidity position of the bank, over the 11 years for 2041 to 2052 B.S. is quite poor. The debt equity ratio is unbalanced since the rising tendency of the ratio is the due to rapid yearly increase in borrowing but equity is

increasing very slowly. The over due loan and interest receivable amount are increasing every year. Overall profitability position of the bank over 11 years from F/Y 2041 to 2052 B.S. is very weak. The bank has been facing the problem of loss during the periods. Total trend analysis of loan activities of the bank show the mixed result. Every year loan disbursement, collection, interest collection have been increased but on the been increasing which shows the inactive position of Agricultural Development Bank, Nepal.

Mr. Prem Bahadur Mungmen

He had done research on "Financial Performance of Purwanchal Gramin Bikash Bank Ltd." (Prem Bahadur Mungmen: 2004, p.n. 75)

On the study, the result come that the financial ratio indicates poor financial position over the period of 2051 to 2059 B.S. Trend of operating expenses is increasing day by day in comparisons to operating profit. Borrowing is the main source of fund. Although the main resources of fund are used in loan disbursement, it is used for the recovery of losses. The growth of net loss in negative. It is the sigh of gradually improvement in financial performance. Loan has not been timely recovered from clients. The relationship between deposit and investment is not on acceptable condition. Overdue loan has increased year to year. Share capital remains some during the study periods. Loan disbursement by the bank, is quite small in amount; it is not practicable to take legal action against the defaulters. The purwanchal Grameen Bikash Bank, Ltd. Is going to break, even level in the coming year. It's activities are also expending day by day.

CHAPTER – III

3. RESEARCH METHODLOGY

3.1 Introduction

"Research mean to search or study about a phenomenon. The word research is composed by 're' and 'search' where 're' means repeatedly or again and again, and search means to investigate or find. Thus, to search again and again is research. Generally, research is an effort to search new fact, knowledge, principle in scientific ways." (P.R. Joshi, P. – 3)

Research methodology contains two words "Research" and "Methodology". "Research" means the search for knowledge and "Methodology" refers the study. Research is a process of knowing cause the fact; because seeing, hearing and feeling may be different than the reality. Methodology means the series of systematic method of the research work.

The human beings can not remain satisfied with the same things for a long time. They are always curious to learn more and to something new and special by raising questions like why, how, when, where, what, etc. To answers these questions, they should gather information and analyze them to achieve their goals or satisfaction. The research for gaining the knowledge about method of goal achievement which we desire, is known as Research Methodology.

Research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objective in view. A scientific research is a systematic, control, empirical and critical investigation of hypothetical propositions about the presumed relations

among natural phenomena. It is the way to solve the problem systematically. The research for gaining the knowledge about method of goal achievement, which we desire is known as research methodology.

The proper analysis of the study can be meaningful only on the right choice of research tools that help to draw meaningful conclusion. The main objectives of this study are to analyze the financial performance of SSU (Pvt.) Ltd. In this chapter the research focus on research design, population and sample nature and sources of data, data processing procedures tools and techniques used for analysis and definition of key terms.

3.2 Research Design

Research design is the plan, structure and strategy of investigations conceived so as to obtain answer to research questions and to central variance. The main objectives of the present study being analysis of financial performance of SSU (Pvt.) Ltd., Sonapur, Sunsari in Nepal, descriptive research design and analytic study of collected data of various financial statement over a time period is being used. The study covers the five years period from 061/062 to 065/066.

3.3 Population and Sample

Population is a total about which we are going to study or research where as sample is the number of representatives about of total population. The financial statement i.e. balance sheet and profit and loss accounts of SSU (Pvt.) Ltd. Published from establishment to this data are assume as population of the study where as balance sheet and profit and loss accounts of five fiscal years from 062/063 to 066/067 are selected as a sample of the study. It is quite difficult to adopt the whole population in this study. Thus five years financial data are taken from the population for the study as sample.

3.4 Nature & Source of Data

Information is lifeblood of any research to gather the information and data collection are the major task. To achieve the objective, this study used primary as well as secondary data. Primary data are collected through media of interview and supplementary question arise with the officials. Secondary data are those data, which already existed and may be statement, viz; balance sheet and profit and loss account of SSU (Pvt.) Ltd..

In this study secondary data is very important because most of the figures were used from secondary source. The other necessary documents and information relating to this study are collected from this industry's chef accountant Mr. Sanjay Kumar Karn.

The major sources of data used in the study are as follows :

i) Balance sheet and profit and loss account of the company.
ii) Other additional information has been collected from various sources like annual reports, audit report, official record, company profile and the company's prospectus.
iii) Unpublished master level dissertation, papers and journals.
iv) Direct personal contact, telephone contact.

3.5 Data Processing Procedure

The research is mainly based on secondary data. The data collected from the head office of SSU (Pvt.) Ltd. The data from the annual financial reports that were published by SSU (Pvt.) Ltd.

3.6 Tolls and Techniques used

The analysis of data has been done according to the pattern of data available. Various financial and statistical tools have been used in this study. These tools and techniques measure the relation of concerned variables that have direct impact on financial performance. The various financial and statistical tools that have been used are : different ratios, breakeven analysis, leverage, EBIT-EPS analysis, average, standard deviation, co-efficient variation, correlation analysis, regression analysis and trend analysis. Brief discussion of these tools are follows :

3.6.1 Ratio analysis

Financial tools are also well known tools for studying financial performance. Ratio analysis is the universally used technique of financial analysis, which was pioneered by Alexander in 1919. It is the principle technique used in judging the condition portrayed by the financial statements.

“Ratio analysis is the systematic use of ratios to interpret the financial statements so that the strengths and weakness of a firm as well as its historical performance and current condition can be determined.” (M.Y. Khan and P.K. Janin, 1974, P. 109)

To calculate the performance of an organization by creating the ratios from the figures of different accounts consisting in balance sheet and profit and loss account as known as ratio analysis.

A large number of ratios can be generated from the components profit and loss account and balance sheet. Different types of ratio can be calculated which are liquidity, leverage, profitability and activity.

a) Liquidity Ratio

Liquidity ratios are establishing a relationship between cash and other current assets when the firms have sufficient current assets as compared to current liabilities, that position of the firms is called liquidity

position. It reflects the short – term financial strength of the firm. These are two ratios under liquidity ratio which are as calculated by using following this formula.

$$\text{Current Ratio} = \frac{Current\ Assets}{Current\ Liabilities}$$

$$\text{Quick Ratio} = \frac{Quick\ Assets}{Current\ Liabilities}$$

b) Leverage Ratio

These ratios indicate whether the firm is financially sound or solvent as far as its long – term obligations are concerned. These measure the business ability to pay interest regularly and to repay the principle on the due dates. Leverage ratios are calculated by using following this formula.

$$\text{Total long – term debt to net worth ratio} = \frac{Total\ long-term\ Debt}{Net\ worth}$$

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

$$\text{Interest coverage ratio} = \frac{EBIT}{Interest} \times 100\%$$

c) Activity Ratio

Activity ratio reflect the firm's efficiency in utilizing its assets and profitability ratios measure overall performance and effectiveness of the firm. Some important activity ratios are calculated in following way.

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

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

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

d) Profitability Ratio

A firm can not live without profit. The relation of the return of the firm either its sales a\or its equity or its assets known as profitability ratios. Some important profitability ratios are calculated in following way.

Gross profit margin ratio = $\frac{Gross\ \ profit}{Sales} \times 100$

Net profit margin ratio = $\frac{Net\ \ profit}{Net\ \ Sales} \times 100$

Operating expenses ratio = $\frac{Operating\ \ \text{exp}enses}{Net\ \ Sales} \times 100$

Return on assets ratio = $\frac{Net\ \ profit\ \ after\ \ tax}{Total\ \ assets} \times 100$

Basic earning power ratio (return on investment ratio) = $\frac{EBIT}{Total\ \ assets}$

Return on equity ratio = $\frac{EAT}{Net\ Worth} \times 100$

3.6.2 Break Even Analysis

The breakeven analysis ratio is also known as cost volume profit analysis. It shows the relationship between sales volume and profitability.

3.6.3 Leverage Analysis

The risk of business is measured in terms of leverage, viz. operating and financial. The leverage associated with investment activities is preferred to as operating leverage, while leverage associated with financial activities is called financial leverage and product of operating and financial leverage is total leverage.

3.6.4 EBIT – EPS Analysis

EBIT – EPS analysis is a method to study the effect of leverage and EPS and it involves the comparison of alternative method of financing under various assumption of EBIT.

3.6.5 Statistical Analysis

Beside financial and accounting tools, some statistical tools are also used to analyze the data, which are as under:

a) Average (mean)
b) Standard deviation
c) Coefficient of variation
d) Correlation co-efficient analysis
e) Probable error
f) Regression analysis
g) Trend analysis

3.6.6 Cash Flow Analysis

Cash flow statement is a formal financial statement published to decision makers outside the organizations. It is usually a report of cash flow activities of past period, it reflects the actual result of past cash transaction. A cash flow statement is a statement of company's ability to generate cash from various activities such as operating, investing, financing and their need of cash. It is a statement, which shows the inflow and outflow of cash and cash equivalents during the year. It summarizes the overall cash flows of the entire entity for a period of one year.

CHAPTER – IV

4. PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

The important part of the study is presentation and analysis of data which helps to find out the fact matter about organization. To make the decision by various concerned people like managers, investors, creditors, government and others interested aspects requires to know about the financial performance of a business. Analysis and interpretation of financial presentation of the data gives clear view of the overall performance of a business. It is the main tool which points out a strength ness and weakness of an organization.

The specific objective of this study is to indentity the real financial position of SSU (Pvt.) Ltd. To meet this objectives, in this chapter we are trying to analyze the financial and statistical tools. Such analysis provides useful information about is broadly divided into six parts namely (i) Ratio analysis (ii) Break even analysis (iii) Leverage analysis (iv) BEIT – EPS analysis (v) Statistical analysis (vi) Cash flow analysis

4.2 Ratio Analysis

Ratio analysis is one of the important tools for the analysis of financial statement. The analysis of the financial statement with the help of the ratio is called ratio analysis. In other words an arithmetical relationship between two figures is know as ratio. It is computer by dividing one item of relationship with the other.

4.2.1 Liquidity Ratio

Liquidity ratio measures the ability of a firm to meet its short – term obligation and reflects the short – term financial strength ness of the company. Short – term liquidity involves the relationship between current assets and current liability. It is extremely essential for a firm to be able to meet its obligations as they become due. If the liquidity ratio of the firm is not enough, it will result bad in credit ratings, low creditor's confidence eventually may lead to the bank ruptey if the firm has high degree of liquidity funds there will be unnecessary idle funds. Therefore, it is necessary to strike a proper balance between liquidity and calculate in order to know whether the firm is maintaining appropriate level of liquidity or not.

4.2.1.1 Current Ratio

Current ratio is the relationship of current assets and current liabilities. Current assets are those assets, which can be converted into cash within short period of time. Normally not exceeding one year, current liabilities are those obligation which are payable within a short period. Therefore, we can say current ratio measures the liquidity of the short term solvency of the firm. It actually reveals the current assets of a firm available to meet each rupee of current liability.

The current ratio measures the extent to which the claims of short term creditors are covered by short term assets.

The current ratio less or more than standard ratio is not preferable. If the current ratio of a firm is less than 2:1 the solvency position of the firm is not better. The cash position may not be available to pay current liabilities. If the current ratio is more than 2:1 the company may have an excessive investment in current assets that do not produce the return. Current ratio of SSU (Pvt.) Ltd. For the study period is presented below.

Table No.- 1

Current Ratio

Fiscal Year	Current Assets	Current Liabilities	Ratio (times)
2061/062	133642702	32176060	4.15
2062/063	172561238	65547172	2.63
2063/064	185074894	68838745	2.69
2064/065	223913273	86170134	2.60
2065/066	201429154	65644637	3.07
Average			3.03
S.D.			0.59
C.V			0.19

Sources : Appendix – 2

In this above table, we can clearly see that the current ratios of the study period are 4.15, 2.63, 2.69, 2.60 & 3.07 from the F/Y 2061/062 to 2065/066 respectively. The current ratios are also fluctuating over the study period because CA & CL are also fluctuating during the period. The average ratio is 3.03 times. In the year 2061/062, the current ratio is very high i.e. 4.15 times than the other years because of low position of current liabilities than current assets. Similarly, F/Y 2064/065 shows the current ratio of 2.60 times because the amount of current liabilities is highest of all in the F/Y.

The short term solvency of the SSU (Pvt.) Ltd. Is sound but it appears more conservative in using current assets to generate sales except the year 2064/065.

The standard deviation is 0.59 and co-efficient of variation of the ratio is 19%, which indicates the high variation is current ratio.

4.2.1.2 Quick Ratio

The quick ratio or acid test ratio is to precise measure of the firm's liquidity. This ratio establishes a relationship between quick liquidity assets and current liabilities. This ratio measures the firm's ability how quickly it can cover its current assets in the cash in order to meet the current liabilities. An assets is liquid if it can be converted into cash immediately or reasonably soon without a loss in the value of assets. Cash is the most liquid assets other assets which are considered to be relatively liquid and included in quick assets and book debts (debtors and receivables) and marketable securities can be realized without difficulty. It is calculated as quick assets divided by the current liabilities presented below table.

Table No.- 2

Quick Ratio

Fiscal Year	Quick Assets	Current Liabilities	Ratio (times)
2061/062	87782065	32176060	2.7282
2062/063	79014241	65547172	1.2055
2063/064	69618655	68838745	1.0113
2064/065	70876764	86170134	0.8225
2065/066	84380419	65644637	1.2854
Average			1.4106
S.D.			0.6781
C.V			0.48

Sources : Appendix – 2 & 3

From the above table, we can clearly see that the QA/CL ratio of the study period are 2.7282, 1.2055, 0.8225, 1.2854 from the F/Y 061/062 to 065/066 respectively. The average quick ratio is 1.4106 times. It is observed from the above table that quick ratio of SSU (Pvt.) Ltd. Shows increasing and decreasing trend. The average

quick ratio is higher than the fiscal year 2062/063, 2063/064, 2064/065 and 2065/066 and lower than the fiscal year 2061/062.

Generally an acid test ratio of 1:1 is considered as satisfactory, a firm an easily meet all current claims. The quick ratio shows that the company have sufficient quick assets to fulfill the current liabilities. Besides this the company has to think that a high value of quick ratio means availability of funds in time. It shows that the SSU (Pvt.) Ltd. Has invested its sufficient money in quick assets.

The standard deviation is 0.6781 and C.V. is 48% which indicates the high variation is quick ratio.

4.2.2 Leverage Ratio

To find out the long – term financial position of the firm, leverage or capital structure ratios are computed. These ratios indicate whether the company is financially sound or solvent as far as its long obligations are concerned. These ratios measure the ability of the firm to pay the interest regularly and to repay the principle on the due dates. Various kinds of leverage ratios are :

4.2.2.1 Long – term debt to Net Worth Ratio

LTD to NW ratio indicates the relationship between the borrowed funds and shareholders equity (NW). This is commonly used to measure the degree of financial leverage of the company. A high ratio shows the large amount of financing by creditors as compare to the owner's. The relationship between LTD and NW ratio of SSU (Pvt.) Ltd. during the study period are presented in the following table.

Table No.- 3

Long – term Debt to Net Worth Ratio

Fiscal Year	Long – term Debt	Net Worth	Ratio (times)	Ratio (%)
2061/062	46987958	86181967	0.5482	54.52
2062/063	47965958	90502882	0.53	53
2063/064	69528958	76016848	0.9147	91.47
2064/065	90491958	77372144	1.1696	116.96
2065/066	65031958	99214149	0.6555	65.55
Average			0.763	76.3
S.D.			0.2456	24.56
C.V			0.3219	32.19

Sources : Appendix – 2

From the above table, we can clearly see that the LTD to NW ratio of SSU (Pvt.) Ltd. are 54.52%, 53%, 91.47%, 116.96% and 65.55% for the years from 2061/062 to 2065/066 respectively. The average ratio is 76.3% comparing with the average, it is higher in F/Y 2063/064 and 2064/065 and lower in F/Y 2061/062, 2062/063 and 2065/066. The ratios are not in same trend neither the increasing trend nor the decreasing trend. The ratios are fluctuating over the study period. Long – term debt is decreased in the F/Y 2061/062 and increased in the F/Y 2064/065. Net worth is decreased in the F/Y 2063/064 and increased in F/Y 2065/066. The higher ratio lies in the F/Y 2064/065 and the lower in the F/Y 2062/063.

The S.D. is 24.56% and C.V. is 32.19%.

4.2.2.2 Total Debt to Total Assets Ratio

This ratio denotes structural relationship between total debt and total assets of a company. Total debt is composed medium and long – term debt and current liabilities and total assets of the sum of total assets less depreciation. The following table shows relationship between total debts and total assets.

Table No.- 4

Total Debt to Total Assets Ratio

Fiscal Year	Total Debt	Total Assets	Ratio (times)	Ratio (%)
2061/062	79164018	165345985	0.4788	47.88
2062/063	113513130	204016012	0.5564	55.64
2063/064	138367703	214384551	0.6454	64.54
2064/065	176662092	254034236	0.6954	69.54
2065/066	130676595	229890744	0.5684	56.84
Average			0.5889	58.89
S.D.			0.0335	3.35
C.V			0.0569	5.69

Sources : Appendix – 2

From the above table, we can clearly see that the debt to assets ratio from the F/Y 2061/062 to 2065/066 are 47.88%, 55.64%, 64.54%, 69.54 & 56.84% respectively. From the above calculation, it is cleared that the average debt ratio is 58.89%. The ratio shows fluctuate trend having the highest ratio if 69.54% in the F/Y 2064/065 and the lowest ratio of 47.88% in the F?Y 2061/062. The amount of debt and total assets both are fluctuating.

The standard deviation is 3.35% and co-efficient of variation of the ratio is 5.69%

4.2.2.3 Interest Coverage Ratio

The interest coverage ratio calculates the debt serving capacity of a firm. It is calculated to analyze the firm's ability to meet interest obligations. This relation indicates the times that interest on debt capital is covered by earning before interest and taxes. For instance, if ICR is 5 times, it denotes that the firm is able to pay interest on debt capital to the extent that current EBIT falls to the one fifth of current level. Therefore, greater the ICR, more safety from creditor's view point that their interest claim is fulfilled. Contrary to this lower ICR denotes the excessive use of debt with less profitability. the following table shows the relationship[between EBIT and Interest.

Table No.- 5

Interest Coverage Ratio

Fiscal Year	EBIT	Interest	Ratio (times)
2061/062	13688489	904898	15.14
2062/063	11773189	929285	12.67
2063/064	9449236	1283312	7.36
2064/065	5259716	3304120	1.59
2065/066	6401872	3250118	1.97
Average			7.75
S.D.			1.25
C.V			0.16

Sources : Appendix – 1

From the above table, we can clearly see that the EBIT to Interest ratio of SSU (Pvt.) Ltd. are 15.14, 12.67, 7.96, 1.59 & 1.97 for the year from 2061/062 to 2065/066 respectively. The interest coverage ratio was fluctuating throughout the study period. Average ratio was 7.75 times. While comparing the ratio with the F/Y 2064/065 and 2065/066 have the lowest ratio because of the high interest amount.

The total risk can be measured by standard deviation, higher the standard deviation higher the risk and vice – versa.

Higher C.V. indicates more interest coverage ratio fluctuation and less C.V. indicates less interest coverage ratio movements.

The S.D. is 1.25 and C.V. is 0.16 times.

4.2.3 Activity Ratio

In order to know how efficiency SSU (Pvt.) Ltd. is utilization its available resources activity ratio is calculated. Activity ratio is the relationship between sales and various kinds of assets are indicating by activity ratio. It is also called turnover ratio of efficiency in assets management as well as the effectiveness of the investment of

resources in the business enterprises with the help of this ratio, we can easily know whether the funds have been used effectively or not.

4.2.3.1 Inventory Turnover Ratio

Inventory turnover ratio indicates the efficiency of the firm in selling its products. In the other word the inventory turnover ratio shows how rapidly the inventory is turning into receivable through sales. It means the ratio shows the efficiency of the business concern in inventory management.

Average inventory is the average of opening and closing balance of inventory. In the manufacturing company inventory of finished goods is used to calculated inventory. The inventory turnover shows how rapidly the stock is changing into receivable through sales. Generally a high inventory turnover indicates of good inventory management and lower inventory turnover suggest inefficient inventory management. A low inventory by production and sales activities or a low moving or absolute inventory. A high level of inventory unnecessarily tied up funds, becoming the cause of lost and increase costs. The following table shows the relationship between cost of goods sold and average inventory.

Table No.- 6

Inventory Turnover Ratio

Fiscal Year	Cost of goods sold	Average Inventory	Ratio (times)	Ratio (%)
2061/062	294543935	41703560	7.0628	706.28
2062/063	320028315	69703817	4.5913	459.13
2063/064	330936037	104501618	3.1668	316.68
2064/065	391302265	134246374	2.9148	291.48
2065/066	430436318	135042622	3.1874	318.74
Average			4.18	418
S.D.			1.56	156
C.V			0.37	37

Sources : Appendix – 1 & 4

From the above table, we can clearly see that the cost of goods sold and average inventory ratio of SSU (Pvt.) Ltd. are 7.0628, 4.5913, 3.1668, 2.9148 & 3.1874 for the year from 2061/062 to 2065/066 respectively. Comparing the ratio with the average, it is higher in F/Y 2061/062 and 2062/063 and lower in F/Y 2063/064, 2064/065 and 2065/066. The high ratio 7.0628 times in the F/Y 2061/062 because the average inventory is lower in the year than that of other F/Y. The lowest ratio is 2.9148 in F/Y 2064/065.

The S.D. is 1.56 and C.V. is 37%.

4.2.3.2 Total Assets Turnover Ratio

Assets turnover ratios are used to determine the efficiency of the firm in utilizing its resources to generate maximum sales through their proper utilization.

Generally, the higher a firm's total assets turnover is calculated by dividing sales by total assets. The relationship between sales to total assets ratio of SSU (Pvt.) Ltd. during the study period are presented in the following table.

Table No.- 7

Total Assets Turnover Ratio

Fiscal Year	Sales	Total Assets	Ratio (times)	Ratio (%)
2061/062	324057788	165345985	1.9599	195.99
2062/063	349768978	204016012	1.7144	171.44
2063/064	352084980	214384551	1.6423	164.23
2064/065	408863816	254034236	1.6095	160.95
2065/066	458067364	229890744	1.9925	199.25
Average			1.7837	178.37
S.D.			.1611	16.11
C.V			.0903	9.03

Sources : Appendix – 1 & 2

From the above table, we can clearly see that the sales to total assets ratio of SSU (Pvt.) Ltd. are 195.99%, 171.44%, 164.23%, 160.95% & 199.25% for the years from 2061/062 to 2065/066 respectively. The average ratio is 178.37% which is low from the F/Y 2061/062 and 2065/066 and is higher than the fiscal year 2062/063, 2063/064 and 2064/065. The ratio is highest in the F/Y 2065/066 during the study period because total assets are decreased in the year. Above table shows that the company has not met the general standard in the study period, which indicates that the company is suffering from the problem of assets management. The S.D. is 16.11 and C.V. is 9.03%.

4.2.3.3 Fixed Assets Turnover Ratio

Investment in assets is necessity and important part of the company the fixed assets turnover ratio measures the efficiency of an enterprises comparing with its investment in fixed assets. It is also related with sales and investment in fixed assets. It indicates that the adequacy of sales in relation to the investment in fixed assets. High fixed assets in generating sales and vice – versa. It is important in case of manufacturing concern because sales are produced not only by amount invested in fixed assets. This ratio is calculated by dividing sales by net fixed assets.

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

Where,

Fixed assets = net fixed

Sales = net sales

The relationship between sales to net fixed assets ratio of SSU (Pvt.) Ltd. during the study period are presented in the following table.

Table No.- 8

Fixed Assets Turnover Ratio

Fiscal Year	Sales	Net Fixed Assets	Ratio (times)
2061/062	324057788	28225557	11.4810
2062/063	349768978	27977048	12.5020
2063/064	352084980	27221497	12.9336
2064/065	408863816	29829340	13.7068
2065/066	458067364	28169966	16.2608
Average			13.3768
S.D.			1.6113
C.V			0.1205

Sources : Appendix – 1 & 2

The fixed assets turnover ratio for the F/Y 2061/062, 2062/062, 2063/064, 2064/065 & 2065/066 are 11.4810, 12.5020, 12.9336, 13.7068 & 16.2608 times respectively. The average of these fiscal year ratio is 13.3768 times. As compared to the individual ratio with an average F/Y of 2064/065 & 2065/066 shows better performance and the other years performance requires to be improved. Higher turnover ratios are always preferred.

The S.D. is 1.6113 and C.V. is 12.05%

4.2.3.4 Capital Employed Turnover Ratio

This ratio measures the sales of the firm in relation to the capital employed and analyzed with sales investment capital must be compared and analyzed with sales in order to examine the efficiency of the company's management in generating revenues from available capital. This ratio have been tested to know how efficiently the long term capital is employed in generation of revenues. Therefore this ratio measures the sales rupee for each rupee of capital employed. The relationship between sales and total capital employed of SSU (Pvt.) Ltd. during the study period are presented in the following table.

Table No.- 9

Capital Employed Turnover Ratio

Fiscal Year	Sales	Capital Employed	Ratio (times)	Ratio (%)
2061/062	324057788	133169925	2.4334	243.34
2062/063	349768978	138468840	2.5260	252.6
2063/064	352084980	145545806	2.4191	241.91
2064/065	408863816	167864102	2.4357	243.57
2065/066	458067364	164246107	2.7890	278.89
Average			2.5206	252.06
S.D.			0.1394	13.94
C.V			0.0553	5.53

Sources : Appendix – 1 & 2

From the above table, we can clearly see that the capital employed ratio of SSU (Pvt.) Ltd. are 243.34%, 252.60%, 241.91%, 243.57% & 278.89% in F/Y 2061/062 to 2065/066 respectively. From the above table we can see that the average capital employed turnover ratio is 2.5206 times. In the F/Y 2063/064 the ratio is minimum. Similarly, F/y 2065/066 has the highest ratio, which sounds good to the financial managers.

Generally a higher ratio is preferable which shows that the firm is very efficient on sales activities. Thus the tendency of the management of the company should be to enhance the ratio of capital employed turnover.

The S.D. is 13.94% and C.V. is 5.53%.

4.2.4 Profitability Ratio

Profit is the essential for the survival of the organization. In the long run, there must be profit. It is needed to fulfill organization's demand such as return on equity future expenses. These ratios given final answer about how effectively the firm is being managed. Not only any business concern has to earn profit but also it has to remember social responsibility. The profitability ratio is use to

measure the operating performance of the firm. It can be computed in relation to the investment and the sales profitability ratios are those ratios, which indicate degree of success in achieving desired profit levels.

4.2.4.1 Gross Profit Margin Ratio

Gross profit margin ratio builds a relationship between gross profit and sales, which is calculated by dividing the gross profit by sales. This ratio shows the profit with relation to sales after the direct production cost is deducted. Gross profit margin ratio is very significant on evaluating the profitability of a business. Gross profit ratio indicates the percentage of profit after cost of production. This ratio is measure of productive efficiency. It is generally expressed in term of percentage. It is very significant on evaluating the profitability of a business. High gross profit margin implies the firm is able to produce a relatively lower cost. A low gross profit margin ratio advice they should be carefully investigated. The relationship between gross profit and sales of SSU (Pvt.) Ltd. during the study period are presented in the following table.

Table No.- 10

Gross Profit Margin Ratio

Fiscal Year	Gross Profit	Sales	Ratio (times)	Ratio (%)
2061/062	29513853	324057788	0.0911	9.11
2062/063	29740633	349768978	0.0850	8.50
2063/064	21148943	352084980	0.0601	6.01
2064/065	17561551	408863816	0.0430	4.30
2065/066	27631046	458067364	0.0603	6.03
Average			0.0679	6.79
S.D.			0.0177	1.77
C.V			0.0026	0.26

Sources : Appendix – 1

From the above table, we can clearly see that the gross profit margin ratio of SSU (Pvt.) Ltd. are 9.11%, 8.50%, 6.01%, 4.30% and 6.03% on the F/Y 2061/062 to 2065/066 respectively. It shows that the ratio of gross profit margin is not fluctuant. The average of it is 6.749%. In the F/Y 2061/062, there is highest margin. The poor performance was on the F/Y 2064/065.

With the helps of above result, it is revealed that SSU (Pvt.) Ltd. has nearly balance gross profit margin. Low result means high cost of production of the lower selling price and low volume of sales. The gross profit is positive during the study period. The situation of SSU (Pvt.) Ltd. is satisfactory.

The S.D. is 0.0177 and C.V. is 0.0026.

4.2.4.2 Net Profit Margin Ratio

Net Profit margin ratio builds a relationship between net profit and sales and it denotes management is efficiency is manufacturing administrating and selling cost of the products. This ratio is overall measure of the firms ability to turn each rupee of sales into net profit. It reveals the overall profitability of the enterprises. Net profit is obtained when operating expenses and income tax is subtracted from gross profit. A high ratio is the indication of the highest overall efficiency of the firm and better utilization of the total sources. A high profit margin is also an indication of the ability of the firm to sales its products. A low profit margin is an indication of poor performance. This is calculated by dividing net profit by sales. The relationship between net profit and sales of SSU (Pvt.) Ltd. during the study period are presented in the following table.

Table No.- 11

Net Profit Margin Ratio

Fiscal Year	NPAT (EAT)	Sales	Ratio (times)	Ratio (%)
2061/062	10035590	324057788	0.0310	3.10
2062/063	8512404	349768978	0.0243	2.43
2063/064	6410250	352084980	0.0182	1.82
2064/065	1535596	408863816	0.0038	0.38
2065/066	2521354	458067364	0.0055	0.55
Average			0.0166	1.66
S.D.			0.0105	1.05
C.V			0.0064	0.64

Sources : Appendix – 1

From the above table, we can clearly see that the net profit margin ratio of SSU (Pvt.) Ltd. are 3.10%, 2.43%, 1.82%, 0.38% and 0.55% for the year from 2061/062 to 2065/066 respectively. It is clear that the average net profit margin ratio is 1.66%, which is lower than the F/Y 2061/062, 2062/063 and 2063/064. In the F/Y 2064/065 and 2065/066, the ratios are lower than the average. The lowest ratio is 0.38% in the F/Y 2064/065 because NPAT is decreased in the year. The S.D. is 0.0105 and C.V. is 0.64%.

4.2.4.3 Operating Expenses Ratio

The operating expenses ratio shows the relationship between operating expenses and volume of sales. From the profitability point of view low ratio is favourable for the firm. Its ratio must be below 1. The relationship between operating expenses and volume of SSU (Pvt.) Ltd. during the study period are presented in the following table.

Table No.- 12

Operating Expenses Ratio

Fiscal Year	Operating Expenses	Sales Revenue	Ratio (times)	Ratio (%)
2061/062	305678270	324057788	0.9433	94.33
2062/063	332714994	349768978	0.9512	95.12
2063/064	337479864	352084980	0.9585	95.85
2064/065	398866245	408863816	0.9755	97.55
2065/066	446207504	458067364	0.9741	97.41
Average			0.9605	96.05
S.D.			0.0126	1.26
C.V			0.0132	1.32

Sources : Appendix – 1

Operating expenses is calculated by adding cost of goods sold and administrative and distribution expenses.

From the above table, we can clearly see that the average operating ratio is 96.05%. The lowest ratio is 94.33% found in the F/Y 2061/062. Similarly, F/Y 2064/065 show the highest of it with 97.55%. The ratio of SSU (Pvt.) Ltd. is lower than 1 in each year of the study period. It means the operating cost is below than the sales. It is satisfactory position of the firm.

The standard deviation is 0.0126 and C.V. is 1.32%, which indicates the low variation in operating ratio.

4.2.4.4 Return on Assets Ratio

The return on assets ratio is a useful measure of the profitability of all financial resources invested in the company's assets. This type of ratio is calculated in term of the relationship between net profit and assets. Net profit means net profit after tax. If the firm is not suing its assets efficiency it is not able to earn a reasonable return on its assets so high ratio is favourable and low ratio is unfavourable. The following table shows relationship between EAT and Total assets.

Table No.- 13

Return on Assets Ratio

Fiscal Year	NPAT (EAT)	Total Assets	Ratio (%)
2061/062	10035590	165345985	6.07
2062/063	8512404	204016012	4.17
2063/064	6410250	214384551	3
2064/065	1535596	254034236	0.60
2065/066	2521354	229890744	1.10
Average			2.99
S.D.			2
C.V			0.67

Sources : Appendix – 1 & 2

The return on assets for the fiscal year of 2061/062, 2062/063, 2063/064, 2064/065 and 2065/066 are 6.07%, 4.17%, 3%, 0.60% and 1.10% respectively.

The average return on assets ratio is 2.99%. As based on it only the F/Y 2061/062, 2062/063 and 2063/064 shows better performance. Other F/Y shows return on assets ratio, below the average F/Y 2061/062 shows the best performance and 2064/065 shows the worst position.

The S.D. is 2% which shows these ratios are not moving far from average during the study period. The C.V. is 67%.

4.2.4.5 Basic Earning Power Ratio

Profit generating power of the total assets invested in a firm effectiveness of the firm in generating operating profit with its total available assets reveals the earning power of the firm is calculated as EBIT (operating income) divided by the total assets presented below in the table.

Table No.- 14

Basic Earning Power Ratio

Fiscal Year	EBIT	Total Assets	Ratio (%)
2061/062	13688489	165345985	8.28
2062/063	11773189	204016012	5.77
2063/064	9449236	214384551	4.41
2064/065	5259716	254034236	2.07
2065/066	6401872	229890744	2.78
Average			4.66
S.D.			2.22
C.V			48

Sources : Appendix – 1 & 2

From the above table, we can clearly see that the EBIT to TA ratio of SSU (Pvt.) Ltd. are 8.28%, 5.77%, 4.41%, 2.07% and 2.78% in the F/Y 2061/062 to 2065/066 respectively. The average ratio is 4.66%. It shows that there is difference between the highest ratio and lowest ratio. The highest ratio was found to be 8.28% in the F/Y 2061/062 and the lowest ratio was 2.07% in the F/Y 2064/065. The S.D. is 2.22 and C.V. is 48%.

4.2.4.6 Return on Shareholders Equity Ratio (Net Profit to Net Worth)

The shareholders equity will include common share capital, share premium and reserve surplus less accumulated losses. It is also known as net worth, therefore it can be said that there is relationship between the net profit and net worth as well as shareholders fund. This ratio indicates how well the firm has uses the resources of the owners. This can be calculated by dividing net profit by net worth.

Table No.- 15

Return on Shareholders Equity Ratio

Fiscal Year	EAT (NPAT)	Total Assets	Ratio (%)
2061/062	10035590	86181967	11.64
2062/063	8512404	90502882	9.41
2063/064	6410250	76016848	8.43
2064/065	1535596	77372144	1.98
2065/066	2521354	99214149	2.54
Average			6.8
S.D.			3.85
C.V			57

Sources : Appendix – 1 & 2

From the above table, we can clearly see that the EAT to net worth ratio of SSU (Pvt.) Ltd. are 11.64, 9.41%, 8.43%, 1.98% and 2.54% in the F/Y 2061/062 to 2065/066 respectively. Their average is 6.8%. Looking at the table, we can say that the F/Y 2061/062 was the best and 2064/065, the worst. F/Y 2061/062, 2062/063 and 2063/064 performance was above average and others are lower than the average. This company needs to perform better in the future.

The standard deviation is 3.85 and co-efficient of variation of the ratio is 57%.

4.3 Break – Even Analysis or Break – Even Point

The break – even analysis is also known as cost volume – profit analysis. The break – even analysis is concerned with the study of revenues and costs in relation to sales volume and particularly, the determination of that volume of sales at which the firm's total revenues are exactly equal to total costs, yielding zero income. The "no profit, no loss" point is a BEP or at which losses cease and profit begin.

Business organizations are run to earn profit. Profit planning is the fundamental part of the overall management function. Profit planning can be done only when the management has the information about the cost of the product, both fixed and variable cost and the selling price of the product. But what are fixed and variable costs ? Fixed costs are those costs that do not increase with the increase in output where as variable costs are those costs that increase with the increase in output. Fixed costs are a function of time, not sales and are typically contractual; variable costs are vary directly with sales and are a function of volume, not time. Operating BEP will increase as a result of an increase in either fixed or variable operating costs or a decrease in sales volume.

Here the calculation of BEP if SSU (Pvt.) Ltd. all the volume of cost of goods sold in total is considered to be 100% variable costs with respect to total fixed cost, includes expenses such as distribution expenses, administrative expenses depreciation expenses and interest expenses. Since the data which is concern is of secondary one, i.e. the income statement of SSU (Pvt.) Ltd., taken from annual reports do not provide the clear volume of sales unit, per unit variable cost so it is difficult to calculate, the BEP in units. And also the sales unit of SSU (Pvt.) Ltd. is not of single product it has multi product. Thus, for the calculation of BEP in Rs. is concerned. The different volume

of sales variable cost and fixed cost of SSU (Pvt.) Ltd. for the study period is shown in the following table.

Table No.- 16

Comparative Table showing sales, variable cost, contribution margin and fixed cost

Year	2061/062	2062/063	2063/064	2064/065	2065/066
Sales	324057788	349768978	352084980	408863816	458067364
Less : Variable cost	294543935	320028325	330936037	391302265	430436318
Contribution Margin	29513853	29740663	21148943	17561551	27631046
Fixed Cost	15858929	17578105	11698920	14925682	23061843

Sources : Appendix – 1

Where, Fixed cost = Adm. & dist^{n}. exp^{n} + Dep^{n} + Interest

Calculation of Profit Volume Ratio (P/V Ratio)

$$\text{P/V Ratio} = \frac{Contribution\ M\arg in}{Sales}$$

$$\text{or,} \quad = \frac{Sales - Variable\ Cost}{Sales}$$

$$= 1 - \frac{Variable\ Cost}{Sales}$$

Variable cost ratio and break – even point can also be ascertained from P/V ratio with the following formula

1) Variable Cost Ratio = 1 – P/V ratio

2) Break Even Point in Rs. = $\frac{Fixed\ Cost}{P/V\ Ratio}$

Calculation of P/V ratio for the study period

Where,

$$\text{P/V ratio} = \frac{Contribution\ M\arg in}{Sales}$$

Table No.- 17

Showing P/V Ratio

Fiscal Year	P/V Ratio
2061/062	0.0911
2062/063	0.0850
2063/064	0.0600
2064/065	0.0430
2065/066	0.0603

Sources : Appendix – 1

Now, after calculation of P/V ratio for the study period, from F/Y 2061/062 to 2065/066, it is time to calculate the break – even point. Since, for every study period, the volume of sales is different in increasing trend and also if we analyze the debt position it differs in every study period. So, we have to calculate the different point for the study period. In debt financing, the creditors must be paid the fixed interest charges, which is fixed in nature. But in contrary if there is no debt and all the investment is done by equity financing, or owners' fund then there is no obligation of interest payment. The BEP of SSU (Pvt.) Ltd. for the study period considering the interest charges is calculated in following table.

Table No.- 18

Comparative Table showing fixed cost, P/V Ratio,

Break – even point and Actual sales

Fiscal Year	Fixed Cost (Rs.)	P/V Ratio	Break Even Point (Rs.)	Actual Sales(Rs.)
2061/062	15858929	0.0911	174082645	324057788
2062/063	17578105	0.0850	206801235	349768978
2063/064	11698920	0.060	194982000	352084980
2064/065	14925682	0.0430	347108884	408863816
2065/066	23061843	0.0603	382451791	458067364
Average	16624696	0.06788	261085311	378568585

Sources : Appendix – 1

From the above table, we can clearly see that the firms present level sales are high than that the firm's present level break even point. Therefore, it is clear that the firm's is able to earn profitability. generally, the volume of sales of any firm should be far beyond the break even level to run the firm profitability.

4.4 Leverage Analysis

This topic, basically intends to measure the associated risk and level of return of the company, the risk of leverage, i.e. operating and financial. The operating leverage measures the operating risk, while financial leverage measures the financial risk of a business. Leverage and capital structure are closely related concepts links to cost of capital and therefore capital budgeting decision. Generally increase in leverage results in increase return and risk, where as decreases in leverage result in decreased return and risk.

Types of Leverage

1) **Operating Leverage :** Operating leverage is the (potential) use of fixed operating cost by firm in a hope to magnify the effect of changes in sales on EBIT.

2) **Financial Leverage :** Financial leverage is the (potential / actual) use of fixed financing cost by a firm in a hope to magnify the effect to common shareholders.

3) **Total Leverage (Combined Leverage) :** Total leverage is the use of both fixed operating and fixed financing cost by a firm.

Measurement of Leverage

1) Degree of Operating Leverage (DOL)

DOL is the function of level of activity (opening sales volume) and amount of fixed cost. It is the numerical measure of the firms operating leverage. It is simply the percentage changes in EBIT resulting from 1% change in output or volume of sales.

Mathematically,

$$\text{DOL} = \frac{Percentage\ chage\ in\ EBIT}{Percentage\ chage\ in\ Sales}$$

DOL measures the size of business risk, inherent, DOL of SSU (Pvt.) Ltd. during the study period is calculated in the following table.

Table No.- 19

Calculation of DOL

Fiscal Year	EBIT	Δ EBIT	% change in EBIT	Sales	Δ Sales	% change in Sales	DOL
2061/062	13688489	-	-	324057788	-	-	-
2062/063	11773189	(1915300)	(13.99)	349768978	25711190	7.93	(1.76)
2063/064	9449236	(2323953)	(19.74)	352084980	2316002	0.66	(29.91)
2064/065	5259716	(4189520)	(44.34)	408863816	56778836	16.13	(2.75)
2065/066	6401872	1142156	21.72	458067364	49203548	12.03	1.81

Sources : Appendix – 1

From the above table, we can clearly see that the percentage change in EBIT is negative in F/Y 2062/063 to 2064/065. In F/Y 2065/066 percentage change in EBIT is greater than percentage change in sales and also it is positive. Thus, the above table reveals that the SSU (Pvt.) Ltd. had not maintained the operating leverage.

2) Degree of Financial Leverage (DFL)

DFL intends to measure the degree of risk related to the financial activities of the firm. In the other words, financial leverage results from the presence of fixed financial charge in the firm's income stream. These financial charges do not vary with EBIT and they have to be paid regardless of the amount of EBIT available to pay them.

DFL is the numerical measure of the financial leverage present in a firm. It is simply the percentage charge in firm's EPS or earning available to common stock holder resulting from 1 percentage change in EBIT.

Mathematically,

$$\text{DFL} = \frac{Percentage\ chage\ in\ EPS}{Percentage\ chage\ in\ EBIT}$$

DFL measures the financial risk, inherent in the firm.

After the calculation of earning after tax (EAT) EPS should be calculated.

Mathematically,

$$\text{EPS} = \frac{EAT}{Total\ \ No.of\ \ Share} \times 100$$

Table No.- 20

Calculation of EPS

F/Y / Particulars	2061/062	2062/063	2063/064	2064/065	2065/066
EAT	10035590	8512404	6410250	1535596	2521354
No.of Share	400000	400000	400000	400000	600000
Earning Per Share (EPS)	25.09	21.28	16.02	3.84	4.2

Sources : Appendix – 1 & 2

DFL of SSU (Pvt.) Ltd. during the study period is calculated as follows :

Table No.- 21

Calculation of DFL

Fiscal Year	EPS	Δ EPS	% change in EPS	EBIT	Δ EBIT	% change in EBIT	DFL
2061/062	25.09	-	-	13688489	-	-	-
2062/063	21.28	(3.81)	(15.19)	11773189	(1915300)	(13.99)	(1.09)
2063/064	16.02	(5.26)	(24.72)	9449236	(2323953)	(19.74)	(1.25)
2064/065	3.84	(12.18)	(76.03)	5259716	(4189520)	(44.34)	(1.71)
2065/066	4.2	0.36	9.38	6401872	1142156	21.72	0.4319

Sources : Appendix – 1 & 2

From the above table, we can clearly see that there is existence of DFL of SSU (Pvt.) Ltd. for the F/Y 2065/066. The percentage change in EBIT is greater than the percentage change in EPS in the F/Y 2065/066. If we analyze the DFL for the study period 2062/063 to 2064/065, the DFL is greater than 1, there is financial leverage. But in the F/Y 2065/066, the DFL of SSU (Pvt.) Ltd. shows 0.4319

3) Degree of Total Leverage (DTL)

DTL is the numerical measure of the firm's total leverage. It can be obtained in a fashion similar to that to measure operating and financial leverage of the sensitivity of firms EPS with respect to the sales.

Mathematically,

$$DTL = \frac{Percentage\ chage\ in\ EPS}{Percentage\ chage\ in\ Sales}$$

The degree of total leverage of SSU (Pvt.) Ltd. for the study period is calculated in the following table.

Table No.- 22

Calculation of DTL

Fiscal Year	EPS	Δ EPS	% change in EPS	Sales	Δ Sales	% change in Sales	DTL
2061/062	25.09	-	-	324057788	-	-	-
2062/063	21.28	(3.81)	(15.19)	349768978	25711190	7.93	(1.9155)
2063/064	16.02	(5.26)	(24.72)	352084980	2316002	0.66	(37.45)
2064/065	3.84	(12.18)	(76.03)	408863816	56778836	16.13	(4.71)
2065/066	4.2	0.36	9.38	458067364	49203548	12.03	0.7797

Sources : Appendix – 1 & 2

From the above table, we can clearly see that there is existence of DFL of SSU (Pvt.) Ltd. has not been able to maintain the degree of total leverage in the F/Y 2062/063 to 2065/066 because it comes in negative. In F/Y 2065/066, the DTL is less than 1 because % change in EPS in 2065/066 is les than percentage change in sales.

4.5 EBIT - EPS Analysis

The analysis of EBIT – EPS is one of the most important and widely used financial tools for financial performance. This analysis is considered to answer the following

- What will happen to EPS with various alternative levels of EBIT?
- What will happen to EPS if additional capital is employed ?

For this purpose the management of SSU (Pvt.) Ltd. has planned to raise Rs.50 million for expansion and smooth running of business raising additional capital of Rs.50 million through different financing plans for SSU (Pvt.) Ltd. are shown in the following table.

Table No.- 23

No. of Shares outstanding for alternative plans

Financing Plans	Amount of debt (Rs.)	Amount of equity Rs.100 share	No of Share outstanding
Plan 1	0 (0%)	50000000 (100%)	600000+500000 = 1100000
Plan 2	12500000 (25%)	37500000 (75%)	600000+375000 = 975000
Plan 3	25000000 (50%)	25000000 (50%)	600000+250000 = 850000
Plan 4	37500000 (75%)	12500000 (25%)	600000+125000 = 725000
Plan 5	50000000 (100%)	0 (0%)	600000+0 = 600000

Sources : Appendix – 2

Current interest expenses (taken from most recent F/Y 2065/066 at income statement) is Rs.3250118

Expected cost of the loan =

$$\frac{Average\ Interest\ paid\ from\ F/Y\ 2061/062\ to\ 2065/066}{Average\ Total\ Long-term\ loan\ from\ F/Y\ 2061/062\ to\ 2065/066}$$

$$= \frac{1934226}{64001358}$$

$$= 3.02\%$$

Average sales for the study period = $\frac{Total\ sales\ for\ the\ study\ period}{No.of\ study\ period}$

$$= \frac{1892842926}{5}$$

$$= 378568585$$

Calculation of relationship between EBIT and Sales =

$$\frac{Average\ EBIT\ of\ the\ study\ period}{Average\ Sales\ of\ the\ study\ period}$$

$$= \frac{9314500}{378568585}$$

$$= 2.46\%$$

Applicable marginal tax rate (f) = 20% (taken from F/Y 2065/066 income statement)

Expected EBIT for average level of sales

= 2.46% of Rs.378568585

= Rs.9312787.19

Table No.- 24

Calculation of EPS

Financial Plan / Particulars	1 Debt = 0% Equity = 100%	2 Debt = 0% Equity = 100%	3 Debt = 0% Equity = 100%	4 Debt = 0% Equity = 100%	5 Debt = 0% Equity = 100%
Expected EBIT	9312787.19	9312787.19	9312787.19	9312787.19	9312787.19
Less: Interest expenses	3250118	3250118	3250118	3250118	3250118
additional loan @3.02%	-	377500	755000	1132500	1510000
Taxable Income (EBT)	6062669.19	5985169.19	5307669.19	4930169.19	4552669.19
Less : Tax 20%	1212533.84	1137033.84	1061533.84	986033.84	910533.84
Earning after tax (EAT)	4850135.35	4548135.35	4246135.35	3944132.35	3642135.35
No. of Share	1100000	975000	850000	725000	600000
Earning per share (EPS)	4.41	4.66	5.00	5.44	6.07

Sources : Appendix – 1 & 2

Table No.- 25

Calculation of EPS for Indifference Level of EBIT

Financial Plan / Particulars	1 Debt = 0% Equity = 100%	2 Debt = 0% Equity = 100%	3 Debt = 0% Equity = 100%	4 Debt = 0% Equity = 100%	5 Debt = 0% Equity = 100%
Expected EBIT	9312787.19	9312787.19	9312787.19	9312787.19	9312787.19
Less: Interest expenses	3250118	3250118	3250118	3250118	3250118
additional loan @3.02%	-	377500	755000	1132500	1510000
EBT	3322000	2944500	2567000	2189500	1812000
Less : Tax @ 20%	664400	588900	513400	437900	362400
Earning after tax (EAT)	2657600	2355600	2053600	1751600	1449600
No. of Share	1100000	975000	850000	725000	600000
Earning per share (EPS)	2.42	2.42	2.42	2.42	2.42

Sources : Appendix – 1 & 2

Now, taking EBIT slightly above than indifferent level of EBIT, where expected EBIT assumed to be Rs.6600000, which is higher than indifference level.

Table No.- 26

Calculation of EPS for EBIT higher than indifference level

Financial Plan / Particulars	1 Debt = 0% Equity = 100%	2 Debt = 0% Equity = 100%	3 Debt = 0% Equity = 100%	4 Debt = 0% Equity = 100%	5 Debt = 0% Equity = 100%
Expected EBIT	9312787.19	9312787.19	9312787.19	9312787.19	9312787.19
Less: Interest expenses	3250118	3250118	3250118	3250118	3250118
additional loan @3.02%	-	377500	755000	1132500	1510000
EBT	3349882	2972382	2594882	2217382	1839882
Less : Tax @ 20%	669976	594476	518976	443476	367976
Earning after tax (EAT)	2679906	2377906	2075906	1773906	1471906
No. of Share	1100000	975000	850000	725000	600000
Earning per share (EPS)	2.44	2.44	2.44	2.45	2.45

Sources : Appendix – 1 & 2

From the above table, we can clearly see that the different EPS at three different level of EBIT are, i.e. first expected EBIT for average level of EBIT, second expected EBIT for indifferent level of EBIT and third expected EBIT higher than indifference level. It is clear (obvious) from the above table that when EBIT increase, EPS also increases under all financing plans. Plan 1 does not employ additional leverage, i.e. this plan is made through common equity only respectively other succeeding financial plans have increased debt by 25% for additional proposal of rising Rs. 50 million.

In the above table, while analyzing the EPS with respect to average level of EBIT, table No. 24 shows that the EPS has been increases from as 4.41 to 6.07 (from Plan 1 to Plan 5) at the same

amount of EBIT, i.e. Rs.9312787.19. Since alternative methods of financing have different impacts on earning per share, this insights in comparing between two financing alternatives, like debt vs common stock financing, with the existing and expected level of EBIT. Here, the higher expected EBIT for average level of EBIT in relation to the indifference level of EBIT.

In the above table No. 25 i.e. expected EBIT for indifference level of EBIT, the result of EPS are consistent for different financing alternatives. Plan 1 has the EPS of as 2.42 and this amount of EPS has also been able to maintain in every succeeding plans. Since, EPS are being consistent in every financing alternative, it is not better for SSU (Pvt.) Ltd. because EPS are less that of EPS for average level of EBIT.

The effect of leverage can be early viewed of through EPS when EBIT is slightly above the indifference level. When expected EBIT will be higher than indifference level, the EPS increased as the proportion of debt is increased. It is so because, when the existing expected EBIT is higher than the indifference level of EBIT the result of EPS would be higher at those financing plans which contain high volume of debt financing all other things being the same.

Return Risk Trade Off Analysis

EBIT – EPS, break – even analysis gives as insight into the return risk trade – off that governs valuation. The return – risk trade off can be analyzed by calculating the overall expected EPS, its standard deviation and co-efficient of variation for different financing alternatives.

Table No.- 27

Calculation of expected EPS, S.D. and C.V. for alternative plans

Expected EBIT	1 0% Debt	2 25% Debt	3 50% Debt	4 75% Debt	5 100% Debt
EBIT Rs.9312787.19	4.41	4.66	5.00	5.44	6.07
EBIT Rs.6572118	2.42	2.42	2.42	2.42	2.42
EBIT Rs.6600000	2.44	2.44	2.44	2.45	2.45
Average EPS	3.09	3.17	3.29	3.44	3.65
Std. Deviation of EPS	0.93	1.05	1.21	1.42	1.71
Coefficient of Variation of EPS	0.3	0.33	0.37	0.41	0.47

Sources : Appendix – 1 & 2

From the above table, we can clearly see that the value of overall expected EPS, S.D. of EPS and C.V. of EPS for three different level of EBIT and for different financial plan. The plan 5 has the expected EPS of Rs.3.65, which is the highest value of EPS among the different financing plans. It is because the value of expected EBIT i.e. Rs.9312787.19 is highest than the indifferent level. This leads in enhancing the value of EPS to be higher at that plan which contain maximum amount of debt financing. The above table show the value of expected EPS has been increasing in every succeeding financing plan. The lowest value of expected EPS, Rs.3.09 is in plan 1 and highest value of expected EPS, Rs.3.65 in plan 5.

At the same time, the S.D. of EPS and C.V. of EPS also has been increasing trend in every succeeding financing plan. The above table shows the S.D. of 1.71 and C.V. of 0.47 at financing plan 5.

Indifference Point for EBIT – EPS Analysis

An indifferent point for EBIT – EPS analysis is to find out that level of EBIT at which all the financial alternatives generates the same or equal amount of EPS. To find the indifference level is most necessary because the firm couldn’t be able to know

whether its EBIT position is below or above the indifference level. Since as we have been earlier that the decision of using leverage are totally based on the status of EBIT that the firm produce and this status of EBIT also depends on the level of indifference point. If the existing expected EBIT is higher than the indifference point, it is better to have debt financing.

But at that point where the existing expected EBIT and indifference level are equal, then the company may choose any of the financing alternatives. Thus and indifference point is that level of EBIT at which the difference financing plans generate equal amount of EPS.

The following equation is employed to compute the indifference points between the financing plans.

$$= \frac{(EBIT - INT_A)(1 - T)}{NA} \qquad = \frac{(EBIT - INT_B)(1 - T)}{NB}$$

$$= \frac{(EBIT - INT_A)}{NA} \qquad = \frac{(EBIT - INT_B)}{NB}$$

$$= NA\ (EBIT - INT_B) \qquad = NA\ (EBIT - INT_A)$$

$$= EBIT\ (NA - N_B) \qquad = NA\ INT_B - NB\ INT_A$$

$$= EBIT \qquad = \frac{NA\ INT_B - NB\ INT_A}{NA - NB}$$

Where,

EBIT = level of earning before interest and tax at indifference points.

EPS = earning per share at indifference point

INT_A = amount of interest expenses at plan A

NA = no. of share outstanding of plan A

INT_B = amount of interest expenses at plan B

NB = no. of share outstanding of plan B

T = corporate income tax rate.

Similarly, the following equation is employed to compute EPS at indifference level.

$$\text{EPS} = \frac{(EBIT - INT_1)(1 - T)}{N_1}$$

Where,

INT_1 = amount of interest at Plan 1

N_1 = No. of share outstanding at Plan 1

1. Calculation of indifference level for Plan 1

$$\text{EBIT} = \frac{NA\ INT_B - NB\ INT_A}{NA - NB}$$

$$= \frac{(1100000 \times 3627618) - (975000 \times 3250118)}{1100000 - 975000}$$

$$= 6572118$$

Where,

INT_B = Amount of Debt X Expected cost of loan

= 12500000 X 3250118

= 3627618

$$\text{And, EPS} = \frac{(EBIT - INT_1)(1 - T)}{N_1}$$

$$= \frac{(6572118 - 3250118)(1 - 0.2)}{1100000}$$

= 2.416 or 2.42

2. Calculation of indifference level for Plan 1 and Plan 3

$$\text{EBIT} = \frac{NA\ INT_C - NB\ INT_A}{NA - NC}$$

$$= \frac{(1100000 \times 4005118) - (850000 \times 3250118)}{1100000 - 850000}$$

$$= 6572118$$

$$\text{And, EPS} = \frac{(EBIT - INT_1)(1 - T)}{N_1}$$

$$= \frac{(6572118 - 3250118)(1 - 0.2)}{1100000}$$

$$= 2.42$$

3. Calculation of indifference level for Plan 1 and Plan 4

$$\text{EBIT} = \frac{NA\ INT_D - NB\ INT_A}{NA - ND}$$

$$= \frac{(1100000 \times 4382618) - (725000 \times 3250118)}{1100000 - 725000}$$

$$= 6572118$$

$$\text{And, EPS} = \frac{(EBIT - INT_1)(1 - T)}{N_1}$$

$$= \frac{(6572118 - 3250118)(1 - 0.2)}{1100000}$$

$$= 2.42$$

4. Calculation of indifference level for Plan 1 and Plan 5

$$\text{EBIT} = \frac{NA\ INT_E - NB\ INT_A}{NA - NE}$$

$$= \frac{(1100000 \times 4760118) - (600000 \times 3250118)}{1100000 - 600000}$$

$$= 6572118$$

$$\text{And, EPS} = \frac{(EBIT - INT_1)(1 - T)}{N_1}$$

$$= \frac{(6572118 - 3250118)(1 - 0.2)}{1100000}$$

$$= 2.42$$

From the above table, we can clearly see that the indifference level of EBIT and EPS at indifference point for various combination of plan. The indifference equal volume of EBIT and the same time the EPS at indifference level is also the same. The uniformity in indifference level was ensure because of the same interest rate for all level of increment debt financing and issue price per share is the same and also consider the rate of other charges to be some. Here the calculation of indifference level of EBIT highlights to note the management of company Whether SSU (Pvt.) Ltd. is able to achieve this level of EBIT ? Yes, perhaps the volumes of EBIT during the study period are high than the indifference level of EBIT. Thus the researcher concludes that for any additional investment for expansion proposal it is better to prefer through debt financing not the common stock financing.

4.6 Correlation Analysis

Among the carious statistical methods, correlation is a useful tool in determining the degree of relationship between two variables. This analysis describes not only the magnitude of relationship but also its direction. The relationship between these variables helps to determine the optimality and the ways for what changes should be brought on, one in order to achieve the excepted changes in another. Correlation analysis has been adopted as one of the important statistical tool to compute the analysis of the financial performance of SSU (Pvt.) Ltd.

The correlation between some of the variables are analyzed and interpreted here, they are :

4.6.1 Correlation Analysis of Total Long – term Debt and Net Worth

Long – term debt and net worth are two major components of capital structure of a firm. In case of pursuing the optimum capital structure model consisting the owner's fund and debt fund in its capital mix, it is expected to have perfect correlation between owner's equity and long – term debt. That is for an increase in Ltd. in capital mix. There should be an increase in NW (shareholder's equity). Correlation co-efficient between Ltd. and NW are computed as follows :

Table No.- 28

Calculation of Correlation of Ltd. and NW

(000000 omitted)

F/Y	Ltd. (x)	Net Worth (y)	x^2	y^2	xy
2061/062	46.987958	86.181967	2207.8682	7427.3314	4049.5146
2062/063	47.965958	90.502882	2300.7331	8190.7717	4341.0574
2063/064	69.528958	76.016848	4834.2760	5778.5612	5285.3722
2064/065	90.491958	77.372144	8188.7945	5986.4487	7001.5568
2065/066	65.031958	99.214149	4229.1556	9843.4474	6452.0904
Total	Σx =320.0068	Σy =429.2880	Σx^2 =21760.8274	Σy^2 =37226.5604	Σxy =27129.5914

Sources : Appendix – 2

Now, the Karl Person's co-efficient of correlation (r) is given by :

$$r = \frac{N\Sigma xy - \Sigma x \Sigma y}{\sqrt{\left[N\Sigma x^2 - (\Sigma x)^2\right]\left[N\Sigma y^2 - (\Sigma y)^2\right]}}$$

$$= \frac{5 \times 27129.5914 - 320.0068 \times 429.2880}{\sqrt{\left[5 \times 21760.8274 - (320.0068)^2\right]\left[5 \times 37226.5604 - (429.2880)^2\right]}}$$

$$= \frac{-1727.1222}{6399.7850 \times 1844.6150}$$

$$= \frac{-1727.1222}{3435.8608}$$

$$= -0.5027$$

Computation of Probable Error (PE)

$$PE = \frac{0.6745\left(1 - r^2\right)}{\sqrt{N}}$$

$$= \frac{0.6745\left[1 - \left(-0.5027\right)^2\right]}{\sqrt{5}}$$

$$= \frac{0.5040}{\sqrt{5}}$$

$$= \frac{0.5040}{2.2361}$$

$$= 0.2254$$

Now ¢ PE = 6 x 0.2254 = 1.3527

Summary of computation

r = - 0.5027

PE = 1.3524

$|r| > PE$

$|r| < ¢\ PE$

Calculation of co – efficient of determination

R = r^2 = $(-0.5027)^2$ = 0.2527 or 25.27%

Interpretation

Correlation co-efficient between Ltd. and NQ of SSU (Pvt.) Ltd., r = - 0.5027, which shows that there is high degree of negative correlation between the variables. This shows that the two variables are not increasing or decreasing to the same direction. Since the correlation co-efficient 'r' is not greater than six times of PE co-efficient of correlation is not practically certain. The value of 'r' is not significant.

Since there is negative correlation in between LTD and NW. It indicates that if one variable is increasing than other variable is decreasing i.e. They are not same direction.

4.6.2 Correlation Analysis of Total Long – Term Debt and Total Capital employed

The relationship between long – term debt and capital employed is measured and tested by Karl Pearson's co-efficient of correlation. Correlation between Ltd. and CE helps to determine whether the company's capital structure is optimum. If the company has the policy of attempting to keep the capital structure optimum : the coefficient of correlation should be the perfect positive correlation between debt and capital employed. For an increase in their should be proportional increase in Ltd. if their exist optimum capital structure. But the perfect positive correlation does not refer to the optimum capital structure in all cases : it simply indicates that the company is following a policy of maintaining constant ratio of debt to total capital through the capital structure is not optimum. The Karl Pearson's correlation co-efficient between debt and total capital are computed below :

Table No.- 29

Calculation of Correlation of Ltd. and CE

(000000 omitted)

F/Y	Ltd. (x)	CE (y)	x^2	y^2	xy
2061/062	46.987958	133.169925	2207.8682	17734.2289	6257.3828
2062/063	47.965958	138.468840	2300.7331	19173.6197	6641.7906
2063/064	69.528958	145.545806	4834.2760	21183.5816	10119.6482
2064/065	90.491958	167.864102	8188.7945	28178.3567	15190.35127
2065/066	65.031958	164.246107	4229.1556	26976.7837	10681.2459
Total	Σx =320.0068	Σy =749.29478	Σx^2 =21760.8274	Σy^2 =113246.5706	Σxy =48890.41877

Sources : Appendix – 1 & 2

Where,

Capital employed = Net Worth + Total and Long term debt

Now, the Karl Person's co-efficient of correlation (r) between LTD and CE is given by :

$$r = \frac{N\Sigma xy - \Sigma x \Sigma y}{\sqrt{\left[N\Sigma x^2 - (\Sigma x)^2\right]\left[N\Sigma y^2 - (\Sigma y)^2\right]}}$$

$$= \frac{5 \times 48890.41877 - 320.0068 \times 749.29478}{\sqrt{\left[5 \times 21760.8274 - (320.0068)^2\right]\left[5 \times 113246.5706 - (749.29478)^2\right]}}$$

$$= \frac{244452.0939 - 237997.4248}{\sqrt{6399.7850 \times 4790.1857}}$$

$$= \frac{4672.6691}{\sqrt{30656158.59}}$$

$$= \frac{4372.6691}{5536.8004}$$

$$= 0.8439$$

Computation of Probable Error (PE)

$$PE = \frac{0.6745\left(1 - r^2\right)}{\sqrt{N}}$$

$$= \frac{0.6745\left[1 - (0.8439)^2\right]}{\sqrt{5}}$$

$$= \frac{0.6745 \times 0.2878}{2.24}$$

$$= \frac{0.1941}{2.24}$$

$$= 0.2254$$

Now 6PE = 6 x 0.0867 = 0.5202

Summary of computation

r = 0.8439

PE = 0.0867

$|r| > PE$

$|r| < 6PE$

Calculation of co – efficient of determination

R = r^2 = $(0.8439)^2$ = 0.7122 or 71.22%

Interpretation

Correlation co-efficient between Ltd. and CE of SSU (Pvt.) Ltd., r = - 0.8439, which shows the nearly perfect positive correlation between the variables. the coefficient of determination, r^2 (R) which is 0.7122 means that 71.22% of the variance in the dependent variable (CE) has been explained by the independent variable (LTD) and the remaining percent of the variation is due to the other factors.

4.6.3 Correlation Analysis of Total Assets and Sales

Sales and Total Assets of a company should have high significant positive correlation. Negative correlation between assets and sales indicate poor assets management and inefficient operation. Correlation coefficient between total assets and sales are computed as follows for SSU (Pvt.) Ltd. during the study period.

Table No.- 30

Calculation of Correlation of Total Assets and Sales

(000000 omitted)

F/Y	Total Assets (x)	Sales(y)	x^2	y^2	xy
2061/062	165.345985	324.057788	27339.2948	105013.45	53581.6542
2062/063	204.016012	349.768978	41622.5332	122338.338	71358.4720
2063/064	214.384551	352.084980	45960.7357	123963.8331	75481.5804
2064/065	254.034226	408.863816	64533.3880	167169.62	103865.403
2065/066	229.890744	458.067364	52849.7542	209825.71	105305.4471
Total	Σx =1067.6715	Σy =1892.8429	Σx^2 =232305.7059	Σy^2 =728310.9511	Σxy =409592.5567

Sources : Appendix – 1 & 2

Now, the Karl Person's co-efficient of correlation (r) between Total Assets and Sales is given by :

$$r = \frac{N\Sigma xy - \Sigma x \Sigma y}{\sqrt{\left[N\Sigma x^2 - (\Sigma x)^2\right]\left[N\Sigma y^2 - (\Sigma y)^2\right]}}$$

$$= \frac{5 \times 409592.5567 - 1067.6715 \times 1892.8429}{\sqrt{\left[5 \times 232305.7059 - (1067.6715)^2\right]\left[5 \times 728310.9511 - (1892.8429)^2\right]}}$$

$$= \frac{2047962.784 - 2020934.418}{\sqrt{21606.0976 \times 58700.5114}}$$

$$= \frac{27028.366}{\sqrt{1268288978}}$$

$$= \frac{27028.366}{35613.0451}$$

$$= 0.7589$$

Computation of Probable Error (PE)

$$PE = \frac{0.6745\left(1 - r^2\right)}{\sqrt{N}}$$

$$= \frac{0.6745\left[1 - (0.7589)^2\right]}{\sqrt{5}}$$

$$= \frac{0.6745 \times 0.42407}{2.24}$$

$$= 0.1277$$

Now 6PE = 6 x 0.1277 = 0.7662

Summary of computation

r = 0.7589

PE = 0.1277

$|r| > PE$

$|r| < 6PE$

Calculation of co – efficient of determination

R = r^2 = $(0.7589)^2$ = 0.5759 or 57.59%

Interpretation

Correlation co-efficient between Ltd. and CE of SSU (Pvt.) Ltd., r = 0.7589, which is moderate degree positive correlation. It indicates that total assets and sales are highly interrelated an increase in total assets will certainly increase in volume of sales. And the proportionate of increment / decrement in total assets will result some to the sales.

The calculated value of r^2 i.e. co-efficient of determination which is 0.5759 shows that 57.59% of the variation in the dependent variable (sales) has been explained by the independent variable (assets) and the remaining percent of the variation is due to the other factors.

4.6.4 Correlation Analysis of Sales and EBIT

The relation between sales and EBIT should have high positive in relation. The increase in sales should expect to increase in EBIT or vice-versa. Thus the coefficient of correlation of these variables should result positive and here the researcher attempts to know whether there exists such correlation or not.

Table No.- 31

Calculation of Correlation of Sales and EBIT

(000000 omitted)

F/Y	Sales (x)	EBIT (y)	x^2	y^2	xy
2061/062	165.345985	13.688489	105013.45	187.3747	4435.8615
2062/063	204.016012	11.773189	122338.338	138.6080	4117.8963
2063/064	214.384551	9.449236	123963.8331	89.2881	3326.9341
2064/065	254.034226	5.259716	167169.62	27.6646	2150.5076
2065/066	229.890744	6.401872	209825.71	40.9840	2932.4886
Total	Σx =1067.6715	Σy =46.5725	Σx^2 =728310.9511	Σy^2 =483.9194	Σxy =16963.6881

Sources : Appendix – 1 & 2

Now, the Karl Person's co-efficient of correlation (r) between Sales and EBIT is given by :

$$r = \frac{N\Sigma xy - \Sigma x \Sigma y}{\sqrt{\left[N\Sigma x^2 - (\Sigma x)^2\right]\left[N\Sigma y^2 - (\Sigma y)^2\right]}}$$

$$= \frac{5 \times 16963.6881 - 1892.8429 \times 46.5725}{\sqrt{\left[5 \times 728310.9521 - (1892.8429)^2\right]\left[5 \times 483.9194 - (46.5725)^2\right]}}$$

$$= \frac{84818.4405 - 88154.4260}{\sqrt{58700.5114 \times 250.5992}}$$

$$= \frac{-3335.9855}{3835.4010}$$

$$= 0.8698$$

Computation of Probable Error (PE)

$$PE = \frac{0.6745\left(1 - r^2\right)}{\sqrt{N}}$$

$$= \frac{0.6745\left[1 - (0.8698)^2\right]}{\sqrt{5}}$$

$$= \frac{0.6745 \times 0.2434}{2.24}$$

$$= 0.0733$$

Now 6PE = 6 x 0.0733 = 0.4398

Summary of computation

r = 0.8698

PE = 0.0733

$|r| > PE$

$|r| < 6PE$

Calculation of co – efficient of determination

R = r^2 = $(0.8698)^2$ = 0.7566 or 75.66%

Interpretation

Correlation co-efficient between Sales and EBIT of the company, r = -0.8698, which shows that there is negative correlation between these variables. This shows that the value of EBIT increases as sales decreases and vice – versa. Since the correlation coefficient 'r' is more than six times of PE, the coefficient of correlation is practically certain. The value of r is significant.

Here, the calculated value of coefficient of determination, r^2 i.e. 0.7566 signifies that 75.66 percent change in dependent variable (EBIT) has been explained by the change in independent variable (Sales) and the remaining percentage is due to the other factors.

4.6.5 Correlation Analysis of Goods Sold and Sales

The correlation analysis between cost of goods sold and sales of SSU (Pvt.) Ltd. helps to know what kind of relation there exist. The correlation between these two variables should be positive ; it means the increase in cost of goods sold should increase in the volume of sales and vice – versa. Here the researcher attempts to know whether there exists such correlation or not. Correlation coefficient between cost of goods sold and sales are computed as follows :

Table No.- 32

Calculation of Correlation of Sales and Cost of Goods Sold

(000000 omitted)

F/Y	Sales (x)	Cost of Goods Sold (y)	x^2	y^2	xy
2061/062	165.345985	294.543935	105013.45	86756.1297	95449.2560
2062/063	204.016012	320.028315	122338.338	102418.1224	111935.9767
2063/064	214.384551	330.936037	123963.8331	109518.6606	116517.608
2064/065	254.034226	391.302265	167169.62	153117.4626	159989.3373
2065/066	229.890744	430.436318	209825.71	185275.4239	197168.8296
Total	Σx =1067.6715	Σy =1767.24687	Σx^2 =728310.9511	Σy^2 =637085.7992	Σxy =681061.0076

Sources : Appendix – 1 & 2

Now, the Karl Person's co-efficient of correlation (r) between Sales and cost of goods sold is given by :

$$r = \frac{N\Sigma xy - \Sigma x \Sigma y}{\sqrt{\left[N\Sigma x^2 - (\Sigma x)^2\right]\left[N\Sigma y^2 - (\Sigma y)^2\right]}}$$

$$= \frac{5 \times 681061.0076 - 1892.8429 \times 1767.24687}{\sqrt{\left[5 \times 728310.9511 - (1892.8429)^2\right]\left[5 \times 637085.7992 - (1767.24687)^2\right]}}$$

$$= \frac{3405305.038 - 3345120.69}{\sqrt{58700.5114 \times 62267.4965}}$$

$$= \frac{60184.348}{60457.7033}$$

$$= 0.9955$$

$$= 99.55\%$$

Calculation of co – efficient of determination

$R = r^2 = (0.9955)^2 = 0.9910$

Interpretation

Thus the correlation co-efficient between Sales and cost of goods sold is almost perfect for SSU (Pvt.) Ltd. during its study period. It indicates that sales and cost of goods sold are completely highly interrelated. And an increase in sales will be accompanied the increase in cost of goods sold in same proportion. Again, it indicates that an increase in sales is possible by proportionate increase in cost of goods sold. Since the value of 'r' is almost unity/one, there is no necessity of applying significance test.

The calculated value of coefficient of determination, i.e. 0.9910 means that 99.10% Change in dependent variable (Cost of Goods Sold) is brought due to change in independent variable (Sales) and the rest precent is due to change in other variable.

4.7 Regression Analysis

One of the commonly used statistical tools used to analyze the effect of one variable on the other is the simple regression ; it is the most frequently used method of estimation. Regression is the estimation of unknown value or prediction of one variable from known values of the other variables. regression analysis is the mathematical measure of the average relationship between two or more variables in terms of the original units of the data.

Regression analysis is the techniques of studying how the variations in one series are related to variations in another series. Using the relationship between a known variable and unknown variable to estimate the unknown one is termed as regression analysis. Regression analysis shows the variables are related.

Thus, regression analysis describes the way in which are variable is related to another. There are two types of regression analysis, first, simple regression model and second, multiple regressions. There the researcher attempts to estimate or forecast the volume of NPAT of SSU (Pvt.) Ltd. for the specific volume of sales and volume of cost of goods sold for the specific the volume of NPAT and cost of goods sold for extended three years period, i.e. F/Y 2066/067, F/Y 2067/068 and for F/Y 2068/069.

Before entering in the regression analysis of NPAT and Sales, the amount of sales have to be calculated or forecasted for the F/Y 2066/067, F/Y 2067/068 and F/Y 2068/069 by using time series analysis.

Table No.- 33

Calculation of Forecasted value of Sales

F/Y	Sales (y)	Deviation taken from 2063/064 (x)	x^2	xy
2061/062	324057788	-2	4	-648115576
2062/063	349768978	-1	1	-349768978
2063/064	352084980	0	0	0
2064/065	408863816	1	1	408863816
2065/066	458067364	20	4	916134728
Total	$\Sigma y = 1067.6715$	$\Sigma x = 0$	$\Sigma x^2 = 10$	$\Sigma xy = 327113990$

Sources : Appendix – 1 & 2

Now, the equation of straight line, using least square method :

$y = a + bx$

From the given equation of straight line two equations can be formulated

$\Sigma y = na + b\Sigma x$

$\Sigma xy = a\Sigma x + b\Sigma x^2$

Mathematically, when $\Sigma x = 0$, the above equation can be expressed as :

$\Sigma y = Na$

$\Sigma xy = b\Sigma x^2$

$a = \frac{\Sigma y}{N}$

$b = \frac{\Sigma xy}{\Sigma x^2}$

For,

$a = \frac{1892842926}{5}$

$\therefore\ a = 378568585.2$

$b = \frac{327113990}{10}$

$\therefore\ b = 31711399$

Now, putting value of *a* & *b* in equation of straight line,

$y = a + bx$

or $y = 378268585.2 + 32711399\,x$

Thus, the forecasted value of sales for three additional fiscal year is;

y = 2066/067 = 378568585.2 + 32711399 x 3 = 476702782.2

y = 2067/068 = 378568585.2 + 32711399 x 4 = 391654181.2

y = 2068/069 = 378568585.2 + 32711399 x 5 = 394925580.2

4.7.1 Regression Analysis of Sales and NPAT

After forecasting value of sales for three additional fiscal years the volume of NPAT can be formulated by applying regression analysis. Thus, here the researcher forecasts the volume of NPAT if the sales of SSU (Pvt.) Ltd. are Rs.476702782.2, Rs.391654181.2 and Rs.394925580.2 for the F/Y 2066/067, 2067/068 and 2068/069 respectively.

It is logical to highlight,

NPAT = F (sales)

$y = f(x)$

Where,

y = Net profit after tax (NPAT)

x = Sales

Expressing the functional relation is linear equation, we get,

$y = a + bx$

Now, the equation is ;

$\Sigma y = na + b\Sigma x$

$\Sigma xy = a\Sigma x + b\Sigma x^2$

Table No.- 34

Calculation of Regression Analysis of Sales and NPAT

('000000' omitted)

F/Y	NPAT(y)	Sales (x)	xy	x^2
2061/062	10.035590	324.057788	3252.1111	105013.45
2062/063	8.512404	349.768978	2977.3748	122338.338
2063/064	6.410250	352.084980	2256.9527	123963.8331
2064/065	1.535596	408.863816	627.8496	167169.62
2065/066	2.521354	458.067364	1154.94998	209825.71
Total	Σy =29.0152	Σx =1892.8429	Σxy =10269.2382	Σx^2 =728310.9511

Sources : Appendix – 1

Now, putting the value in above equation :

29.0152 = 5 a + 1892.8429 b …….... (i)

10269.2382 = 1892.8429 a + 728310.9511 b …… (ii)

Now, multiplying eq^n (i) by 1892.8429 and (ii) by 5 and subtracting equation (ii) by (i) we get,

54921.2153 = 9464.2145 a + 3582854.244 b

\- 51346.191 = - 9464.2145 a + 3582854.244 b

3575.0243 = - 58700.5115 b

$\therefore\ b = -0.06090278$

Putting the value of b in equation (i)

29.0152 = 5 a + 1892.8429 x – 0.06090278

29.0152 = 5 a – 115.2794

144.2946 = 5 a

$\therefore\ a = 28.8589$

Thus, the regression equation, $y = a + bx$ is;

y = 28.8589 + (- 0.06090278) x

Now, to find the value of NPAT (y) is sales (x) if Rs.476702782.2 in F/Y 2066/067 let us put the value of sales in linear equation.

Thus,

NPAT 2066/067=[28.8589–0.06092078 x 4767.7027822 x 1000000]

= (173252.8415)

The value of NPAT (y) if sales (x) is Rs.391654181.2 in F/Y 2067/068;

Thus,

NPAT 2067/068=[28.8589–0.06092078 x 391.6541812 x 1000000]

= Rs.5006071.565

The value of NPAT (y) if sales (x) is Rs.394925580.2 in F/Y 2068/069 ;

Thus,

NPAT 2068/069=[28.8589–0.06092078 x 394.9255802 x 1000000]

= 4806834.273

Here, the statistical analysis of simple regression model states that the NPAT of SSU (Pvt.) Ltd. is estimated to be Rs.(173252.8415) in F/Y 2066/067, Rs.5006071.565 in F/Y 2067/068 and Rs.4806834.273 in F/Y 2068/069 for different value of sales in respective fiscal years.

The table given below shows the actual amount of sales and NPAT during the study period as well as the estimated value of sales and NPAT for F/Y 2066/067 to 2068/069. The amount of base year for all variables is considered to be 100% for index.

Table No.- 35

Index of Sales and NPAT for Forecasted fiscal years

F/Y	Sales (in Rs.)	Index in %	NPAT (in Rs.)	Index in %
2061/062	324057788	100	10035590	100
2062/063	349768978	107.93	8512404	84.82
2063/064	352084980	108.65	6410250	63.88
2064/065	408863816	126.17	1535596	15.30
2065/066	458067364	141.35	2521354	25.12
2066/067	476702782.2	147.10	(173252.8415)	(1.73)
2067/068	391654181.2	120.86	5006071.565	49.88
2068/068	394925580.2	121.87	4806834.273	47.90

Sources : Appendix – 1

In the above table the value of NPAT has been forecasted for the F/Y 2066/067, 2067/068 and for F/Y 2068/068 using regression analysis and while forecasting the value of NPAT, sales have been taken as the independent variable. And the value of sales for these fiscal years has been estimated using time series analysis. The sale for the F/Y 2066/067 is as.

4.7.2 Regression Analysis of Sales and Cost of Goods Sold :

Here, the researcher attempts to estimate or forecast the volume of cost of goods sold to the firm for F/Y 2066/067, F/Y 2067/068 and F/Y 2068/069 for the specific volume of sales at that period. The volume of cost of goods sold can be formulated by applying regression analysis if the sales of SSU (Pvt.) Ltd. are of Rs.476702782.2 in F/Y 2066/067, Rs.391654181.2 in F/Y 2067/068 and Rs.394925580.2 in F/Y 2068/069 which has been calculated earlier using Time Series Analysis.

It is logical to highlight ;

Cost of goods sold = F(Sales)

$y = f(x)$

Where,

y = Cost of goods sold

x = Sales

Expressing the functional relation is linear equation, we get,

$y = a + bx$

Now, the equation is ;

$\Sigma y = na + b\Sigma x$

$\Sigma xy = a\Sigma x + b\Sigma x^2$

Table No.- 36

Calculation of Regression Analysis of Sales and Cost of Goods Sold

('000000' omitted)

F/Y	Cost of goods sold (y)	Sales (x)	xy	x^2
2061/062	294.543935	324.057788	95449.2560	105013.45
2062/063	320.028315	349.768978	111935.9767	122338.338
2063/064	330.936037	352.084980	116517.608	123963.8331
2064/065	391.302265	408.863816	159989.3373	167169.62
2065/066	430.436318	458.067364	1971.68.8296	209825.71
Total	Σy =1737.24687	Σx =1892.8429	Σxy =681061.0076	Σx^2 =728310.9511

Sources : Appendix – 1

Now, putting the value in above equation :

29.0152 = 5 a + 1892.8429 b ……... (i)

10269.2382 = 1892.8429 a + 728310.9511 b …… (ii)

Now, multiplying eq^n (i) by 1892.8429 and (ii) by 5 and subtracting equation (ii) by (i) we get,

3345120.69 = 9464.2145 a + 3582854.244 b

- 3405305.038 = - 9464.2145 a + 3641554.756 b

-60484.348 = - 58700.5115 b

$\therefore\ b = 1.025278085$

Putting the value of b in equation (i)

1767.24687 = 5 a + 1892.8429 x 1.025278085

1767.24687 = 5 a + 1940.690343

$\therefore\ a = -\ 34.6887$

Thus, the regression equation, $y = a + bx$ is;

y = - 34.6887 + 1.025278085 x

Now, to find the value of cost of goods sold (y) if sales (x) is Rs.476702782.2 in F/Y 2066/067 let us put the value of sales in linear equation.

Thus, cost of goods sold 2066/067

- 34.6887 + 1.025278085 x 476.702782.2

= 454.0607667 (1000000)

= 454060766.7 …… (i)

The value of cost of goods sold (y) if sales (x) is Rs.391654181.2 in F/Y 2067/068;

Thus, cost of goods sold 2067/068

- 34.6887 + 1.025278085 x 391.6541812

= 366.8657489 (1000000)

= 366865748.9 …… (ii)

The value of cost of goods sold (y) if sales (x) is Rs.394925580.2 in F/Y 2068/069 ;

Thus, cost of goods sold 2067/069

- 34.6887 + 1.025278085 x 394.9255802

= 370.2198426 (1000000)

= 370219842.6 …… (iii)

Here, the statistical analysis of simple regression model states that the cost of goods of SSU (Pvt.) Ltd. is estimated to be Rs.454060766.7 in F/Y 2066/067, Rs.366865748.9 in F/Y 2067/068 and Rs.370219842.6 in F/Y 2068/069 for different value of sales in respective fiscal year.

The table given below shows the actual amount of sales and cost of goods sold during the study period as well as the estimated value of cost of goods sold and sales for the F/Y 2066/067 to 2068/069. The amount of base year 2061/062 for all variables is considered to be 100% for index.

Table No.- 37

Index of Sales and Cost of Goods Sold for forecasted fiscal years

F/Y	Sales (in Rs.)	Index in %	Cost of goods sold (in Rs.)	Index in %
2061/062	324057788	100	294543935	100
2062/063	349768978	107.93	320028315	108.65
2063/064	352084980	108.65	330936037	112.36
2064/065	408863816	126.17	391302265	132.85
2065/066	458067364	141.35	430436318	146.14
2066/067	476702782.2	147.10	454060766.7	154.16
2067/068	391654181.2	120.86	366865748.9	124.56
2068/068	394925580.2	121.87	370219842.6	125.69

Sources : Appendix – 1

Since, there is almost perfect correlation in between sales and cost of goods sold. Thus the researcher is interested to know, to what extent the cost of goods sold will change as per change in sales. In the above table the sales for the F/Y 2066/067 is Rs.476702782.2 which shows the index figure of 147.40%. At the same time the forecasted value of cost of goods sold is Rs.454060766.7 and its index figure is 154.16%. It shows that with the increment in sales volume there is nearly same increment in cost of goods sold. The same result can

also be seen in F/Y 2067/068 and 2068/069. Thus, it implies that to increase sales of SSU (Pvt.) Ltd., the company is using same type cost.

4.8 Trend Analysis

Trend analysis is very important in the analysis of financial performance. Trend analysis examines whether the financial position of a company is improving or deteriorating over the year in the financial analysis the direction of change over a period of years is of crucial importance.

The improving or deteriorating tendencies of the ratio over time is known as trend. Trends actual represent the firm in its stat of motion overtime. So trend analysis gives the picture of the present situation in relation to the past and shows the direction to the future by adding time dimension to the ratio analysis. The trends analysis facilates the planning and preparing action plan of a firm for the future period. Thus warns about the future challenges or informs about the opportunities in terms of competitive advantages. This types of analysis is particularly applicable to the items of balance sheet and profit and loss account.

4.8.1 Trend Analysis of TD, NW and CE

The total debt of SSU (Pvt.) Ltd. is the sum of secured, unsecured and current liabilities. The net worth of the company is the sum of share capital and reserve and surplus fund. And, the sum of net worth and medium long – term debt is known as the capital employed. The table given below shows the amount of TD, NW and CE of SSU (Pvt.) Ltd. during its study period. The amount of base year 2061/062 is considered to be 100% which preparing trend index.

Table No.- 38

Index of TD, NW and CE

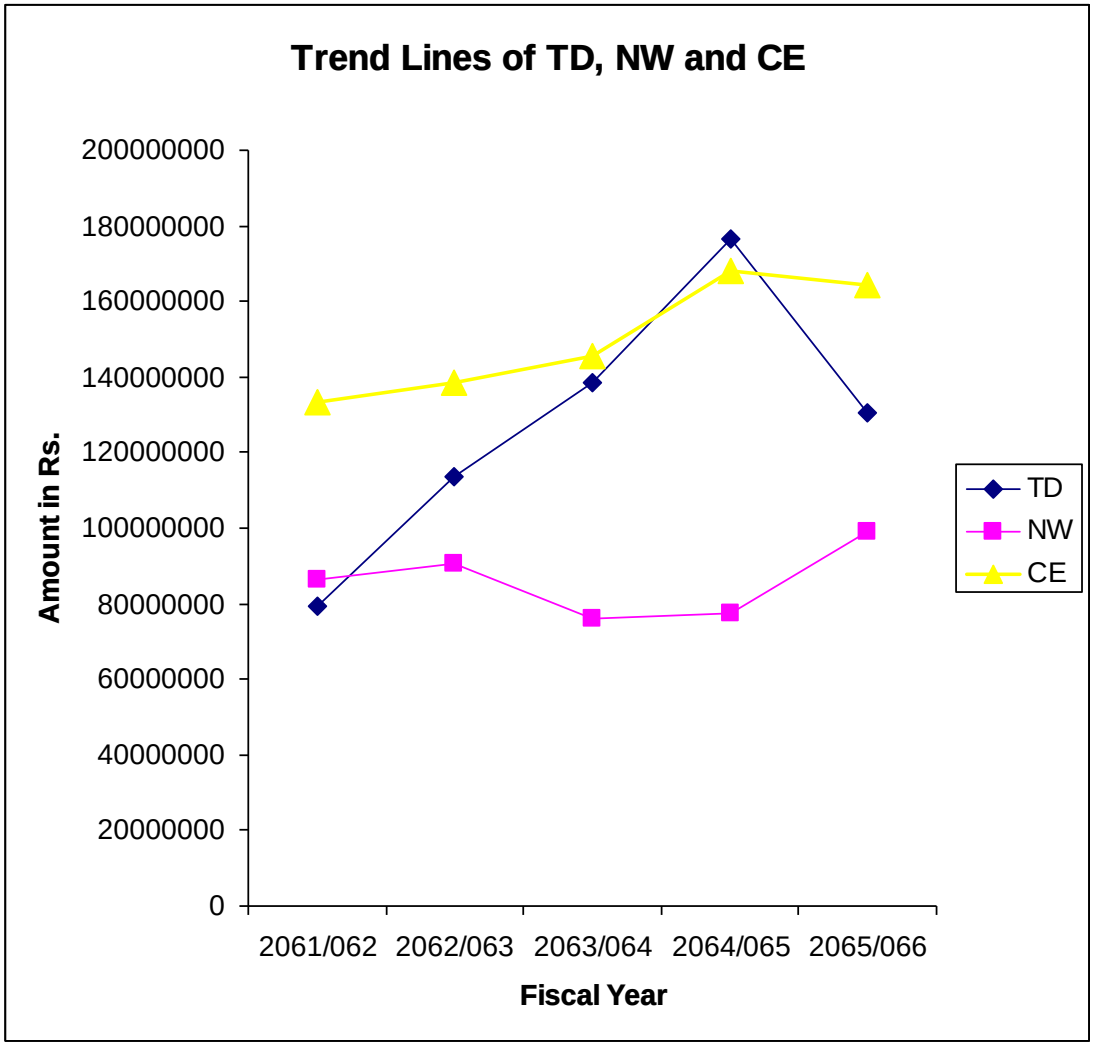
Fiscal Year	Total Debt	Index in %	Net Worth	Index in %	Capital Employed	Index in %
2061/062	79164018	100	86181967	100	133169925	100
2062/063	113513130	143.39	90502882	105.01	138468840	103.98
2063/064	138367703	174.79	76016848	88.21	145545006	109.29
2064/065	176662092	223.16	77372144	89.78	167864102	126.05
2065/066	130676595	165.07	99214149	115.12	164246107	123.34

Sources : Appendix – 2

From the above table, we can clearly see that the amount of TD, NW and CE of SSU (Pvt.) Ltd. for the study period as well as their index figure considering the amount of base year to be 100%. The index of TD shows that the TD of SSU (Pvt.) Ltd. is increasing except the year of 2065/066. The increasing ratio is high in the year 2062/063, 2063/064, 2064/065. This implies that the industry is trying to increase outside loan. The proportion of net worth is increasing except the year of 2063/064 and 2064/065 in comparison to its base year. But the increasing trend is low than that of TD. It implies that SSU (Pvt.) Ltd. wants to use both owner's financing and debt financing. The CE of SSU (Pvt.) Ltd. is also increasing trend except the year 2065/066. Reduction in CE at V/Y 2065/066 is because of decrement in TD in this year.

The above table and its analysis can also be presented in the following figure.

Figure No. 1



From the above figure it shows that the trend of TD, NW and CE during the study period. The TD is in increasing trend except the year of 2065/066. The NW is fluctuating. CE is increasing trend except the year that of TD. TD trend line cut the trend line of NW in F/Y 2062/063 because the TD increasing percentage is high than that of NW increasing percentage.

4.8.2 Trend Analysis of EBIT, Interest and EAT

The EBIT of SSU (Pvt.) Ltd. for the study period is taken by reducing operating expenses. Other expenses and depreciation from its gross profit and adding other incomes to it. The interest is that expenses, and tax from EBIT. The NPAT of SSU (Pvt.) Ltd. is

decreasing trend because the cost of goods sold, administrative & distributed expenses and other etc. expenses is also decreasing in study period.

Table No.- 39

Index of EBIT, Interest and EAT

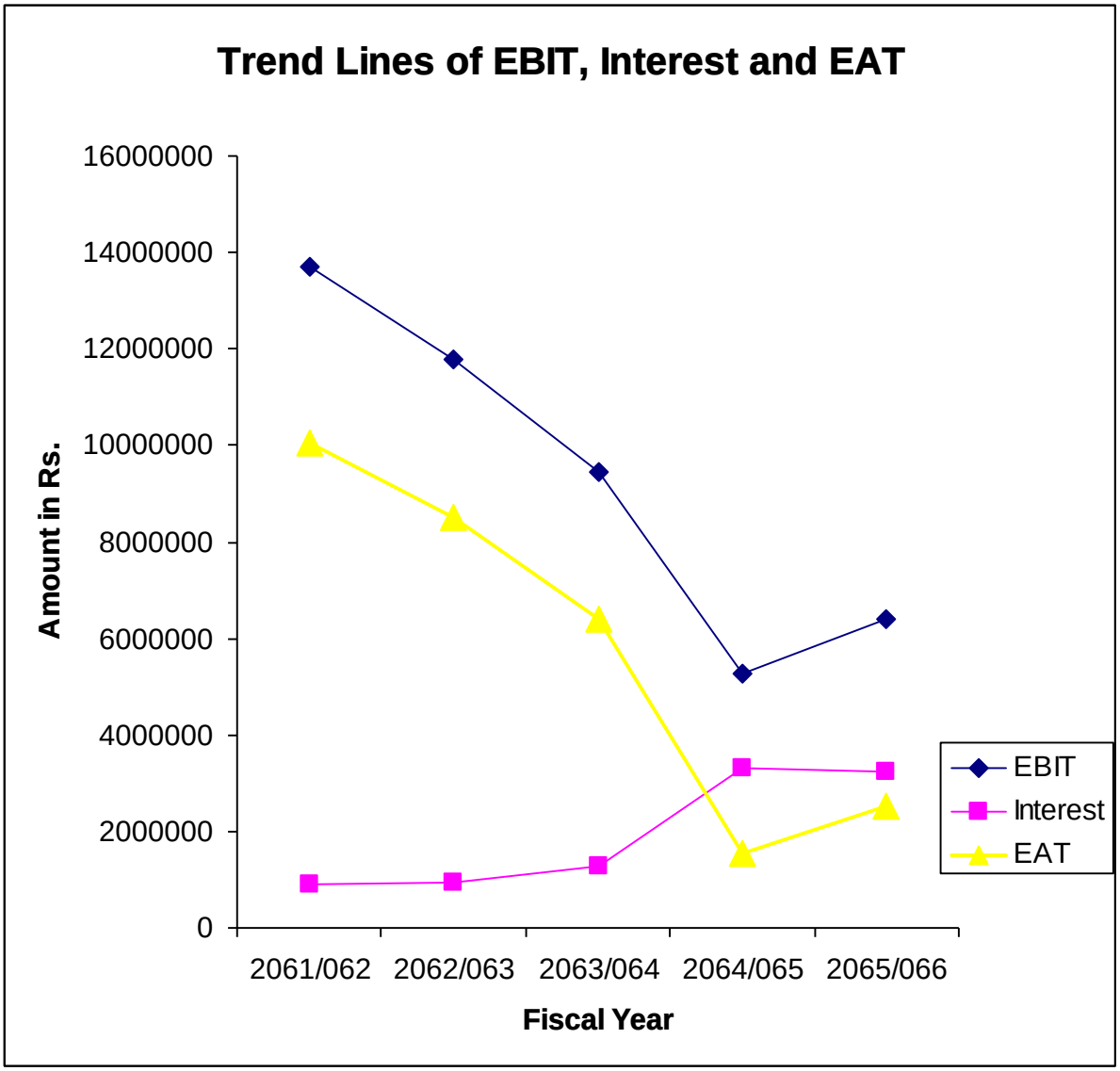
Fiscal Year	EBIT	Index in %	Interest	Index in %	EAT	Index in %
2061/062	13688489	100	904298	100	10035590	100
2062/063	11773189	86	929285	102.76	8512404	84.82
2063/064	9449236	69.03	1283312	141.91	6410250	63.88
2064/065	5259716	38.42	3304120	365.38	1535596	15.30
2065/066	6401872	46.77	3250118	359.41	2521354	25.12

Sources : Appendix – 2

From the above table, we can clearly see that the amount of EBIT, Interest and NPAT of SSU (Pvt.) Ltd. for the study period as well as their index figure. Considering the amount of base year to be 100% the index figure of EBIT shows the decreasing trend because increasing trend of cost of goods sold, administrative and distributed expenses and other expenses. By the help of index to produced it can be said that the percentage of EBIT is maximum in its base year and the lowest percentage of EBIT at F/Y 2064/065 which is 365.38% and the lowest decrease percentage of interest in its base year. It shows that SSU (Pvt.) Ltd. increasing the secured debt finance except the F/Y at 2065/066. The index figure of NPAT (EAT) of SSU (Pvt.) Ltd. seems decreasing trend from its base year. But increases in its F/Y 2065/066 from the F/Y 2065/066. By analyzing the index of EBIT, interest and EAT (NPAT), the management try to increase the business.

The above tables and its analysis can also be viewed by the help of figure.

Figure No. 2



The above figure shows the trend lines of EBIT, Interest and EAT of SSU (Pvt.) Ltd. during the study period. By the above figure and overall view of trend of these variables can be made. It shows that the trend of EBIT, Interest and EAT all are fluctuating. From the above figure, we can clearly see that the trend of EBIT and EAT are same to the upward and downward. Which are decreases until in the F/Y 2064/065 and increase in the last F/Y 2065/066.

4.8.3 Trend Analysis of Total Revenue, Total Expenditure and EAT (NPAT)

The total revenue of SSU (Pvt.) Ltd. is the combination of sales revenue and other income and the total expenditure consists of cost of goods sold plus business and operating expenses plus depreciation plus other expenses plus interest expenses plus tax expenses. Here the result of EAT can from by subtracting total expenditure from its total revenue. The table given below shows the amount of total revenue, total expenditure and EAT of SSU (Pvt.) Ltd. during the study period. The amount of base year for all variables is considered to be 100%

Table No.- 40

Index of Total Revenue, Total Expenditure and EAT

Fiscal Year	Total Revenue	Index in %	Total Expenditure	Index in %	EAT	Index in %
2061/062	324465474	100	314429884	100	10035590	100
2062/063	350051764	107.89	341539330	108.62	8512404	84.82
2063/064	352229897	108.56	345819647	109.98	6410250	63.88
2064/065	408925630	126.03	407390034	129.56	1535596	15.30
2065/066	458081945	141.18	455560591	144.88	2521354	25.12

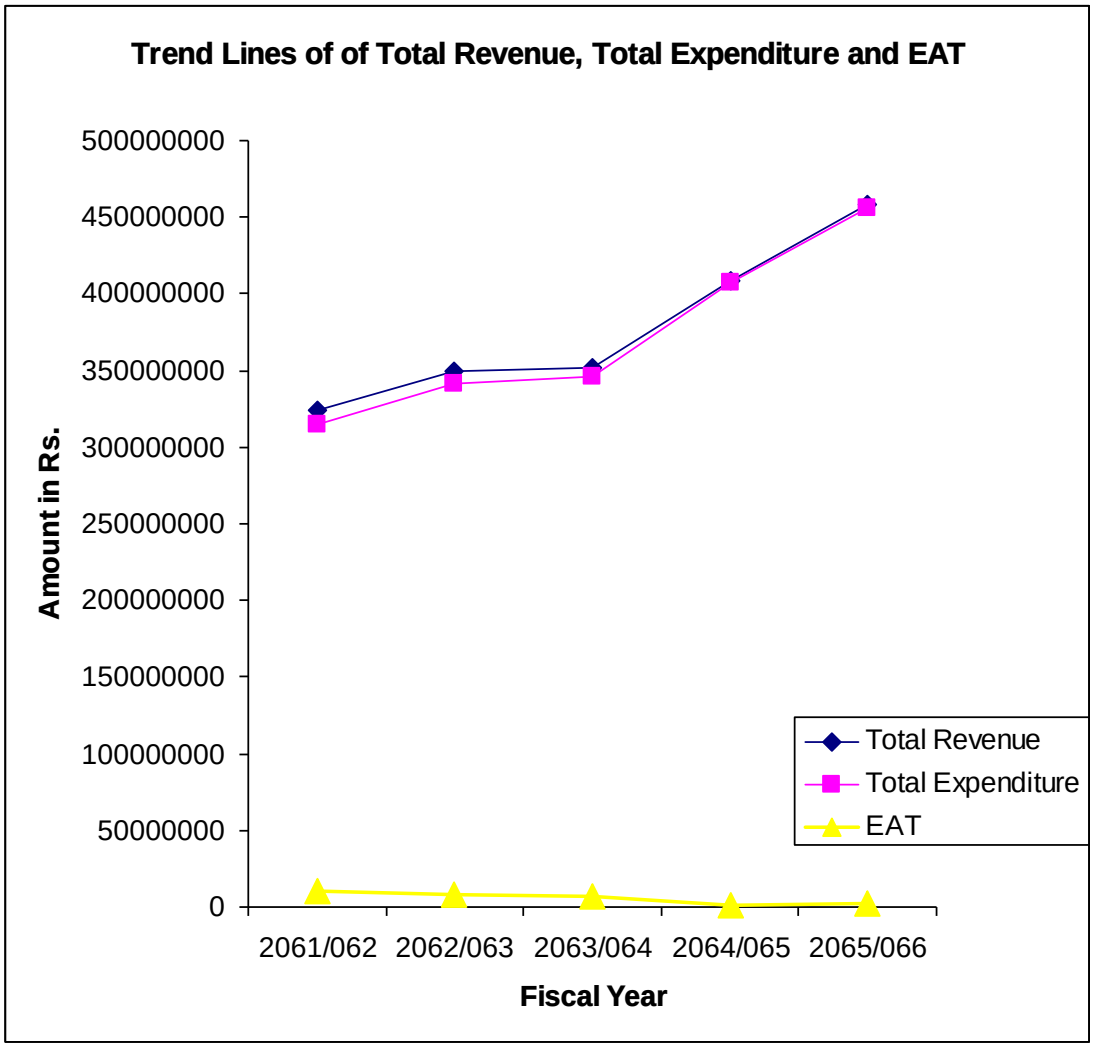
Sources : Appendix – 1

The above table shows amount of total revenue, total expenditure and EAT of SSU (Pvt.) Ltd. for the study period as well as their index figure considering the amount of base year to be 100%. The index figure of total revenue and total expenditure are increasing trend. From the above table, we can clearly see that the firm is able in increasing the sales volume. At the same time, the index figure of total expenditure is very similar with the index figure of total revenue. From the above table, it can also be observed that the amounts of total expenditure during the study period are very close to total revenue in every respective fiscal year. The EAT is

decreasing trend until the F/Y 2064/065 and increase in the F/Y 2065/066.

The above table and its analysis can also be viewed by the help of figure, plotting the absolute amount of total revenue, total expenditure and EAT as trend lines during the study period.

Figure No. 3



From the above figure, we can clearly see that the total revenue and total expenditure are increasing trend. Both increasing trend ratio are nearly same. But on the other hand, the EAT is decreasing trend until the F/Y 2064/065 from its base year but in the last year of study period 2065/066 is decreased.

4.8.4 Trend Analysis of Sales, Cost of Goods Sold and Gross Profit

The sales of SSU (Pvt.) Ltd. is the total amount of sales during the study period and cost of goods sold is the total amount of cost that have incurred while producing the goods. There is close relationship between cost of goods sold and sales. Any manufacturing company could not enhance its sales without expanding amounts on cost of goods sold. But, the manufacturing company must take in amount that the percentage increment in sales must be higher than that of percentage increment in cost of goods sold because it helps the organization to increase its efficiency. The gross profit is the differences between sales and cost of goods sold. The table given below shows the amount of total sales, cost of goods sold and gross profit of SSU (Pvt.) Ltd. along with its index during the study period. The amount of base year for all the variables is considered to be 100% while preparing trend index.

Table No.- 41

Index of Sales, Cost of Goods Sold and Gross Profit

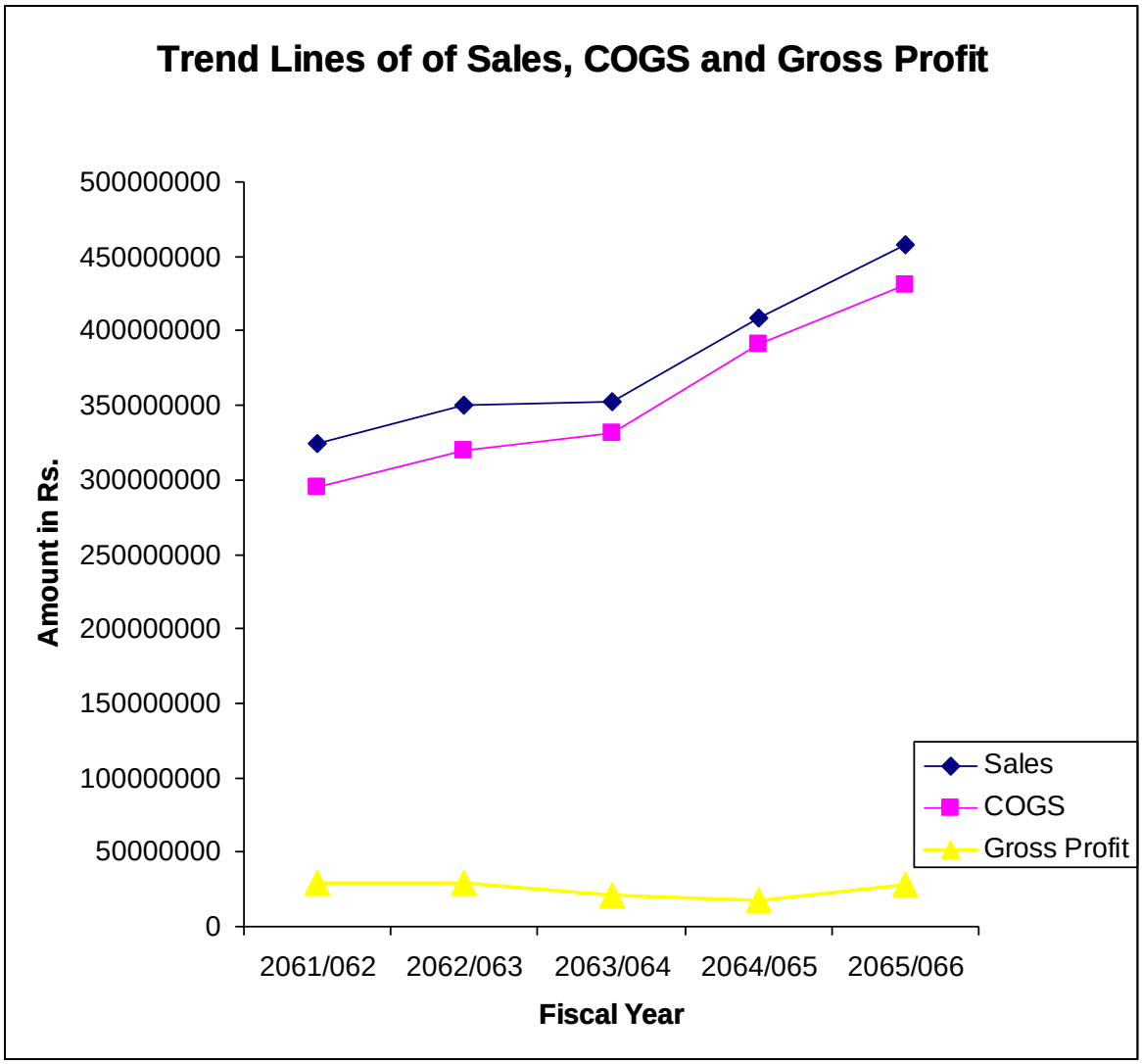
Fiscal Year	Sales	Index in %	Cost of Goods sold	Index in %	Gross Profit	Index in %
2061/062	324057788	100	294543935	100	29513853	100
2062/063	349768978	107.93	320028315	108.65	29740633	100.77
2063/064	352084980	108.65	330936037	112.36	21148943	71.66
2064/065	408863816	126.17	391302265	132.85	17561551	59.50
2065/066	458067364	141.35	430436318	146.14	27631046	93.62

Sources : Appendix – 1

From the above table, we can clearly see that the amount of total sales, cost of goods sold and gross profit during the study period as well as their index figure. The index figure of total sales of SSU (Pvt.) Ltd. is increasing trend. The index figure of cost of goods sold is also increasing trend. The index figure of gross profit is decreasing trend but in the last year 2065/066, is increasing trend.

The above table and its analysis can also be viewed by the help of figure, plotting the absolute amount of sales, cost of goods sold and gross profit in trend lines during the study period.

Figure No. 4



From the above figure, we can clearly see that the trend line of sales, cost of goods sold and gross profit during the study period. Sales, cost of goods sold are increasing trend and gross profit is decreasing trend but in F/Y 2065/066increasing trend.

4.8.5 Trend Analysis of Sales and Fixed Assets

There is close relationship between sales and fixed assets. The sales revenue of the company is the total amount of sales during the study period. The fixed assets of the firm are land, building, furniture and equipment, vehicles, plant and machinery, electricity, other assets etc.

The table given below shows the amount of total sales and total fixed assets of SSU (Pvt.) Ltd. during the study period. The amount of base year is consider to be 100% while preparing index.

Table No.- 42

Index of Sales and Fixed Assets

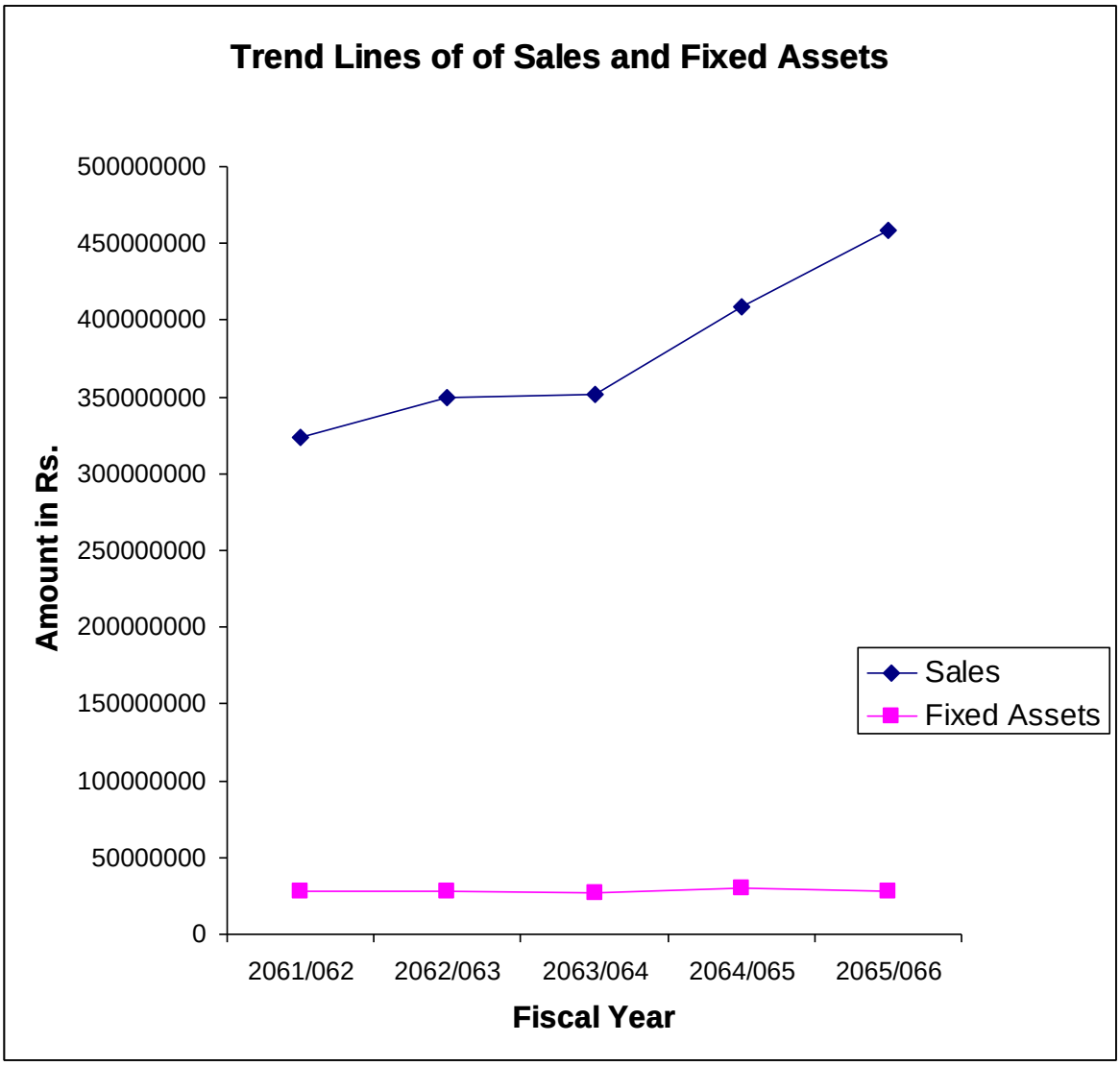
F/Y	Sales (in Rs.)	Index in %	Fixed Assets	Index in %
2061/062	324057788	100	28225557	100
2062/063	349768978	107.93	27977048	99.12
2063/064	352084980	108.65	27222497	96.45
2064/065	408863816	126.17	29829340	105.68
2065/066	458067364	141.35	28169966	99.80

Sources : Appendix – 1 & 2

From the above table, we can clearly see that the amount and trend index of sales and fixed assets during the study period. The index figure of total assets of the firm is increasing trend. And the index figure of fixed assets shows fluctuating trend. From the above table it can be observed that the fixed assets is decreasing trend in F/Y 2062/063 and 2063/064. Overall this situation of sales and fixed assets shows good impact for business efficiency.

The above table and its analysis can also be viewed by the help of figure, plotting the absolute amount of sales and fixed assets as trend lines during the study period.

Figure No. 5



From the above figure, we can clearly see that the trend line of sales and fixed assets during the study period. The sales shows increasing trend but the fixed assets shows fluctuation trend. From the above figure we can clearly see that the firm able to increase in sales.

4.9 Cash Flow Analysis

Cash flow statement is that types of statement which shows the inflows and outflows of cash equivalents during the year. Cash flow statement attempts it report only cash movement. It is called cash flow statement because it describes the sources and use of cash.

Cash is the lifeblood of business enterprises. It is fuel that keeps a business alive. Without cash no activities can be taken place. So a business must have an adequate of cash to operate. Cash flow statement helps to management to assets the liquidity of business, to determine dividend policy, to evaluate the policies regarding investment and financing etc. Similarly this statement is useful for investors and creditors in assessing the company ability to manage cash flow to generate positive feature ability to manage cash flow to generate positive feature cash flows, to divided and interest etc. So cash flow statement is an important financial tools for the management. So the overall cash flow statement of SSU (Pvt.) Ltd. is analyzed from year 2061/062 to 2065/066 by using indirect method.

Table No.- 43

Showing Comparative Cash Flow Statement

Particular	2061/062	2062/063	2063/064	2064/065	2065/066
Cash available from operating activities : -					
Earning before tax and other income	1278419	10843904	8165924	1955596	3151754
Add : Depreciation	3820296	3962141	3871781	4057582	4040539
: Interest	904298	929285	1283312	3304120	3250118
Operating activities before change	17508785	15735330	13321017	9317298	10442411
Decrease/(increase) in CA	(41445191)	(36229670)	(4612907)	(45136234)	22537313
Decrease/(increase) in CL	16710091	33371112	3291572	17330389	(20525496)
Interest	(904298)	(929285)	(1283311)	(3304120)	(3250117)
Payment of dividend	-	-	(20000000)	-	-
Payment of tax	(2862679)	(6522989)	(2651959)	(599298)	(1309751)
Net cash flow from operating activities (A)	(10993292)	5424498	(11935588)	(22391965)	7894360
Cash available from investing activities : -					
Fixed Assets Purchase	(13288664)	(3713633)	(3117229)	(6664426)	(2381165)
Fixed Assets Sales	371000	-	-	-	-
Debenture Purchase	(291624)	-	-	-	-
Debenture Sales	-	-	1390566	1795536	-
Net cash flow from investing activities (B)	(13209288)	(3713633)	(1726663)	(4868890)	(2381165)
Cash available from Financing activities : -					
Payment for bank loan	-	-	-	-	-
From medium and long-term loan	22386000	978000	21563000	20963000	(25460000)
From bank loan	-	-	-	-	-
Increase in share capital	-	-	-	-	20000000
Net cash flow from financing activities (C)	22386000	978000	21563000	20963000	(5460000)
Total cash flow (A+B+C)	(1816580)	2688865	7900749	(6297855)	53195
Add: Opening balance of cash and banks	5638865	3822286	6511152	14411901	8114046
Closing balance of cash and bank	3822286	6511152	14411901	8114046	8167241

Cash flow analysis is useful in evaluating financial policies and current cash position. Cash is the basis for carrying an operations. The cash flow statement prepared on an estimated basis for the next accounting period will enable the management to plan and co-ordinate the financial operations properly. Cash flow is especially useful to management to know how much funds needed. The management shows how much fund can be generated internally and how much should arrange from outside.

Analysis of cash flow is useful for short run planning. A firm needs sufficient cash to pay debts mattering in the near future to pay interest, other expenses and to pay dividends to shareholders. A firm can make projections of cash inflows and outflows for the near future to determine the availability of cash.

Cash flow statement of SSU (Pvt.) Ltd. shows that the cash flow from operating activities are (10993292), 5424498, (11935588), (22391965) and 7894360 for the F/Y 2061/062 to 2065/066 respectively. The cash flow shows that the trend of flow is fluctuating.

Cash used in investing activities are: (13209288), (3713633), (172663), (4868890) and (2381162) for the F/Y 2061/062 to 2065/066 respectively fixed assets sales in the only F/Y 2061/062. Cash flow from financing activities are: 22386000, 978000, 21563000, 20963000 and (5460000) in F/Y 2061/062 to 2065/066 respectively. Closing balance of cash of SSU (Pvt.) Ltd. is 3822286, 6511152, 14411901, 8114046 and 8167241 in the year 2061/062, 2062/063, 2063/064, 2064/065 and 2065/066 respectively.

CHAPTER – V

5. SUMMARY, CONCLUSION & RECOMMENDATIONS

5.1 Summary

This is the age of 21st century, so industrialization is necessary to develop the country rapidly. So, industrialization is the fundamental requirement to develop economic sector of any country. In other words, industrialization helps to bring advance technologies and equipments. From this, people get employment opportunity as well as the chance to develop their skills. So, the developments of the industries depend up on its efficient and effective management.

The most important component of financial management is financial performance. So, it is compared as life blood and nerve sector of any business organization of firms. Financial management is that managerial activity which is concerned with the planning and controlling of the financial resources. The subject of financial management is immense of interest to both academicians and practicing. It is the most important subject for using various fields.

This research has been undertaken to study the financial performance of SSU (Pvt.) Ltd., Sonapur, Sunsari. This study is based on secondary data. This study is designed to judge the financial statement of SSU (Pvt.) Ltd. for five years from 2061/062 to 2065/066 and it has been divided into five chapters. They are introduction, review of literature, research methodology, presentation analysis and interpretation of data summary, conclusion and recommendation.

In the first chapter, background of the study, focus of the study, statement of problem, objective of the study need for the study,

limitation of the study. Significance of the study, scope of the study, research methodology and the study of the organization.

The second chapter deals with review of literature which include introduction, financial performance, financial management, financial statement, analysis of financial statement, assets – liability analysis, techniques of financial analysis, break-even analysis, leverage analysis, EBIT – EPS analysis, statistical analysis, cash flow analysis and review of related study.

In the third chapter, research methodology is presented, where introduction, research design, population and sample, nature and sources of data, data processing procedures, tools and techniques used etc. have been discussed.

Presentation and analysis of data of this study are given in the fourth chapter. In this chapter, to achieve the objective of this study, some significant financial ratios have been calculated. To find out the efficiency of management as well as the effectiveness of the investment of resources in the business, we calculate turnover ratio. The profitability ratio is used to measure the operating performance of the company. This chapter also used the break-even analysis, leverage analysis, EBIT – EPS analysis, correlation analysis, regression analysis, trend analysis and cash flow analysis.

In the last chapter summary of analysis and conclusion from the study and some workable suggestions are also provided for improving the financial performance of SSU (Pvt.) Ltd.

5.2 Conclusion

Following are the major findings of the research work :

1) The current ratio of the company is above 2 times in all years of study. It indicates the best short term liquidity or the company can met short term obligation easily. But the high liquidity has decreased the profitability of the company.

2) All the quick ratios except the F/Y 2064/065, of the SSU (Pvt.) Ltd. during the study period were higher than the theoretical norm of 1:1. The average quick ratio is 1.4106. It indicates that the firm has maintained sufficient amount of cash to meet immediate obligation.

3) The proportion of LTD to NW is fluctuation through out the study period. This shows that the company has not the clear intention towards in debt.

4) TD to TA ratio is in fluctuating trend throughout the study period. The average TD to TA ratio is 58.891. Which implies that the creditors still has good margin of safety despite of share of outsiders in TA of the company is more than its owners. Thus, there is no fixed model for financing procedure.

5) Generally, a high interest coverage ratio is desirable. The average interest coverage ratio is 7.75 times, which shows, the company has to pay high amount of interest charges for borrowing capital.

6) The inventory turnover ratio is in decreasing trend except the F/Y 2065/066. The average inventory turnover ratio of company for the five years is 4.18 times. It means it is good for the company in comparison to its inventory utilization.

7) Total assets turnover ratio is also in fluctuating trend. The overall assets positions of the company are not satisfactory due to its inefficient utilization of the total assets of the company.

8) The fixed assets turnover ratio is in increasing trend.

9) The capital employed turnover ratio is also fluctuating trend. The average ratio of 2.5206 times over indicate that each rupee of capital is able to generate sales of as 2.5206 which is high the normal standard of 2 times, which shows that the company is efficient in sales generation.

10) Average gross profit margin ratio is 6.79%, which indicates that the firm earns more than 6.79% gross profit during the study period.

11) The average net profit margin ratio is 1.66%. Net profit margin ratio is decreasing trend except F/Y 2065/066.

12) Operating expenses ratio is the firms operating expenses. The average ratio is 0.9605, which indicates the earning capacity of SSU (Pvt.) Ltd. is low.

13) The average return on assets is 2.99%. The company able to generate some returns every year during the study period. This situation is satisfactory for the company.

14) The result of break – even analysis shows that the company's break even levels are low with the [resent level of sales.

15) The degree of operating leverage is not satisfactory. In the F/Y 2062/063, 2063/064 and 2064/065, the DOL is negative. Therefore we can clearly see that the DOL has either negative effect or the percentage change in EBIT is less than the percentage change in sales except the F/Y 2065/066.

16) At the same time, the result of degree of financial leverage is not satisfactory.

17) And the degree of total leverage is also unsatisfactory position.

18) With alternative financial plans, EBIT – EPS analysis is a very widely used tool to analyze the increasing or decreasing leverage effect on EPS. The analysis showed that the average level if EBIT of the firm is high than the indifference level of EBIT, while analyzing the return risk trade – off, it shows that there is high

return with high risk for SSU (Pvt.) Ltd. while increasing debt financing.

19) The correlation coefficient between LTD and NW shows high degree of negative correlation.

20) The correlation co-efficient between LTD and CE shows the nearly perfect positive correlation. It indicated that CE change in the same direction with the change in LTD.

21) The correlation co-efficient between TA and sales volume shows moderate degree of positive correlation. It indicates that the sales increase up with the increment in total assets.

22) The correlation co-efficient between sales and EBIT has negative correlation. It indicates that EBIT decreases with the increment in sales.

23) The correlation co-efficient between sales and cost of goods sold shows almost perfect positive correlation. It indicates that cost of goods sold is changed in the same direction with the change in sales.

24) The estimated value of cost of goods sold calculated by regression analysis between sales and cost of goods sold for additional three fiscal years is in fluctuating trend.

25) The trend index of TD, NW and VE are fluctuating trend during the study period.

26) The trend index of EBIT is fluctuating trend. The trend index of interest is increasing trend except the F/Y 2065/066. The index of EAT shows decreasing trend except the F/Y 2065/066.

27) The trend index of total revenue shows increasing trend. At the same time the total expenditure shows also increasing trend. The increasing trend index of total revenue and total expenditure are nearly same from its base year. And the same time the index of EAT shows decreasing trend in F/Y 2061/062 to 2064/065. In the F065/066 the trend index is increase.

28) The trend index of sales, cost of goods sold are in increasing trend but gross profit is in decreasing trend except the F/Y 2065/066.

29) The trend index of sales shows increasing trend during its study period and the trend index of fixed assets shows fluctuating trend.

30) The cash flow is also in fluctuating trend.

5.3 Recommendations

From the overall study of the financial performance of SSU (Pvt.) Ltd. The following recommended points may advisable for the management of the company and others.

1) The current ratio of the company is more than standard 2:1, company should maintain this ratio in the future.

2) We found that the capital structure position of the company has not the clear intention of debt. So, the company should try to fix model financing.

3) The overall assets position of the company is not satisfactory. The company should maintain efficient utilization of the total assets in the future.

4) The average capital employed turnover ratio of the company is high than standard of 2 times, company should maintain this ratio.

5) The profitability ratio shows that the company's operating cost is high. A manufacturing company should minimize the cost in order to maximize the profit. So it in suggested to control the cost in every step to minimize the profit of better performance. If the company can utilizes the total capacity for production, cost of production will be down.

6) The company's operating and financial leverage is not satisfactory position. The company must think for cost reduction and sales increase.

7) The estimated value of EAT for additional three fiscal years is in fluctuating trend. Thus, it is recommended for the management for the better performance.

8) From the correlation analysis, we found that there is high degree of negative correlation between LTD and NW, almost perfect positive correlation between LTD and CE, moderate degree positive correlation between TA and Sales, negative correlation between

sales and EBIT and almost perfect positive correlation between sales and cost of goods sold. The company is recommended to increase sales and decrease cost.

9) From the trend index analysis, we found that the trend index of TD, NW and CE are in fluctuating trend, the trend index of EBIT, interest and EAT are also in fluctuating trend. The trend index of total revenue, total expenditure are increasing trend but EAT is in decreasing trend. The trend index of sales and cost of goods sold are also in increasing trend but gross profit is fluctuating trend. The trend index of sales shows increasing trend but trend index of fixed assets shows fluctuating trend. So, the company should maintain the cash flow trend.

10) The cash flow is fluctuating trend. So the company should maintain the cash flow trend.

11) Now, Nepal has become the full member of World Trade Organization, therefore, Nepal has to adopt the norms and value of international trade as specified by world trade organization. The liberal terms and conditions of the internal trade and tariff must be followed by Nepal as a member of world trade organization. These conditions will create many challenges that should be face by the Nepalese industries. Thus SSU (Pvt.) Ltd. should make their management much more efficient and tactful to cope with the global prospective challenges and grape the opportunities by entering into global competition.

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