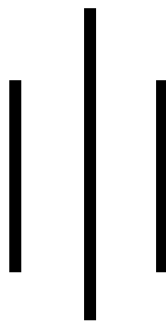


**AN ANALYSIS OF WORKING CAPITAL
MANAGEMENT OF M/S SARAWAGI PLYWOOD
INDUSTRY (PVT) LTD,**

By :

**Yogesh Bhandari
Post Graduate Campus, Biratnagar
T.U. Regd. No. 7-2-3-2055-2000**



A Thesis Submitted to
**Office of the Dean
Faculty of Management
Tribhuvan University**



*In partial fulfilment of the requirements of the degree of
Masters of Business Studies (M.B.S)
Biratnagar
September- 2009*



TRIBHUVAN UNIVERSITY
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Biratnagar, Nepal

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VIVA-VOCE SHEET

We have conducted the viva-voce examination of the thesis report presented by

Yogesh Bhandari

entitled

**An Analysis of Working Capital Management of
M/s Sarawagi Plywood Industry Pvt. Ltd.**

and found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfilment of the requirement for

Masters Degree in Business Studies (MBS)

Viva-Voce Committee

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RECOMMENDATION

This is to certify that the thesis :

Submitted by

Yogesh Bhandari

Entitled

**An Analysis of Working Capital Management of
M/s Sarawagi Plywood Industry Pvt. Ltd.**

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

I hereby declare that the data and work reported in this thesis entitled "An Analysis of working Capital management of M/s Sarawagi Plywood Industry Pvt.Ltd. submitted to the office of the Dean, faculty of Management, Tribhuvan University is my authentic work done for the partial fulfilment of the requirement of the degree of Master of Business Studies (M.B.S.) under the guidance and supervision of Prof. Dr. Madhav Bahadur Shrestha of post Graduate campus, Biratnagar, Tribhuvan University.

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Date: _____

Yogesh Bhandari

Abbreviation

| | | |
|----------|----|----------------------------------|
| σ | = | Standard Deviation |
| Acp | = | Average Collection Period |
| C.R. | = | Current Ratio |
| C.A. | = | Current Assets |
| CCC | = | Cash Conversion Cycle |
| Cl | = | Current Liabilities |
| Ct | = | Credit Turnover |
| Cv | = | Coefficient Of Variation |
| F/Y | = | Fiscal Year |
| Fa | = | Fixed Assets |
| Gpm | = | Gross Profit Margin |
| I.E. | = | That Is |
| Ibid | = | Ibidem In The Same Place Or Work |
| Icp | = | Inventory Conversion Period |
| Icp | = | Inventory Conversion Period |
| IT | = | Inventory Turnover |
| N | = | Number Of Items |
| Npat | = | Net Profit After Tax |
| Npm | = | Net Profit Margin |
| Nwc | = | Net Working Capital |
| Op. Cit. | = | Opera Ciato |
| Pdp | = | Payable Deferral Period |
| Pe | = | Probable Error |
| R | = | Correlation Coefficient |
| Rcp | = | Receivable Conversion Period |
| Rwc | = | Return On Workin |
| Spi | = | Sarwagi Plywood Industry |
| T.U | .= | Tribhuvan Uninersity |
| Ta | = | Total Assets |
| W/C | = | Working Capital |

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M/s Sarawagi Plywood Industries

Bhadrapur-2, Jhapa
(Income Statements)

For the period 1st shrwan 059 to 32nd Ashad 2063

| Particulars | Schedule | 2059 | 2060 | 2061 | 2062 | 2063 |
|----------------------------------|----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Sales | | 34,913,949.00 | 37,776,710.00 | 38,213,870.00 | 43,144,407.00 | 44,011,498.00 |
| Less : cost of sales | 16 | (30,529,770.00) | (30,285,014.00) | (31,934,902.00) | (35,387,624.00) | (32,538,537.00) |
| Gross Profit | | 4,384,179.00 | 7,491,696.00 | 6,278,968.00 | 7,756,783.00 | 11,472,961.00 |
| Less : Distribution expenses | | (82,374.00) | (2,655,511.00) | (1,997,486.00) | (3,763,160.00) | (3,776,033.00) |
| Less : Administrative overheads | 15 | (2,944,171.00) | (2,431,151.00) | (1,730,210.00) | (1,058,091.00) | (2,195,522.00) |
| Net operating profit | | 1,357,634.00 | 2,405,034.00 | 2,551,272.00 | 2,135,532.00 | 5,501,406.00 |
| Less : Interest | | (475,887.00) | (1,234,746.00) | (1,110,012.00) | (667,322.00) | (1,620,739.00) |
| Less : Depreciation | | (446,181.00) | (538,671.00) | (765,699.00) | (719,201.00) | (722,320.00) |
| Profit/loss from sales of Assets | | 27,394.00 | - | | | |
| Profit before Bouns | | 462,960.00 | 631,617.00 | 675,561.00 | 749,009.00 | 3,158,347.00 |
| Less: Bonus | | | | (67,556.00) | (74,901.00) | (315,835.00) |

| | | | | | | |
|---|----|----------------|--------------|--------------|------------|--------------|
| provision | | | | | | |
| Profit before income tax | | 462,960.00 | 631,617.00 | 608,005.00 | 674,108.00 | 2,842,512.00 |
| Provision for income tax | | (75,000.00) | (180,736.00) | (183,430.00) | 182,931.00 | (198,712.00) |
| Net profit/Loss After income tax | | 387,960.00 | 450,881.00 | 424,575.00 | 491,177.00 | 2,643,800.00 |
| Less : previous year extra income tax | | - | 85,497.00 | | | |
| Previous year profit/loss balance | | (1,144,088.00) | (756,128.00) | (390,744.00) | 33,831.00 | 525,008.00 |
| Available for Appropriation | | (756,128.00) | (390,744.00) | 33,831.00 | 525,008.00 | 3,168,808.00 |
| <u>Appropriations :</u> | | - | | | | |
| General Reserve | | - | | | | |
| Proposed Distribution | | - | | | | |
| Balance Transfer to B/S | | (756,128.00) | (390,744.00) | 33,831.00 | 525,008.00 | 3,168,808.00 |
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M/s Sarawagi Plywood Industries

Bhadrapur-2, Jhapa

(Balance sheets)

As on 31st Ashad 059 to 31st Ashad 2063

| Particulars | Schedule | 2059 | 2060 | 2061 | 2062 | 2063 |
|-------------------------------------|----------|--------------|--------------|--------------|--------------|---------------|
| <u>SOURCE OF FUNDS:</u> | | | | | | |
| A. Capital & Reserve Funds | | | | | | |
| a. Capital of Partnership Firm | | 9,850,000.00 | 9,850,000.00 | 6,700,000.00 | 6,700,000.00 | 6,700,000.00 |
| b. Reserve and Retained Earnings | | (756,128.00) | (390,744.00) | 33,831.00 | 525,008.00 | 3,168,808.00 |
| B. Medium & Longterm Loans | | | | | | |
| a. Secured Loans | | | | | | |
| b. Unsecured Loans | | | | | | |
| Grand Total | | 9,093,872.00 | 9,459,256.00 | 6,733,861.00 | 7,225,008.00 | 9,868,808.00 |
| <u>APPLICATION OF FUNDS:</u> | | | | | | |
| A. Fixed Assets | | 5,227,832.00 | 6,538,919.00 | 6,354,901.00 | 7,462,111.00 | 23,432,474.00 |
| a. Investments | | | | | | |

| | | | | | | |
|--------------------------------|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| B. Current assets | | | | | | |
| a. Inventories | | 10,747,063.00 | 7,983,927.00 | 9,279,350.00 | 3,129,873.00 | 4,318,948.00 |
| b. Trading & Other Receivables | | 5,102,682.00 | 8,895,878.00 | 4,406,441.00 | 6,278,873.00 | 3,748,800.00 |
| c. Cash and Bank Balances | | 390,167.00 | 1,495,530.00 | 208,771.00 | 181,499.00 | 387,654.00 |
| d. Advances, Loans & Deposits | | 439,260.00 | 235,242.00 | 465,586.00 | 10,333,088.00 | 7,982,673.00 |
| Total | | 21,907,004.00 | 25,149,496.00 | 20,715,049.00 | 27,385,444.00 | 39,870,549.00 |
| Less: Current Liabilities | | | | | | |
| a. Liabilities | | (12,738,132.00) | (15,509,504.00) | (13,730,232.00) | (19,902,604.00) | (29,487,194.00) |
| b. Provisions | | (75,000.00) | (180,736.00) | (250,986.00) | (257,832.00) | (514,547.00) |
| Total | | 9,093,872.00 | 9,459,256.00 | 6,733,831.00 | 7,225,008.00 | 9,868,808.00 |
| Net Current Assets | | | | | | |
| To be written off | | | | | | |
| Grand total | | 9,093,872.00 | 9,459,256.00 | 6,733,831.00 | 7,225,008.00 | 9,868,808.00 |

CHAPTER – ONE

Introduction

1.1 Background of the Study

Industrialization is one of the major activities which can play an important role in the economic development of the country. It is equally necessary for both the developed and developing countries but priority for the establishment of industries may differ. Although Nepal is an agriculture country, now a days Nepal cannot remain in isolation out of the business chain like industrialization. But manufacturing industries in Nepal has started making notable progress. Establishment of industries can only meet the targeted goal of economic development as well as other serious problems; like unemployment and poverty reduction. It also helps to uplift the economic growth save foreign exchange through export promotion, generate employment opportunities, reduce the dependency on import, better use of raw materials etc.

With the objective of increasing productivity and efficiency on investment in the public enterprises, promoting private sector initiative and participation in the operation of these enterprises, mitigating the burden of unproductive expenditure on the government treasury and thereby release resources for the economic development, Nepal government has recognized participation of these industries/enterprises as appropriate and timely. The program of privatization has been

initiated with the objective of enhancing the productivity of public enterprises by making efficiency utilization of investment, better utilization of resources, competitiveness in economy, cost reduction and number of favourable impacts.

In Nepalese context both import substituting and export promoting industries are needed. Our first attention is paid to the establishment of import substituting industries in Nepal, like Sarawagi Plywood Industries, and then our orientation is concentrated towards the industrialization of export promoting industries. These two import substituting and export promoting industries have great importance to our economy. Import substituting industries will be helpful to minimize the import of goods as well as local resources such as materials, capitals, labours etc. will get employment within the nation. Besides these industries will generate revenue more to the government and profitable export promoting industries will maximize the export of goods and will generate the income to the nation's fund. Both private and public sector have been contributing to our nation. However, the private sector is recognized as the driving force behind it with the drawn of multiparty democracy. The economic liberalization has made a sharp turn as the numbers of the industries has increased greatly.

It is very necessary to accommodate industrial development together with political, social heritage and culture of a nation. Political factor is one of the most powerful factors which determine the growth and smooth operation of every sector, until and unless it can not be improved. Most of the industries are being disturbed in smooth running due to the worse political condition. Various industries have to depend on raw materials which can only be imported from other

countries. Locally available raw materials based industries can be found rarely in our country. It is usual to open and operate the industrial institutions in huge numbers for each and every country to become economical viable. Thus, industries are considered as backbone of the economic development. Such industries, which occupy significant role for the betterment of a country, are conducted in both public and private sector. The major deviations as regards them are the economic and the industrial policies adopted by the country.

Financial management is another important device for every business organisation to smooth running and generating more income. Proper financial management is a crucial part so that industries can obtain required raw materials in time, payment of salaries and wages to personnel and labours, payment of tax to the government, payment of outsiders' liabilities on time as well. "Analyzing financial statements to quote Metcalf and Tetrad is a process of evaluating the relationship between component parts of a financial statement to obtain a better understanding of a firm's position and performance"¹ In this respect, Working Capital plays a significant role in every aspect of working capital is needed for day to day operations of the business. So, it can be considered as the life blood of any business.

Every business organization must have an adequate working capital so that they help to supply raw material to process labour, fuel, power etc., and then raw materials converts into work-in progress and it converts finally into finished goods. Working capital management is the management of current assets current liabilities of the firm. Working capital management involves managing the firm's liquidity which in turn involves managing firm's investment in current assets and

¹ M.Y. Khan.and P.K.Jain,*Management Accounting*,8th reprint 1993 A.D., Tata McGraw-Hill Publishing Company Ltd.,New Delhi , p.110

its use of current liabilities. Concept of working capital implies Gross and Net . Gross working capital concept highlights the working capital to all current assets but net working capital highlights it the difference between CA and CL.

| Working Capital | |
|-------------------------------|------------------------------|
| Gross Working Capital concept | Net Working Capital Concept |
| All current assets | Difference between Ca and CL |

Figure No. 1 Concept of Working Capital

Working Capital management helps to create of goodwill, good management of current assets and current liabilities easy for bank loan, smooth operation of business, regular supply of raw materials etc. "Working capital is needed for day to day operation of the business, so it can be considered as the life blood for any business. The management of working capital has a definite effect in the profitability and the continued existence of a business.

"The net working capital, being the difference between current assets and current liabilities, indicates the liquidity position and suggests the extent to which working capital needs may be financed by the permanent source of the fund. The importance of working capital can be collected as:

- i. A large proportion of the financial manager's time is allocated to working capital management.
- ii. More than half of the total assets are typically invested in current assets.
- iii. The relation between sales growth and the need to invest in current assets is close and direct.

- iv. Investment in fixed assets may be reduced by renting or learning, but investment in inventories and receivables is usually unavoidable.
- v. Small firm may minimize their investment in fixed assets by leaving but they can not avoid investment in cash, receivables and inventories.

A brief introduction of Sarawagi Plywood Industry, Bhadrapur.

Sarawagi Plywood Industry was established in 14th chaitra 2051 B.S. but it was running its transactions since 14th magh 2052 B.S. This is private industry and its authorised capital is Rs. 45 Lakhs of which Rs. 21 Lakhs is working capital and rest is fixed capital. This industry was established according to partnership Act 2020 and the partners are Omprakash Sarawagi and NandaKishor Sarawagi Both partners have active involvement to formation of this industry in the eastern part of Nepal. It is totally forest-based industry.

The material named face veneer, teak face veneer, core veneer, fali veneer, rolla goliachiran which are bi-product of teak plant and utis plant, are the main raw materials of phywood industry. The raw material teak plant and chemical are mainly imported from India and utis plant from various parts of Nepal. Now a day Sarwagi Plywood Industry is considered as most dominant, leading plywood manufacturing industry all over the nation. The required plants and machinery are imported

from Nepal and they are designed by India. The licensed capacity of electricity is 450 H.P. and its installed capacity is 300 H.P. The annual production of this industry is 654,000 sq. metres Per 8 hours.

This Industry has three working shift of eight hours each for all the seven working days. There is good working environment and all the required facilities are available. The Industry doesn't create industrial pollutions hence there is no need of installing pollution control device. This industry is very popular of its finished product with the brand name of 'Surya ply' among all the plywood industries. The main market of its finished product is Kathmandu (60%) and rest 40% products are supplied to the other main cities of Nepal. The industry produces plywood of different shapes and size.

In the production process of plywood, required raw materials are collected and sent to dryer machine. After this, the dried materials are chopped and sent to mix glue in the glue mixture department. Glue mixed materials are composed and sent to hot press machine to press them. The pressed materials are cut to various shape and size and sent to finishing department and finally they are stored into go down. The above mentioned long process is involved to prepare finished product.

In summary, Sarawagi plywood Industry is operating smoothly and its all practices are satisfactorily running. The industry is using manual as well as computer system for the records and accounts keeping. The industry is providing sufficient facilities to its employees as much as possible and enforced by different laws. The management of the industry has been

adopting the provision made by Nepal Government. The employer and employees both are satisfied, encouraging and motivated with the practices taken part in the industry.

1.2 Statement of the problem

The existing both private and public industries have not been able to meet the country's demand. As a result a huge amount of money is spent to import various goods to meet the demand of the country. The pace of industrialization in the country has been very slow in spite of planning efforts stretching from the first five years plan to tenth five years plan.

Every business organisation should manage working capital neither too little nor too much. Too much working capital creates expenses and too little working capital does not help to operate day to day transaction.

working capital is a circulating capital which is compared as life blood of the human being for the organisation division regarding working capital not only affects the short-run profitability but it also affects the long -run survival of the organisation .From the various studies, it is found that organisation are not able to manage the proper level of working capital and effective an efficient utilisation of it. They are not able to find out what level of working capital is suitable for their industries.

Sarawagi Plywood Industry is a leading industry through out the country. It produces plywood as the finished product with the brand name of "SURYA PLY". It has covered almost all the major cities as its main market. However it has been facing against some serious problems that have been identified in study:-

- a. The main problem of SPI is finance problem. SPI has very poor finance so it has to take maximum loan which has not been utilised properly.
- b. Working capital position is not favourable for SPI. Sometime it is facing low and sometime high working capital position which affects to inventory management.
- c. There is absence of proper investment of current assets as compared to current liabilities.
- d. Liquidity position of SPI is very low which creates many problems in inventory management.
- e. The industry's investment in receivables seems fluctuating year by year, which indicates the industry has not paid any attention towards the credit policy. The industry has not stable credit policy, which also has an adverse effect on the firm's sales revenue as well as profitability.

As above mentioned problems, the industry has many other problems which relates to inventory management, labour management, materials handling and working capital management too. The management team of SPI should be sound and effective towards these burning problems. The management should apply the best tools and techniques for obtaining the solution of the created problems.

1.3 Objective of the study :

In every organisation, working capital is considered as the key of running business transactions. Without working capital business organisation can not operate smoothly. For the operation of business, working capital should be managed in such a way that it should not be too little and too much .Too little working capital does not help to get achievement by running business and in other hand too much working capital makes burden of unnecessary expenses. I.e. it increases more expenses that are not favourable for any business organisation.

The major objective of this study is to evaluate the position of working capital of Sarawagi Plywood Industry. The specify objectives are listed as below:-

- a. To analyze the position of working capital of SPI.
- b. To analyze the size of working capital of SPI.
- c. To determine the liquidity position of SPI.
- d. To evaluate the efficiency of working capital this is observed by evaluating various turnover ratios.
- e. To list some suggestions for the improvement of their present working capital performance.

1.4 Significance of the study

Working capital is the size of investment in each type of current assets. Each of the current assets should be managed efficiently and effectively. It is because decisions regarding working capital not only affect profitability of the firm in the short run but also affect the very survivals in the long run. The Management of working capital can not be neglected by any enterprises; otherwise it can seriously erode its financial viability. Time has come for public enterprises to keep closet towards the efficient management of working capital. Public enterprises are facing certain policies issue like deficient financial planning, neglect of working capital management deviation between liquidity and turnover etc. Therefore it has been felt very necessary to evaluate working capital position and focus on the importance of working capital management in Sarawagi Plywood Industry.

1.5 Limitation of the study :

Every research work has its own limitations. This study has been suffering from the following limitations.

1. This study has been limited to the concept of working capital management only.
2. This study is fully based on secondary data which are obtained from Sarawagi Plywood Industry.
3. This study is not free from time and recourses.

4. This study has taken 5 years audited financial statements (Balance Sheet and income statement) only i.e. 2059 to 2063 B.S.
5. Limited tools and techniques have been used for evaluation of working capital.
6. The obtained information and explanations used for the purpose of the study are assumed to be true.

1.6 Organisation of the Study

The study has been classified into five broad chapters. The title of each of these units are as follows.

Chapter I- Introduction

Chapter II – Review of literature

Chapter III- Research methodology

Chapter IV- Presentation and analysis of data

Chapter V- Summary, conclusion & Recommendation

Introduction: This is the first chapter of the study. It consists of the background of the study, Statement of the problem, objective of the study, limitation of the study & organisation of the study itself.

Review of literature: The second chapter, review of literature, deals with the study of related books, journals and research works which are already published and conducted by different experts and researcher in the field.

Research Methodology : This is the third chapter of the study which describes the various aspects includes in research methodology process such as – research design, nature and sources of data, population and sample of the study, methods and tools of analysis of data viz. quantitative and qualitative tools and at last definition of key terms.

Presentation and analysis of data: This presentation and analysis of data is one of the major parts of the study. This chapter helps to fulfil by presenting and analysing the available data, It makes easy to draw conclusion and recommendation to the concerned parties in further chapter. In this chapter, various tools and techniques are used (which are already mentioned in the fourth chapter) to draw conclusion and findings as well.

Summary, Conclusion and recommendation: It is the last chapter that deals summary, conclusion and recommendation of the study. This chapter gives the result to the industry and other related parties by way of recommendation also.

Figure of Organisational Structure
Organizational Structure of M/S Sarawagi Plywood Industry Pvt.Ltd.
Bhadrapur-2, Jhapa

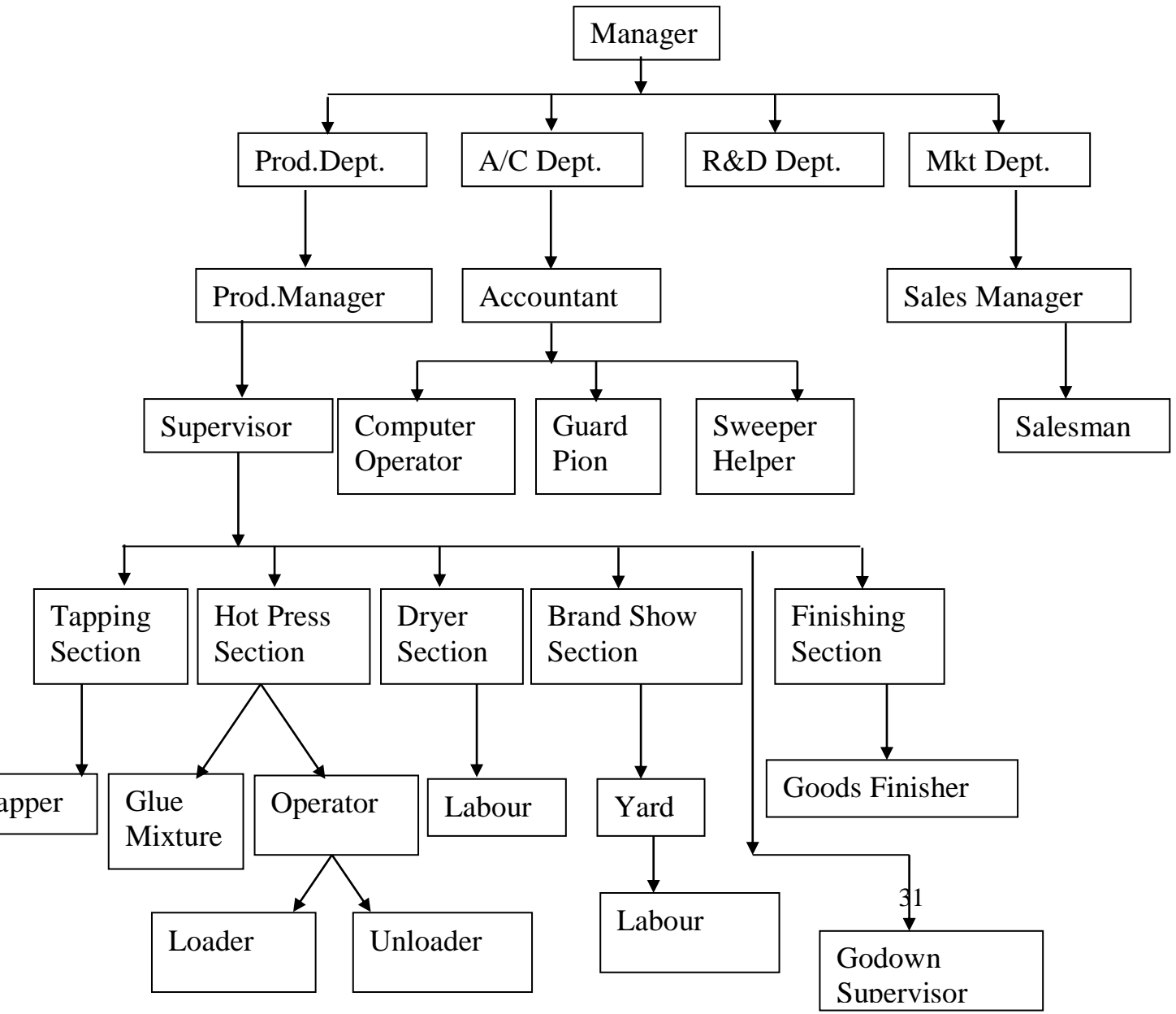


Figure No. 2 Organisational Structure of M/s Sarawagi Plywood Industry

CHAPTER –TWO

Review of the Literature

2.1 Introduction:

As the researcher has discussed about the background of the study, statement of the problems, objectives of the study, limitation of the study etc. in earlier chapter. In this chapter, the researcher has tried to review briefly about the topic 'Working capital management' through the published books and articles as well as submitted thesis to T.U. by M.B.S. students in some public and private sector enterprises in Nepal. This chapter deals with theoretical framework and review of the relevant studies. Under the theoretical framework of working capital management, it reviews the meaning and concept, classification of working capital, factors determining working capital, techniques of forecasting working capital and so on.

Working capital management plays vital role in maximizing shareholders wealth through ensuring solvency of the firm and maximizing the profit. In the context, various studies have been made regarding working capital management of some public enterprises of Nepal and some private sectors. A research study conducted by Laxmi Devi Manandhar² tried to evaluate significance of working capital management in Nepalese public corporations. In her study, she found

² Laxmi Devi Manandhar, *Significance of working capital management in Nepalese public corporation*, unpublished, master's thesis, 2046 B.S.

comparatively large amount of investment in current assets than other capital assets in most of the enterprises. She also found that the investment in inventories of manufacturing public enterprises is larger than that of non-manufacturing companies. She suggested minimizing the investment in inventories and receivables in those enterprises. Nepalese public enterprises operate in the areas ranging from industrial estates, banking, trading and sectors of a numbers of big and small manufacturing enterprises. They carry different titles as they have been established under different titles as they have been established under different legal status. Only few of them are operated as NG enterprises. They are owned and conductive organisation which are owned and controlled by public authorities and output is marketed "productive organization refers to an identification decision making which an explicit of extractable budget on which produces goods and services. Ownership refers to such entitle as such organization where more than 50% of outstanding equity is held by public authority directly and indirectly. Control means the power to be involved in the management of enterprises through the appointment of the top management, number of board of directors and chief executives. Output is said to be marketed if sales cover more than 50% of current cost which constitute largely wages and rent"³

A research study conducted by Rajendra Giri on the working capital management of Balaju Textile Industries Ltd. shows that it has positive net working capital. He noted that high current ratios were indicative of slack management practices,

³ *Performance of public Enterprises in Nepal* (Macro study) Kathmandu, June, 1997

slow moving idle isolatable inventory; a decreasing term of acid- test ratio indicated the very poor deteriorating liquidity position of Balaju Textile Industries Ltd.

The analysis made by Suresh Pradhan ⁴ tried to analyze the working capital policy of manufacturing public enterprises in Nepal. He attempted to assess the liquidity position, utilization of working capital, profitability position and sources of financing of current assets of the PEs in Nepal. He found in his study that most of them have large investment in inventories and receivables; the long term financing was accruing high portion of the total financing. He concluded that almost all the manufacturing PEs in Nepal were following conservative approach in managing their working capital.

A comparative study of working capital management in public sector brick factory conducted by **Mr. Subash chandra Shrestha**,⁵ tried to make a comparative assessment of working capital management of public sector brick factories in Nepal. He has tried to analyze various components of W/C like cash, inventory, receivable and current liabilities. His study is focussed on two government brick factories- Harisiddhi and Bhaktapur brick factory. In order to achieve the main objectives, He has studied the position of W/C management through various types of liquidity and profitability ratios. He found that there is no proper relation between liquidity turnover and profitability of two brick factories. There

⁴ R.Giri ,*Working capital management, A case study of BIIL*, unpublished master degree. Thesis,T.U. 1996, P.91-94

⁵ Suresh pradhan, *A study on w/c policy of manufacturing public enterprises in Nepal*, unpublished master degree Thesis.

is no good combination between fixed capital and working capital. The analysis shows that the W/C position is totally neglected.

It is clearly seen that most of the studies explore that working capital management is weakest and neglected part of financial management in public and private sector. They have no attention towards W/C management. W/C management is an analyzing factor that clearly shows the liquidity position, profitability position, and ability to pay the outsiders liability. Most of the studies were made on the basis of secondary data drawn from the annual audited balance sheet and profit and loss account (income statement)

2.2 Working Capital Management:

The review of journals, articles and dissertation are already highlighted in the above topics in this chapter. This topic relates the conceptual thought in working capital management. This study has made to review some books on financial management which deals with the management of W/C.

There are two types of capital- fixed capital and working capital. Fixed capital is that capital in which the management invests for long- term view. On the other hand, they are not for short-term but to more up or down in jumps when major investment decisions are made. Working capital, on the other hand, is fluncthating or short term capital which needs for

operating day to day transactions. "Working capital management is concerned with the problems that arise in attempting to manage the current assets, the current liabilities and the inter-relationship that exist between them."⁶

The term current assets refers to those assets which in the ordinary course of business can be, or will be, turned into cash within one year without undergoing a diminution in value and without disrupting the operations of the firm. The major current assets are cash, marketable securities, account receivable and inventory. Current liabilities are those liabilities which are intended at their inception to be paid in the ordinary course of business, within a year, out of the current assets or earnings of the concern. The basic current liabilities are accounts payable bills payable, bank overdraft and outstanding expenses.

The goal of working capital management is to manage the firm's current assets and current liabilities in such a way that a satisfactory level of W/C is maintained. This is so because if the firm cannot maintain a satisfactory level of W/C, it is likely to become insolvent and may even be forced into bankruptcy. The current assets should be large enough to cover its current liabilities in order to ensure a reasonable margin of safety. Each of the current assets must be managed efficiently

⁶ Subash chandra sharestha 'A comparative study of W/C management in public sector brick factories' unpublished master degree thesis.

in order to maintain the liquidity of the firm while not keeping too high a level of any one of them. Each of the short term sources of financing must be continuously managed to ensure that they are obtained and used in the best possible way.

"In short the working capital is the sources of financing current assets and it include short as well as long-term financing"⁷
Working capital management is always interested with problem which arises at the time of management of current assets and current liabilities and their interrelation. "For conventional accounting purpose current assets may be defined as those assets held for trade or production or which result from the routine operations of the business"⁸

2.3 Concept of Working Capital Mgmt. :

There are two concept of working capital. Gross and Net

The gross concept of working capital may be defined by total of current assets. Or total current assets are working capital which represents both owned capital and loan capital used for financing current assets. It includes cash, marketable securities, receivables, and inventory. These assets can be converted into cash within a year. Generally, cash is more liquid

⁷ Surendra Pradhan, *Basis of Financing Management*, Educational Enterprises (p) Ltd. Nepal 1992 P. 147.

⁸ Ibid, p.148

than that of other current assets. So cash is the most valuable factor of current assets which must be balanced. "The gross concept of working capital refers to the amount of funds invested in short term assets that are employed in the enterprises"⁹

This concept focuses attention on two aspects of current assets management.

- a. Optimal investment in current assets, the investment in current assets should be just adequate, not more not less to the needs of the firms. The careful planning and controlling of current assets will make the firm able to maximize its return on investment.
- b. The financing needed to support current assets, financing arrangement should be made quickly whenever the need for working capital funds arises. Similarly, surplus funds should be invested in short term securities.

Net working capital refers to the difference between current assets and current liabilities. "Net working capital is defined as current assets minus current liabilities"¹⁰

$$\text{Net working capital} = \text{current Assets} - \text{Current Liabilities.}$$

This concept is helpful in determining the amount and nature of assets that may be used to pay current liabilities. It indicates the liquidity position of the firm. Negative and excess liquidity both are harmful to the firm. A weak liquidity position;

⁹ Madhav Raj Koirala, *International Financial Analysis*, pointer publishers Jaipur (India) 1995 P.16

¹⁰ Eugen F. Brigham; Louis C. Gapenski; Michael C. Ehrhardt, *Financial Management*; Harcourt publishers international company, ninth edition, 1999, P.792

process a threat to the solvency of the company and makes it unsafe and unsound. Excessive may impairs the profitability of the firm, as idle funds earn nothing. This concept is also useful for determining the ability to meet future operational needs, for judicious mix of long-term and short-term funds to finance current assets. Every firm needs minimum amount of net working capital, which is permanent. Therefore a position of the working capital should be financial with permanent source of funds such as equity share capital, debentures, long term debts, preference share capital and retained earnings. Management must, therefore, decide the extend to which current assets should be financed with equity capital and borrowed capital.

Both the concepts have their own advantages and disadvantages. Which concept is more preferable depends upon the decision of management. Gross concept is could as financial concept where as net concept is caused as accounting concept. In short, gross concept is preferable to evaluate the efficiency but net concept is preferable to judge the liquidity position of the firm.

2.4 Types of working capital :

Working capital can be classified into two groups.

- I. Permanent or fixed working capital
- II. Temporary or variable working capital.

I. Permanent working capital :

As its name implied, permanent or fixed working capital is threat type of working capital which is required on a continuous basis over the entire period. In other words" It is that part of working capital, which is required to meet the firm's minimum needs in long-term, it tends to be constant in short term"¹¹

A firm's permanent working capital is the amount of current assets required to meet long term minimum needs. It is that amount of funds required to produce the goods and services necessary to satisfy demand at its lowest point.

II. Temporary or variable working capital :

Temporary working capital is temporary as variable in nature. Temporary working capital is the investment in current assets that cheques our a period this type of working capital cheques from cash to inventory, inventory to finished goods, business goods to debtors and back to cash . This type working capital varies with seasonal requirements. "Temporary working capital is crated by the firm to meet liquidity requirement that will last only temporarily"¹²

The permanent and temporary working capital an be presented in the following figure.

¹¹ I.M. Pandey,*Financial Management*, Vikash publishing House, New Delhi, 1985, P.328.

¹² I bid P.328

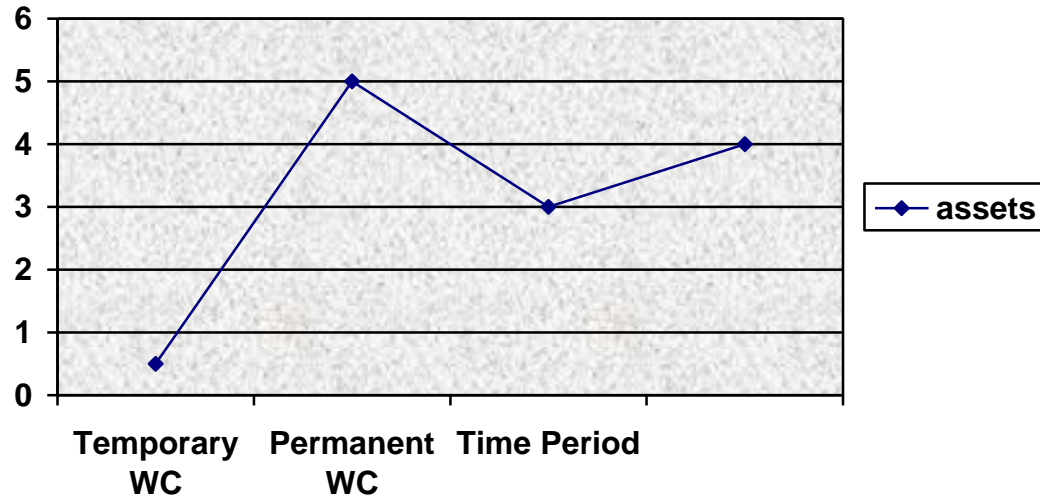


Fig. No.-3 Permanent and temporary W/C

The above figure clearly shows the trend of WC. There are two types of WC presented where permanent working capital is in stable position or neither it is in decreasing way nor in increasing way but temporary WC seems to be fundamental over a time period or it is in both the decreasing way and increasing WC. Increasing and decreasing of working capital is depending on the size of the business and requirements of the firms.

2.5 Determinants of working Capital:

In every business organisation, it is difficult to identify the amount of working capital needs. Some organisation may invest too much fund to working capital and some may invest a little fund to working capital. They do not know about the managing of WC size. Is it possible to make balanced Working capital? It is not possible to make balanced WC because various factors affect the need of working capital. Some factor the need of working capital. Some factors or determinants which affect to make balance are as follows:-

1. Nature and size of Business :

The need of WC is determined by the nature and size of business. If the size of business is large then a huge amount of WC is required but if the size of business is small then a small amount of WC is required. The trading and financial business firms require larger amount of WC relatively to public utilities.

2. Manufacturing Cycle :

Manufacturing cycle also affects the need of WC for the business manufacturing cycle is the time period of converting raw materials into finished goods. If manufacturing cycle runs for long time it needs more amount of WC where as for short time it needs less amount of working capital.

3. Credit Policy :

Current policy is a factor which affects to determine the working capital credit arises when the supplier sells his goods on credit. If supplier takes a liberal credit policy, he needs more amount of working capital but on the other hand if supplier takes a rigid credit policy then he needs less amount of working capital.

4. Growth and Expansion :

Growth and expansion of business is another factor which affects the firm to determine the need of working capital. Growing and expandable firm needs more amount of working capital whereas a stable or static firm needs less amount of WC.

5. Operating efficiency :

Operating efficiency is another important factor that affects working capital needs. It refers to the efficient utilization of available resources at minimum cost. Thus, financial manager can contribute to a strong working capital position through operating efficiency. If a firm has strong operating efficiency then it needs less working capital and vice-versa.

6. Profit Margin :

The level of profit margin differs from firm to firm .It depends upon the nature and quality of products, marketing management and monopoly power in the market. If the firm deals with the high quality product and has a sound marketing management and enjoyed the monopoly power in the market then it earns quite high profit and vice-versa profit is the source of working capital because it contributes towards the working capital as a pool by generating internal funds.

7. Rapidity of Turnover :

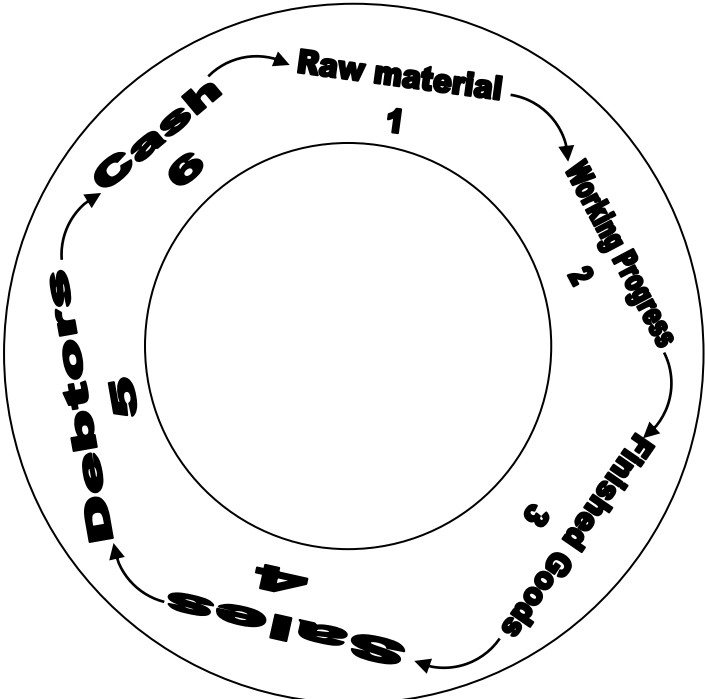
There is inverse relation between working capital and inventory turnover ratio of the ratio is high then is no need to management account of working capital but if the ratio is less then there is needed to manage more amount of working capital.

8. Terms and conditions of purchase and sale:

Working capital is affected by the terms and conditions of purchase and sale. If the terms and conditions of purchases and sale is favourable then less amount of WC can be managed otherwise in unfavourable condition more amount of working capital is needed. If purchase is made on credit and sale is made on cash then loss working capital is required but if purchases is made on cash and sale is made on credit more current of working capital is required.

9. Working Capital Cycle :

Working capital cycle also affects the working capital it starts from the purchases of raw materials and ends to selling of finished goods this cycle can be presented below.



Source: Dongol & Prajapati (Accounting for Financial Analysis and Planning) 2058 Taleju Prakashan Fig. No. Cash Conversion cycle

Fig. No.-4 Working Capital Cycle

If this cycle takes long time to convert raw material to finished goods for generating cash then more amount of working capital are required. On the other hand, if it takes short time period to convert raw material to finished goods for generating cash then less amount of working capital is required.

10. Access to money market :

Maintaining of good relation with banking and financial sector will provide more debt facility. In this situation, the firm needs less amount of working capital. If there is not debt facility then the firm should invest more amounts on working capital.

11. Cash Requirement :

Cash is one of the current assets which are essential for the successful operation of the business and as well as production cycle. Cash should be adequate and properly utilized adequate cash is also requiring maintaining good credit relations.

12. Volume of sales :

A firm maintains the CA because they are needed to support the operational activities which result in sales. As the volume of sales increase there is an increase in the investment of WC, in the cost of operation, in inventories and in receivables. The increase in CAS will result in increase in the requirement of WC.

The requirement of WC is affected by other factors, such as, government policy co-ordination in operation; production and distribution, efficient management of trade cycle, attitude of the management. The impact of socio, political, economical, technological natural, national, global, fiscal and monetary policy also has to be studied in specific cases for assessing the needs. Perhaps a swot analysis may be helpful in this context .In short working capital requirement of an organisation depends upon the factors known as the determinants of WC.¹³

2.6 Working Capital Policy:

WC policy considers the financing side of the CA. The basic question is how much of short term and long term fund should WC use to finance CA at that situation, first of all it is necessary to know about CAs and CLS which are the basic components of WC while differentiating CA from CL or CL from CA, generally a period of one year is used as a line of demarcation, which is somewhat arbitrary. It suggests that the investment in any assets or liability with a life of less than one year fall into the realm of WC management.

In an enterprise the level and quality of CAs and CLs is guided by the working capital policy and management adopted by it. Working capital involves all aspects of the administration of CA, and CLs.¹⁴ There are different types of fund sources and here we are concerned with which of them should be used at what level;. Using long term financing for short term

¹³ P. Gopala,krishna, "*Inventory and Working Capital Management* (Hand book) (1996), Macmillan India Ltd. P.46.

¹⁴ J.F. weston and E.F. Brigham, "*Managerial Finance*" (1984) the Dryden press P.284.

assets is expensive as funds will not be utilized for the full period. Similarly financing long term assets with short term financing is costly as well as inconvenient as arrangement for the new short term financing will have to be made on a continuing basis.¹⁵

WC policy involves two basic questions:-

1. What is the appropriate amount of CA for the firm to carry, both in total and for each specific amount and
2. How should Ca be financed? Should WC policy is designed to minimize the time between cash expenditures on materials and the collection of cash on sales.¹⁶ The firm policy for managing in WC should designed to achieve three goals such as, adequate liquidity, minimization of risk and contribution to maximizing firm's value.¹⁷ Generally there are three approaches to financing alternative of WC.

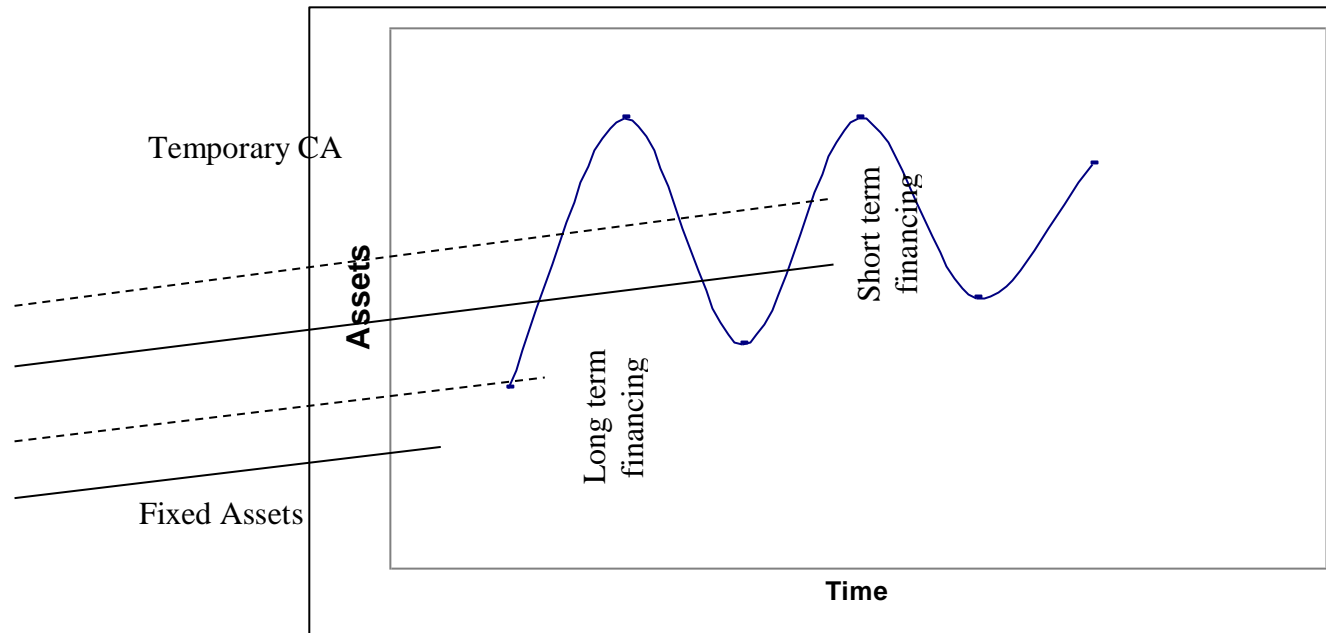
i. Aggressive approach: Aggressive approach is more risky approach. If the firm employ more of the short term funds, shorter the maturity schedule of a firm's debt obligation, the greater the risk that it will be unable to meet principal and interest payment and hence it is more risk approach. Cost of short term funds is cheaper than cost of long term funds so the return or profitability would increase but at the same time risk would also

¹⁵ I.M. Pandey: op.cit P.828

¹⁶ E.F. Brigham, Louis C. Gapanski and Mc.Hahart.op.cit p.792 , 795

¹⁷ Johan J. Hampton, "*Financial Decision Making*" (1998) Prentice Hall of India Pvt.Ltd., New Delhi, P.177-182

increase because of the greater amount of short term funds.¹⁸ Aggressive policy is highlighted by the following figure.



Source : Pandey, 1990 : 830

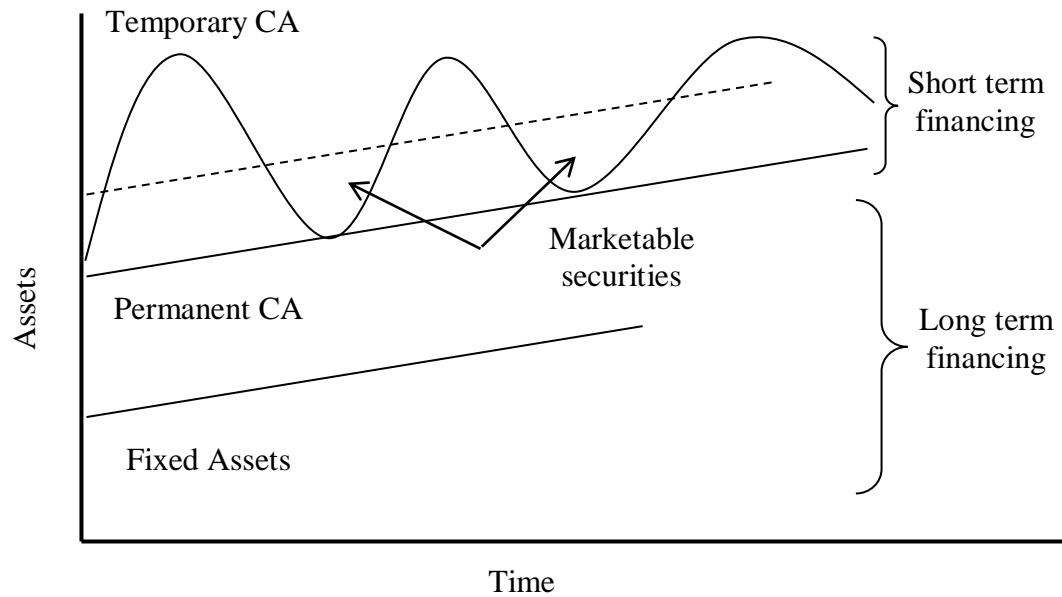
Figure No. -5 Aggressive approach

¹⁸ R.S. Pradhan, "*Financial Management*"(2004) Buddha Academic publisher and Distributors Pvt.Ltd. Ktm. P.344-346

ii. **Conservative Approach:** The less risky approach refers to financing all the assets by long term funds. Then the short term requirement is financed with long term fund, which would necessitate the payment of interest for the use of funds when they are not needed.¹⁹ Under this policy the firm finances its permanent assets and also a part of temporary Ca with long term financing. Under this policy the firm has less risk of facing the problem of shortage of funds. When the firm has no temporary CA, the long term funds released can be invested in marketable securities to build up the liquidity position of the firm.²⁰

¹⁹ Ibid P. 254

²⁰ I.M. pandey,op,cit.p.829



Source : Pradhan 2004:354

Figure No. -6 Conservative approach

- iii. **Hedging (Matching Approach):** It is a moderate approach towards financing which attempts to achieve a trade off between risk and return. The heading approach to financing suggests that each asset would be effect

with a financing instrument of the same approximate maturity.²¹ When the firm follows this approach, long term financing will be used to finance fixed assets and permanent CA and short term financing to finance temporary or versatile CA. Under this policy no short term financing will be used if the firm has a fixed CA is needed only.²² It is presented by the following figure.

There is conflict between long term and short term financing. Short term financing is less expensive than long term financing but at the same time short term financing investment greater risk than long term financing. The choice between long term and short term financing involves trade off between risk and return. The firm then should keep in mind these two dimension relation assets liquidity (level of CA) and relative financing of the WC management. A firm will be following a very conservative WC policy if it combines a high level of CA with high level of long term financing (or low level of short term financing) such a policy will not be risky at all but would be less profitable. An aggressive firm on the other hand, would combine low level of CA with low level of long term financing (or high level of short term financing). This firm risk. In fact, the firm may follow a conservative financing policy to counter its relatively liquid assets structure in practice. The consideration of all this is that the consideration of assets and financing mixes are crucial to the WC management.

²¹ R.S. pradhan, Op Cit P.353

²² I.M. Pandey, Op, Cit, P.828

In other words, the WC management focuses on the coordination control of the firms CAs and CLs. A firm finance its CAs and CLs conservatively or aggressively. An aggressive assets management policy hands to,

- a. Lower level of CAs
- b. A shorter cash conversion cycle
- c. Lower expenses and higher EBIT
- d. Higher turnover and effectively and aggressively managed, and
- e. Higher risk and higher return.

Conservation assets management policy has just the opposite effects. Other thing being equal, the lower the more conservative the firms' liability management polices and the higher the CLs the more aggressive the policy. An aggressive liability management policy results:

- (a) Higher level of CLs
- (b) Shorter cash conversion cycle
- (c) Lower interest cost (of short term rates are lower than long term rates)
- (d) Higher risk and higher return.

Conservative liability management policy have just opposite effects. As aggressive assets policy calls for low level of CAs and a conservative policy calls for a higher level, likewise an aggressive liability policy calls for high level of CL and a conservative policy calls for a low level of CL. In the wards of GE pinches – following rules are to be set²³.

- (a) If a firm has an aggressive CA position it should counterbalance its risk by employing a conservative liability positive.
- (b) If a firm has a conservative CA positive it should counterbalance its risk by employing an aggressive liability positive.
- (c) If a firm has moderate CA position, it should counterbalance its risk by employing moderate liability position.

2.7 Optimum level of current assets

The financial manager should know about the level of current assets that the wealth of shareholder's be maximised. How much current assets should be in business? It is a critical question that is very crucial for the financial manager.

A firm need fixed and current assets to support a particular level of output. However, to support the same level of output, the firm can have different levels of current assets. As the firm's output and sales increases, the need for current assets increases. Generally, current assets do not increase in direct proportion to output, current assets increase, at a decreasing rate

²³ George E pinches, "*Essential of financial management*" 2nd edition 1990, harper Collins publisher, New York, p 481-500

with output. This relationship is based upon the notion that it takes a greater proportional investment in current assets when only a few units of output are produced than it does later on when the firm can use its current assets more effectively²⁴.

Level of current assets can be measured by relating current assets to fixed assets. If current assets are divided by fixed assets then result will be CA/FA. If this ratio becomes higher then it refers to conservative current assets policy but if this ratio becomes lower then it refers to aggressive current assets policy. Higher ratio implies a greater liquidity and lower risk but lower ratio implies poor liquidity and higher risk. The current assets policy of the most firms may fall between these two extreme policies. This can be presented as the following figure.

²⁴ James G Vanhorn, *Financial Management and Policy*, New Delhi: Prentice Hall of India Pvt Ltd, p 390

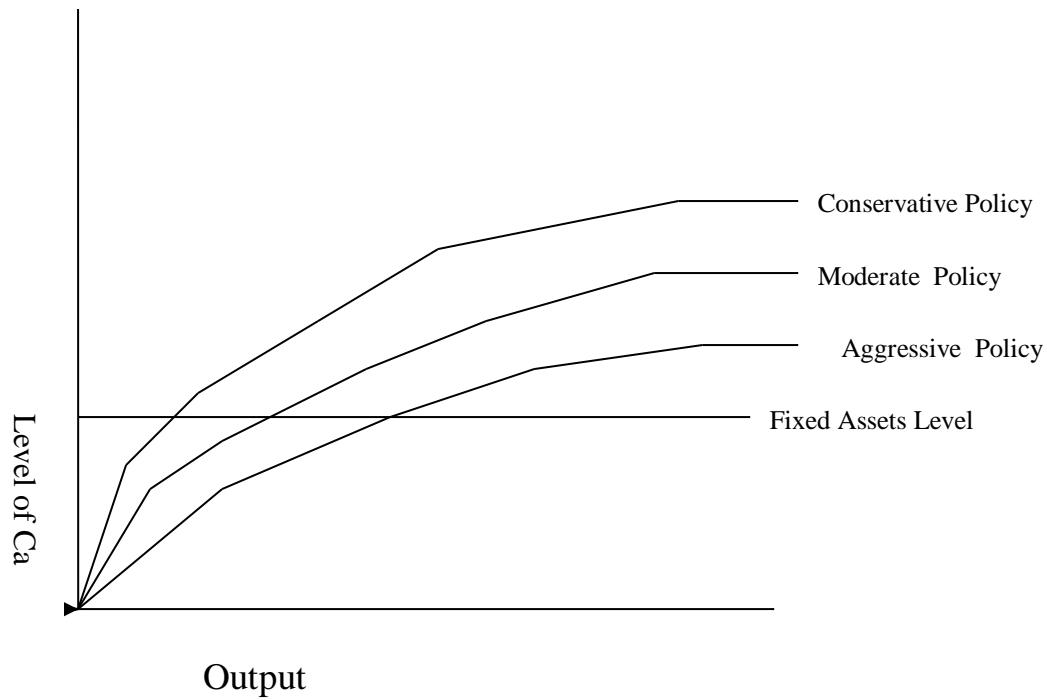


Fig. No.-7
(source I.M. Pandey . 1979)

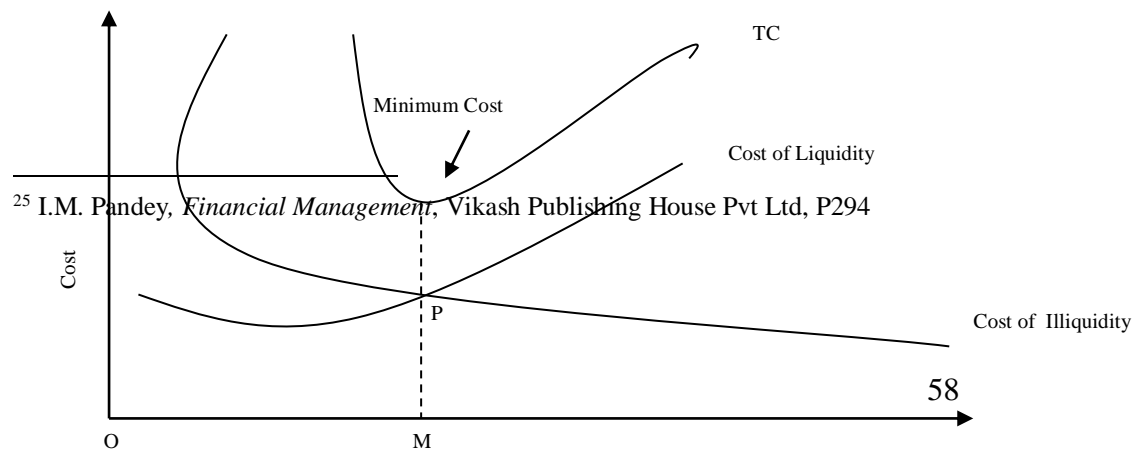
Alternative current assets policies

As above figure, conservative policy represents that the level of CA higher at every level of output while aggressive policy represents that of CA lower at every level of output and average policy represents that the level of CA average at every level of output

If the firm's level of current assets is very high, it has excessive liquidity, its return on assets will be low, as funds tied up in idle cash and stocks earn nothing and high level of debtors reduce profitability. Thus, the cost of liquidity increases with the level of current assets.

The cost of illiquidity is the cost of holding insufficient CA. The firm will not be in a position to honour its obligation if it earns too little cash. This may force the firm and it will face difficulties in obtaining funds in future. This all may force the firm into insolvency. Similarly, the low level of low level of stocks will result in loss of sales and customers may shift to competitors. Also, low level of book debts may be due to tight credit policy, which would impair sales further, thus, the low level of current assets involves cost which increases as this level falls²⁵.

In determining the level of current assets these two costs (cost of liquidity and cost of illiquidity) should balance the profitability solvency trade by minimizing the total cost.



Level of CA

Fig. No.-8 Level of CA

According to the above figure, when the level of current assets increases, the cost of liquidity also increases and the cost of illiquidity decreases. The firm should determine of CA where the total cost is lowest and the sum o these two costs are minimum. These two curves are cut each other at point P where the total cost is minimum, so the optimum level of CA is OM as indicated by figure.

2.8 Components of Current Assets:

Current assets management is a main part of financial manager. It consists the management of cash, receivables, inventories and other components of CA "Management of CA is one of the major (important) functions of the financial manager. Current assets represent all those assets, which can be converted into cash within a year. Cash debtors, stocks, marketable securities, bills receivables etc. are the basic part of current assets.

Investment on current assets is required to support the operation of business organization. More and more current assets represent better liquidity position of the firm. Current assets are not profit generating assets but they are required to perform the routine work."²⁶

2.8.1 Cash

Cash is one of the most important components of current assets. Cash is the most important current assets for the operations of the business. Cash is the basic input needed to keep the business running on a continuous basis, it is also the ultimate output expected to be realised by selling the service or product manufactured by the firm. The firm should keep sufficient cash, neither more, nor less. Cash shortage will disrupt the firms manufacturing operation, while excessive cash will simply remain idle, without contributing any thing towards the firm's profitability. Thus the primary factious of the financial manager is to maintain a sound cash position.

Cash is the most liquid current assets and includes cash in hand and cash at bank. It provides instant liquidity and can be used to meet obligation acquire assets with out any delay.²⁷

²⁷.Basu Sharma "*Financial Management*, it edition 2001 AD Taleju Prakashan, Kathmandu, P.240

²⁷ M.Y Khan and P.K. Jain P. cit. 103

2.8.2 Management of cash

The term cash includes coins, currency and cheques held by the firm, and balances in its bank accounts. Sometimes near cash terms such as marketable securities or bank time deposits, are also included in cash.²⁸ The term near cash item is that they can readily be converted into cash.

Cash management involves managing the money of the firm in order to maximise cash availability and interest income on any idle fund. It is concerned with the managing of cash inflows and outflows; cash balance maintaining, cash planning, investing, surplus cash, financing deficit cash. The basic objective of cash management is:

- (a) To meet the cash disbursement need.
- (b) To minimise fund, committed to cash balance managing collection,
- (c) Balancing cash and marketable securities.

Cash management is concerned of (i) cash flows into and out of the firm, (ii) cash flows within the firm and (iii) cash balances held by the firm at a point of time by financing deficit or investing surplus cash²⁹. It can be represented by a cash management cycle. This is shown as below.

²⁸ I.M. Pandey, Op. cit. P 839

Cash management seeks to accomplish this cycle at minimum cost. At the same time, it also seeks to achieve liquidity and control. Cash management assumes more important than other current assets productive assets that a firm holds. It is significant because it is used to pay the firm's obligations. However, cash is unproductive. Unlike fixed assets or inventories, it does not produce goods for sale; therefore, the aim of cash management is to maintain adequate control over cash position to keep the firm sufficiently liquid and to use excess cash in some profitable way.

Truly a firm should not have cash more or less than required. It must have just adequate cash. Insufficient cash threatens the liquidity and solvency position of the firm whereas cash becomes unproductive³⁰.

There must be an efficient management of cash. Basically efficient cash management is concerned with the management of cash inflow, outflow and cash flow within the firm. It also includes the matters, relating to financing of deficit and investment of surplus cash so as to maintain optimum cash balance. The basic issue of cash management is to enable a firm to maintain efficient liquidity and improve its profitability.

2.8.3 Motives for holding cash:

²⁹ I.M. Pandey, Op cit p 839

³⁰ Surya Rana, *Financial Management*, 2nd edition 2000 AD Ratna Pustak Bhandar, P 244

The firm's need to hold cash may be attributed to the following three motives:

- (1) The transitive motive
- (2) The precautionary motive
- (3) The speculative motive.

The transaction motive:

The transaction motive refers to the holding of cash, to the holding of cash, to meet routine cash requirements to finance the transaction which a firm carries on in the ordinary course of business. A firm enters into a variety of transactions to accomplish its objectives, which have to be paid for in the form of cash. For example, cash payments have to be made for purchase, wages, operative expenses, financial charges, like interest, taxed, dividends and so on. The need to hold cash would not arise, if there were perfect synchronization between cash receipts and cash payments, i.e. enough cash is received when the payment has to be made. But cash received and payments are not perfectly synchronised. Sometimes cash receipts exceeded cash payments, while at other times cash payments are more than cash receipts. When cash payments exceed cash receipts, the firm should maintain some cash balance to be able to make the required payments.

For transaction purposes, a firm may invest its cash in marketable securities. Usually, the firm will purchase the securities whose maturity corresponds with some anticipated payments, such as dividends, taxes etc, in future. However, the transactions motive mainly refers to holding cash to meet anticipated payments whose timing is not perfectly matched with cash receipts³¹.

The precautionary motive

The precautionary motive relates with future. A firm may hold its cash to meet any contingencies in future. According to this motive, holding of cash is necessary for some unexpected emergency.

The precautionary amount of cash depends upon the predictability of cash, if cash flows can be predicted with accuracy; less cash will be maintained against an emergency. The amount of precautionary cash is also influenced by the firm's ability to borrow at short notice, when the need arises. Stronger the ability of the firm to borrow at short notice, less the need for precautionary balance. The precautionary balance may be kept in cash and marketable securities. Marketable securities play an important role here. The amount of cash set aside for precautionary reason is not expected to earn anything.

³¹ I.M. Pandey Op. cit. p303

Therefore, the firm should attempt be invested in high – liquid and low risk marketable securities, Precautionary balance should, thus, be held more in marketable and relatively less in cash.³²

The speculative motive

The speculative motive relates to the holding of cash for investing in profit making opportunities as and as and when they arise. The opportunity to make profit may arise when the security prices change. The firm will hold cash, when it is expected that interest rates will rise and security prices will fall. Securities can be purchased when the interest rate is expected to fall, the firm will benefit by the sub sequent fall is interest rates and increases in security prices. The firm may also speculate on materials prices. If it is expected that materials prices will fall, the firm can postpone materials purchasing and make purchases in future when price actually alls. Some firms may hold cash for speculative purposes.

2.8.4 Cash and near cash items

There are three motives for holding cash. They are transitions motive, precautionary motive and speculative motives. These motives are adopted for profitable business to take advantages.

³² Ibid. P 303

The cash balance of a firm is influenced by credit position of the firm. Status of firm's receivables and investment's, nature of business, management to fixed assets. Besides these factors cash balance is also influenced by availability of short term credit, money market rate and variations in cash flow for effective management of cash. It is very much necessary that management should make every effort to speed up cash inflow and delay cash outflow. "It is also not necessary that management should not fail to meet its obligations, while delaying the outflow of cash"³³.

2.8.5 Receivables management

Receivables are assets accounts representing accounts owed to the firm as a result of the sale of goods or services in ordinary course of business. They play major role of conducting the business for most firms. Most of the firms do not demand immediate payments of cash when they sell the goods to their regular credit worthy customers³⁴. Increase in receivables results from several causes, increase in sales, size of cash discounts, length of credit terms, volume of delinquent accounts etc.

³³ A.K. Mukerjee, *Management of Working Capital in PEs*, Vohra Publishing and Distributors, Allahabad, 1988, P9 36, Ibid p 9

³⁴

The term receivable is defined as debt owned to firm by customers arising from sale of goods or services in the ordinary course of business when a firm makes an ordinary sale of goods or services and does not receive payment, the firm grants trade credit and created account receivables which would be collected in the future. Receivable management can also be called trade credit management. This account receivable represents an extension of credit to customer, allowing them a reasonable period of time in which they have received. For most companies account receivable is a very important investment. They constitute a substantial portion of current assets³⁵.

2.8.6 Aspect of credit policy:

The important aspect of credit policy should be identified before establishing an optimum credit policy. The important decision variables of the credit policy are: (1) credit standard (2) credit terms and (3) collection policy.

Credit standard:

The credit standard followed by the firm has an impact on sales and receivables. The sales and receivables levels are likely to be high, if the credit standards of the firm are relatively loose. In contrast, if the firm has relatively tight credit standards,

³⁵ M.Y. Khan and P.K. Jain op cit p 103

the sales and receivables levels are expected to be relatively low. The firm's credit standards are influenced by three C's of credit (a) Character the willingness of customer to pay (b) capacity the ability of the customer to pay and (c) conditions –the prevailing economic conditions³⁶.

The term credit standards represent the basic criteria for the extension of credit to customer. The quantitative basis of establishing credit standards are factors such as credit ratings, credit references, average payments period and certain financial ratios³⁷.

Credit terms:

After the credit standards have been established and the credit worthiness of the customers has been assessed, the management of a firm must determine the terms and conditions on which trade credit will be made available. The situations under which goods are sold on credit are referred as credit term. These relate to the repayment of the amount under the credit sales. Thus credit terms specify the repayment terms of receivables. The two important components of credit terms are: (1) credit period and (2) cash discount.

³⁶ I.M. Pandey op cit p 323

³⁷ P.K. Jain op cit p 696

Credit period: the time duration for which credit is extended to the customers is referred to as credit period. It is generally stated in terms of a net date.

Cash discount: cash discount is another aspect discounts to their customers in order to induce them to pay their bill early. It is usually expressed as a percentage of sales cash discount term indicate the rate of discount and the period for which discount is available. If the customers does not avail the offer, he must make payment within the normal credit period³⁸.

Collection policy:

Collection policy is another aspect of credit policy. It is necessary for the firms because all customers do not pay firm's bill in time. Some customers are slow – payers while some are non- payers. Because of non – payers customers the bad debt losses may create. In such condition, collection policy should try to reduce non – payers customers and have to try then to pay firm's bill in right time.

In order to collect slow paying accounts the firms should make the collection policy in better way. First of all, if the customers are not paying their bill, the may sent a polite letter. If the receivable still remain uncollected, letters that are

³⁸ I.M. Pandey Op at p 323

progressively strong – worded are sent. If the receivables are further uncollected, the firm finally may take legal action by checking their economic condition whether they are weak or strong. Sometime the firm should maintain patient for collection receivables. If the firm is strict in its collection policy with the permanent customers, they can be shifted to competitor's firm. This may create high uncollectible receivable and advance effect to the profitability of the firm.

2.8.7 Inventory management:

Inventories are very essential part of current assts. A manufacturing firm can not run properly without inventories. Inventories are the stocks of product or a part of product that is required for the production of any complete product. The firms of inventories are raw materials; semi finished goods or work – in – progress and finished goods. Raw materials are those units of input that have been purchased and stored for future production. Work – in – progress is the forms of inventories that are required to process before they become finished product. Finished products are those products which are ready for sales "stocks of raw materials are work – in progress facilitate production, while stock of finished goods is required for smooth marketing operation."³⁹

³⁹ Ibid, p 335

Inventory level of an enterprise is also influenced by the structure of WC. Inventory is the largest component of current assets. Higher and lower level of inventory is not suitable for production of enterprises. It can be said that reasonable level of inventory are maintained for the production and conclude that, that level of inventory does not influence the structure of working capital.

2.8.8 Motives for holding inventory:

A company should hold inventories neither excessive nor inadequate. Maintaining inventories involves tying up of the companies' funds and storage and holding costs. If it is expensive to maintain inventories, why do the companies hold inventories?

There are three general motives for holding investments⁴⁰.

1. The transaction motive: it emphasizes the need to maintain inventories to facilitate smooth production and sales operations

⁴⁰ Martin K, Starr, and W. Miller David, Inventory control: theory and practice. Englewood cliffe, N.J. Prentice Hall, 1962, p 17

2. The precautionary motive: it necessitates holding of inventories to guard against the risk of unpredictable changes in demand and supply forces and other factors.
3. The speculative motive: it influences the decision to increase or reduce inventory levels to take advantage of price fluctuations.

2.8.9 Objectives of inventory management;

The objective of inventory management should be to determine and maintain the optimum level of inventory investment. The optimum level of inventory will lie between two danger points of excessive and inadequate inventories.

The aim of inventory management should be to avoid excessive and inadequate levels of inventories and to maintain sufficient inventory for the smooth production and sales operations. Effects should be made to place an order at the right time with the right source to acquire the right quantity at the right price and quantity. An effective inventory management should:⁴¹

- a. Ensure a continues supply of materials to facilitate uninterrupted production;

⁴¹ Martin K.Starr and W.Miller David,*Inventory Control:theory and practice*,Englewood Cliffs,N.J.prentice Hall,1962.p-17

- b. Maintain sufficient stocks of raw materials in periods of short supply and anticipate price changes,
- c. Maintain sufficient financed goods inventory for smooth sales operation and efficient customer service,
- d. Minimize the carrying costs and time and
- e. Control investment in inventories and keep it at an optimum level.

2.8.10. Inventory Management technique

To manage inventory, it is necessary to maintain right balance of inventory at right time. To achieve, this, the firm should determine the optimum level of inventory. Sufficient inventories should be maintained, neither excessive nor inadequate. Efficiently controlled inventories make the firm flexible. Inefficient inventory control results in unbalanced inventory and inflexibility –the firm may be sometimes out of stock and sometimes may pile up unnecessary stock. This increases the level of investment and makes the firm unprofitable.

"To manage inventories efficiently and effectively answer should be sought to the following two questions."

1. How much should be ordered?
2. Where should it be ordered?

The first question, how much to order, relates to the problem of determining economic order quantity (EOQ) and is answered with an analysis of the costs of maintaining certain level of inventories. The second question, when to order, arises because of uncertainty is a problem of determining the re-order point. "⁴²

Economic Order Quantity (EOQ)

EOQ is the quantity of goods to be ordered which minimizes the total annual cost of inventory. The concept of EOQ was first developed by Ford W. Harris in 1913 for finding the optimum order quantity in order to balance costs of holding excess stock against that of ordering small quantities too frequently. Order quantity decisions affect the amount of inventory to be maintained at various stocking points. Large order quantities may reduce the frequency of orders to be placed to procure inventory items and reduce the total ordering cost. But this decision will increase the cycle stock inventories and cost of carrying inventories. The determination of order quantities rises the question of what order size provides the most economical trade off between relevant inventory costs i.e. ordering, carrying and stock out costs. The ordering quantity decision is stated in terms of economic order quantity (EOQ). The economic order quantity is that inventory level which minimizes the total of ordering and inventory costs."⁴³

⁴² I bid P. 338-339

⁴³ I.M. Pandey, Op cit P.339

Economic order quantity (EOQ) is determined by applying the following formula:–

$$EOQ = \sqrt{\frac{2Ao}{C}}$$

Where,

A= Total annual requirements

O=Ordering cost per order

C=carrying cost per unit.

We not from the above formula that EOQ changes directly with total requirements, and order cost, O and has an inverse relationship with the caring cost, C, however, the square-roosting restrains the relationship in both the case.

EOQ can be presented as graphically.

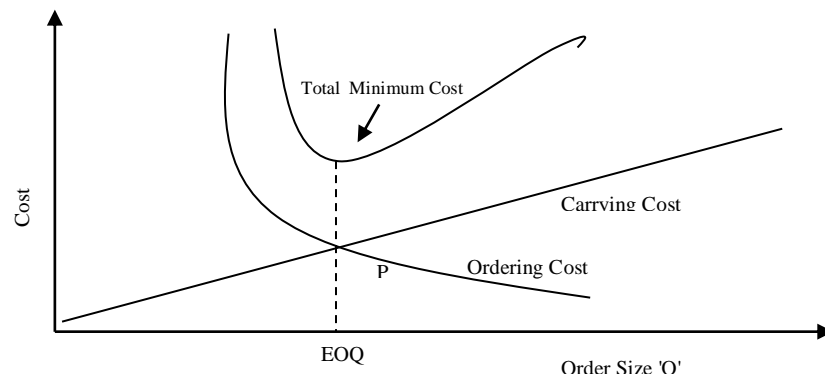


Fig. No. 9 Economic Order Quantity Function

ABC Inventory Management

"Usually a firm has to maintain several types of inventories. It is not desirable to keep same degree of control on all the items. The firm should pay maximum attention to those items whose value is the highest. The firm should, therefore, classify inventories to identify which items should receive the most effort of the firm in controlling. Thus the firm should be selective in its approach to control. Investment in various types of inventories. This analytical approach is called ABC analysis."⁴⁴

According to usage value, inventories are classified as A, B and C groups. 'A' items has the low value but highest annual value of inventories, thus are placed strict control. 'C' items represent relating small value items and would be under simple control and is paid least attention compared to 'A' items. The 'B' items are in between, having moderate volume and value and are thus moderately controlled.

2.9 Review of related Dissertations

⁴⁴Surendra Pradhan, op,cit.,.182

In the concern of working capital management in different public and private enterprises in Nepal, number of studies have been made some of the review of the same are as follows:-

A study made by Shrimala Pokharel on Working capital management of Udayapur Cement Factory Ltd. states that the major problems in Nepalese corporations behind un healthy and unsound situation is improper management of working capital since the successes and failure of any enterprises is heavily depend up on the efficient management of working capital and being a manufacturing company established in Nepal, the efficacy in the management of working capital should be analyzed. Her study attempts to analyze the poor liquidity position of various enterprises.⁴⁵

Another study has made by Mr. Jeevan Nath Sapkota on A study on working capital management in Himal cement company Ltd.. He took five years financial statements from the year of 044/45 to 048/49. He suggested that cash, receivables and inventory should be managed in optimum level. He further suggested sales target should be set to recouped and overcome the problem of loss. The company had not maintained proper liquidity position, inventory control, selling process and not adopted the rule and regulations stated by government. He had only used ratio analysis as the tools of analysing the working capital.⁴⁶

⁴⁵ Sharmila Pokharel, *A study on working capital management of Udayapur Cement Factory Ltd.* unpublihed dissertation, T.U.

⁴⁶ Jiban Nath Sapkota, *A study on working capital management on Himal cement company limited*, unpublished dissertation, T.U.

A analytical study of working capital management in public sector Brick factory has been conducted by Mr. Sushil Chandra shertha. He has analyzed various components of working capital like cash, inventory, receivables, and current liabilities. The study is based on two government Brick factories Harishiddi & Banktapur Brick factory. He found that there is on proper relation in between fixed capital and working capital portion is totally neglected. He has suggested using financial tools to forecast the working capital. The factories have to keep the record up to date according to serious regarding working capital management.

From the above review and analysis of related dissertations, it is concluded that various public and private enterprises have serious problems related to working capital. Various firms are suffering from poor management of working capital such as, unbalance position of current assets and current liabilities, huge investment on inventories less liquidity and profitability position etc. Thus it is necessary to manage various components of WC, coordination with labour personnel and management group, better leadership and sound planning and organising process and motivation because success and failure of any enterprises is heavily depend upon better management.

2.10 Review of Journals/ Articles.

This part is mainly focuses on the review of journals, articles published by different management experts relating to working capital management.

The article relating to working capital management published by Dr. K. Acharya focuses the major two problems- operational and organisational in Nepalese PEs According to him, the problem regarding operations one- increase in current liabilities then current assets, not allowing the current ratio 2:1 and slow turnover of inventory; changes in working capital in relation to fixed capital had very low imparts over the profitability; thin transportation of capital employed to sales, absent of apathetic management information system, break even analysis, ratio analysis, funds flow analysis were ineffective for performance evaluation.

On the other hand, in organizational problems, there is lack of regular internal and external audit system as well as evaluation of financial results very few. PEs have been able to present their capital requirement, functioning of finance development is not satisfactory and even facing the under utilization of capacity. He further said that finance staff should be acquainted with the modern scientific tool, optimizing the level of investment, avoid factitious holding assets, avoid the system of crises decision making process can be the better treatment of PEs.⁴⁷

⁴⁷ Sushil Chandra shrestha, *A comparative study of working capital management in public sector Brick factories*, unpublished dissertation. T.U

In the process of reviewing, Dr. Manohar K. Shrestha found the liquidity, turnover and the profitability position of those enterprises. He has written that four PEs had maintained adequate liquidity position, two had excessive and remaining four had failed to maintain desirable liquidity position. Again he found that two PEs had negative WC, four had adequate turnover on net WC. He further mentioned, six out of ten PEs were operating at losses while remaining four were getting some percentage of profits.⁴⁸

He suggested to those enterprises as identification of needed funds regular checks of accounts, development of management information system, and position attitude towards financing of long-term and short-term sources of capital.⁴⁹

Working capital has two concepts-one is gross and another is net. For this, S.C.Kuchal said the gross WC refers to the firm's investment in current assets which includes to the management of cash and refers to the difference between current assets and current liabilities.⁵⁰

⁴⁸ Dr.K.Acharya,1985," *ems anProblid impediment in the management of Working capital in Nepalese enterprises*" ISODOC, Vol 10 No.3

⁴⁹ Dr. Manohar K.Shrestha, *working capital management in public enterprises, A study on financial results and constraints* vol.8

⁵⁰ S.C.Kuchal,1993, *Financial Management*;chaitanya Publishing House University, Rial , Allahabad

CHAPTER-THREE

RESEARCH METHODOLOGY

Introduction:

Research methodology is one of the most important chapters that help to examine the working capital management of M/S Sarawagi Plywood Industry Pvt. Ltd for the researcher for the study. Research methodology is used to achieve above mentioned objectives by following various research methodology process and methods. In this chapter, focuses have been made on research design, nature and sources of data, data processing procedures and tools and tools and techniques (quantitative and quantitative) used for analysis. Research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view.^{51"}

Research Design

Research Design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to central variance."⁵²

⁵¹ C.K. Kothari" Quantitative Techniques" Vikaram Publishing house Pvt Ltd., New Delhi, 1993, p 19

⁵² Woflf K. Howard, and Pant, Prem R." A Handbook for social science research and thesis writing, '2nd edition, 1999 AD Buddha Academic Enterprises (P) Ltd Katmandu, P 50

The root of this research is to analyse the working capital management of M/S Sarawagi Plywood Industry Pvt Ltd, Research Design is a systematic planning, structure and strategy for conducting a particular research work. It provides the framework of the study. The study seeks to collect, evaluate, verify, analysis and synthesise past evidence systematically and also attempts to explore certain fact the research design for the study are historical and exploratory types.

3.3 Population and sample of the study:

The term 'population' or 'universe' for the research means all the members of any well defined class of people, events of objects. The collecting information from each member, a sub group is chosen which is believed to be representative of the population. This sub – group is called a sample and the method of chosen this sub – group id done by sampling."⁵³

The life period of M/S Sarawagi Plywood Industry is the universe of the study. The whole industries located in Nepal are population and M/S Sarawagi Plywood Industry is taken as sample of the study. It is more difficult to analyse all

⁵³ Ibid, p 75

the published financial statements of the population. So, a sample has been selected for the study. With the purpose to represent the total population five fiscal years are selected for the study.

3.4 Nature and Source of Data

The data used in this study are basically secondary in nature, but the information is also collected through discussion and interview with the employs. So, this study is based upon the secondary data presented by M/S Sarawagi Plywood Industry Pvt. Ltd. Bhadrapur. For this purpose, 5- year's financial statements i.e. income statement and balance sheets have been used.

3.5 Data processing procedure

This study is based on secondary data. Therefore, the require annual reports are collected from the industry through personal contact with the chief of the mill. All these secondary data and information are properly synthesised, arranged, tabulated in accordance with the requirement of the study.

3.6 Tools for analysis:

The major tools employed for the analysis of this study is the ratio analysis which establishes the quantitative or numerical relationship between two variables of the financial statements. Various ratios are employed and group for the analysis of composition of W/C, turnover position, liquidity position and profitability position. A part from this tool, standard deviation, correlation and test of hypothesis are also used here.

3.7 Composition of working capital:

The composition of working capital has been studies by analysing following ratios:

a) Ratio of current assets to total assets:

The ratio of current assets to total assets indicates what percentage of enterprises; total assets are invested in the form of current assets. It is calculated as:

$$\text{CATA} = \frac{\text{CurrentAssets}}{\text{TotalAssets}} \times 100$$

As the ratio increases the risk and profitability of enterprise would decrease.

b) Ratio of current assets to fixed assets:

This ratio represents the relationship between current assets and fixed assets calculated as under:

$$CAFA = \frac{\text{CurrentAssets}}{\text{FixedAssets}} \times 100$$

c) Ratio of cash and bank to total assts:

This ratio represents the relationship between cash and bank with total assts:

$$C\&BTA = \frac{\text{CashandBankBalance}}{\text{TotalAssets}} \times 100$$

The increase in ratio decreases the risk and profitability.

d) Ratio of cash and bank to current assets:

This ratio shows the relationship between cash and bank balance with current assets

$$C\&BCA = \frac{\text{CashandBankBalance}}{\text{CurrentAssets}} \times 100$$

e) **Ratio of inventors to total assets:**

This ratio states the relationship between inventories with total assets.

$$ITA = \frac{\text{Inventories}}{\text{TotalAssets}} \times 100$$

The increase in the ratio indicates liberal inventory policy or blocking of material in stock.

f) **Ratio of inventories and current assets:**

This ratio implies the relationship between inventories and current assets and calculated as:

$$ICA = \frac{\text{Inventories}}{\text{CurrentAssets}} \times 100$$

The increase in the ratio is an indication of liberal inventory policy followed by enterprise.

g) **Ratio of receivables to total assets:**

This implies the relationship between receivables and total assets:

$$RTA = \frac{\text{Re ceivables}}{\text{TotalAssets}} \times 100$$

The increase in the ratio indicates the liberal credit policy followed by enterprises

h) Ratio of receivable to current assets :

This ratio states the relationship between receivable and current assets

$$RCA = \frac{\text{Receivables}}{\text{CurrentAssets}} \times 100$$

3.8 Turnover position

For the analysis of turnover position of m/s Sarawagi Plywood Industry, the following ratios have been employed.

a) **Current assets Turnover:** This ratio indicates the number of times the current assets are turned over during the year. It is computed by dividing sales by current assets. It is also called Gross W/C turnover.

$$CAT = \frac{\text{Sales}}{\text{CurrentAssets}}$$

Increase in this ratio indicates improvement in current assets utilisation.

b) **Net working capital turnover:** This ratio shows the number of times the average net working capital turned over, during the year; it is computed by dividing sales by net working capital.

$$NWCT = \frac{\text{Sales}}{\text{NetWorkingCapital}}$$

Increase in the ratio indicates the increase in net working capital utilisation.

- c) **Turnover of cash:** This ratio indicates the number of times the average cash balance is turned over during the year.

$$CT = \frac{Sales}{CashBalance}$$

It measures the speed with which cash moves through an enterprise's operations.

- d) **Receivable turnover ratio:** This ratio indicates the number of times the receivables are turned over during the year.

$$RT = \frac{Sales}{Receivables}$$

It gives the general measure of the productivity of the receivable investment.

Inventory Turnover: This ratio indicates the number of times inventory is replaced during the year. It shows the relationship between sales and inventory level.

$$ITR = \frac{Sales}{Inventory}$$

This measures the rate of speed with which inventories move through and out of the enterprise.

3.9 Liquidity Position:

Liquidity position shows the ability in paying obligation. The liquidity position of M/S Sarawagi Plywood Industry are analysed with the help of following ratios:

- a) **Current Ratio:** This ratio reveals the solvency and financial strength of the firm. It is the basic yardstick of measuring the solvency and liquidity by position of the firm.

$$CR = \frac{\text{CurrentAssets}}{\text{CurrentLiabilities}}$$

The standard form of this ratio is 2:1 which indicates good liquidity position.

- b) **Acid Test or Quick Ratio:** This ratio measures the firm's ability to convert its current assets quickly into cash in order to meet its current liabilities or immediate cash needs.

Quick assets can be calculated as under.

$$QR = \frac{\text{QuickAssets}}{\text{CurrntLiabilities}}$$

The standard form of this ratio is 1:1 which indicates sound indicates position.

3.10 Profitability position:

Profitability is a measure of efficiency and the search for it provides an incentive to achieve efficiency. The profitability position of SPL is analysed by the following ratios.

a. **Gross Profit Ratio :**

This ratio shows the profits to relative to sales after the direct production costs are deducted. It reflects the efficiency with which management produces each unit of product.

$$GPR = \frac{\text{Gross Profit}}{\text{Sales}} * 100$$

The higher percentage represents the better efficiency of the firm.

b. Net Profit Ratio:

It is also known as net margin, which measures the relationship between net profit and sales of a firm and indicates management's efficiency in manufacturing, administrating and selling of the products.

$$NPR = \frac{Net\ Profit\ After\ Tax}{Sales} * 100$$

This ratio is the overall measure of the firm's ability to turn each rupee of sales into net profit.

c. Operating Ratio:

This ratio measures how much sales receipts are consumed in total operating expenses. Hence, it is a yard stick of operating efficiency.

$$OR = \frac{Cost\ of\ Goods\ Sold + Operating\ Expenses}{Sales} * 100$$

The higher ratio indicates the operating inefficiency of the firm.

d. Return on Total Assets:

It is a useful measure of the profitability of all financial resources invested in the firm's assets. It evaluates the use of total funds without any regard to the source of the funds.

$$ROA = \frac{Net\ Profit\ After\ Tax}{Total\ Assets} * 100$$

The increase in the ratio indicates the profitability is also increased.

e. Return on Working Capital:

f. This ratio measures the profit with respect to total current assets. It is computed by dividing net profit after tax by working capital.

$$RWC = \frac{Net\ Profit\ After\ Tax}{Working\ Capital} * 100$$

The increase in ratio indicates the efficient use of working capital to earn profit

3.11 Statistical tools

- a. **Mean:** Mean is widely used statistical tool for analyzing the working capital. It is also called an 'average'. Its value is obtained by adding together all the items and dividing this total by the number of items.
- b. **Standard Deviation:** The standard deviation of a series of values is defined as the square root of the mean of the distribution. It may be found by finding the differences ($x = X - \text{mean}$) between each individual frequency and the mean

of the distribution squaring of these differences individually adding the square deviation and dividing by N and then extracting the square of the results. The standard deviations or the root mean square deviation is the square root of the mean of the square deviations from their mean of a set of values.⁵⁴

The standard derivation measures the absolute variability of a distribution, the greater the amount of dispersion or variability, the greater the standard deviation, for the greater will be the magnitude of the deviations of the values from their mean. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series.⁵⁵ For this study, standard deviation is used where it is necessary.

Coefficient of Variations (CV)

The coefficient of variation is the most commonly used measure of relative variation. It is used in such problems where the researcher wants to compare the variability of more than two years. Greater the CV, the more variable or conversely less consistent, less uniform and less stable and less homogeneous. Lower the CV, the less variable or more consistent,

⁵⁴ G.S. Monga, *Mathematics and statistics for economics*, Vikash publishing house, new Delhi, 1987 P. 442

⁵⁵ S.P Gupta., *Statistical Methods*, S. Chand Publications, New Delhi, 1992, p 74

more uniform, more stable and homogeneous. The nature of CV is used in working capital management of SPI to see actual size of working capital.

Correlation Analysis:

Correlation analysis is the statistical tools that we can use to describe the degree to which one variable is linearly related to another.⁵⁶ Correlation analysis helps us in determining the degree of relationship between two or more variables but it does not less us anything about cause and effect relationship.

For the purpose of analysis of working capital management of SPI the correlation analysis is applied in some related places. It expresses the correlation between dependent variable and independent variables.

Simple Regression Analysis:

Regression is the determination of a statistical relationship between two or more variables. In simple regression there are only two variables, one is independent variable that affects the behaviours of dependent variable. Regression can only be

⁵⁶ Richard I Levin, Statistics of Management, Prentice Hall of India Pvt. Ltd., New Delhi, 1984, P 518

interpreted on what exists physically i.e.; there must be a physical way in which independent variable (x) can effect dependent variable (y)⁵⁷.

For the analysis of working capital management of SPI simple regression analysis is applied to locate the relationship between current assets on total assets and current assets on net sales.

Test of Hypothesis:

In order to provide a good suggestion, new experiment, observation and some of hypothetical test are applied and decision is made in the analysis of W/C. For the analysis of working capital, only two types of hypothesis are tested. They are student –'t' test and analysis of variance (F- test) student –'t' test is used in size of working capital, growth of working capital, efficiency of working capital, liquidity of working capital wherever necessary. Analysis of variance is used for determination of W/C.

Level of Significance:

Throughout the study five percent (5%) level of significance is used as the basis for rejection of any null hypothesis.

⁵⁷ C.R. Kothari, , Research Methodology Method and Techniques, Willey Eastern Ltd. New Delhi, 1992, P 174

3.12 Definition of Major Terms:

To avoid the confusion and misunderstanding the major terms in this study have been defined as follows:

- a) Working Capital: The term working capital here refers to the gross working capital. In other words, it includes total volume of the current assets of the industry.
- b) Net Working Capital: According the net concept of W/C, it means the difference between current assets and current liabilities.
- c) Current Assets: Current assets refer to those assets which can usually be converted into cash within one year. It includes cash and bank balance, receivable, inventories, prepaid expenses and deposits etc.
- d) Current Liabilities: Current liabilities are those claims customers which are expected to mature for payment within one year. It consists: creditors' provision for tax, bank loan, outstanding liabilities, deposits etc.
- e) Fixed Assets: Fixed Assets are long term assets. It consists, plant and machinery, furniture and fixtures, vehicles, office equipment, building etc.
- f) Total Assets: It is the sum of current assets and fixed assets.
- g) Investments: It includes the share of other PEs and holding of development bonds.
- h) Cash and Bank Balance: it consists of cash and bank balance in hand or at bank.
- i) Receivables: It includes the sales debtors and other debtors.
- j) Inventories: It consists of raw materials; work in process, finished goods, chemical etc.

k) Net Worth: It includes the paid up capital and reserve and retained earnings of the mill.

CHAPTER-4

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction:

This chapter is very important among all the chapters. The main objectives of this chapter are to present all collected datas of M/S Sarawagi Plywood Industries in tabular form and analyze and interpret them. For the analysis and interpretation of data various tools and techniques are used. Analysis and presentation of datas are based on five years financial statements commencing from 2058 to 063 B.S. This chapter includes various topics systematically i.e. analysis of current assets, analysis of current liabilities, analysis of net w/c, size of working capital, structure of working capital, efficiency of working capital, liquidity position, correlations coefficient, turnover position, profitability position etc.

4.2 Analysis of Current Assets:

Each and every business organization requires fixed asset as well as current assets. Fixed assets are those types of assets which ca not changes into cash within a year. Current assets are those types of assets which can change into cash within a year. Current assets are those types of assets which can change into cash within a year. Study of W/C means only the study of current assets not of fixed assets. The requirement of current assets is to operate day to day business transactions current assets include cash, bank, receivable, debtors, inventories, short-term loan & advances.

The industry needs cash to purchase raw materials and pay expenses there may not be perfect matching between cash inflow and cash outflow. The stock of raw materials is kept in order to insure smooth production and to protect against the risk of non-availability of raw materials. The industry has to invest enough funds to CA for the success of the sales activities. CAs is needed because sales do not convert into cash instantly.

The position of current assets of M/S Sarawagi Plywood Industries is summarized on the following table.

M/S Sarawagi Plywood Industries
Current Assets

| F/Y Particulars | 058/059 | 059/060 | 060/061 | 061/062 | 062/063 | Ave. % |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|-------------------------|
| Inventories | 1,07,47,063 | 79,83,927 | 92,79,350 | 31,29,873 | 43,18,948 | 42 |
| % | 64.43 | 42.90 | 64.62 | 15.72 | 26.27 | |
| Receivables | 51,02,682 | 88,95,878 | 44,06,441 | 62,78,873 | 37,48,800 | 32.68 |
| % | 30.59 | 47.80 | 30.69 | 31.52 | 22.81 | |
| Cash and Bank | 3,90,167 | 14,95,530 | 2,08,771 | 1,81,499 | 3,87,654 | 3.0 |
| % | 2.34 | 8.04 | 1.45 | 0.9 | 2.36 | 18 |
| Advances | 4,39,260 | 2,35,242 | 4,65,586 | 1,03,33,088 | 79,82,673 | 21.51 |
| % | 2.64 | 1.26 | 3.24 | 51.86 | 48.56 | |
| Total CAs | 1,66,79,172 | 1,86,10,577 | 1,43,60,148 | 1,99,23,333 | 1,64,38,075 | |

| | | | | | | |
|------------|-----|-----|-----|-----|-----|--|
| Total | 100 | 100 | 100 | 100 | 100 | |
| Percentage | | | | | | |

Source: Appendix-2

The above table clearly shows the position of current assets of M/S Sarawagi Plywood Industries Pvt. Ltd. and their fluctuation in years. SPI has invested huge amount of funds in inventories and receivables. They are major parts of current assets. The industry has invested 64.43% of inventories, 30.59% of receivables, 2.34% of cash and bank and 2.64% of loan and advances in fiscal year 2058/059. In this year, huge amount of funds are invested in inventories and less amount of funds has invested in cash and bank. By this table, huge amount has invested in receivables and less amount in advances in F/Y 2059/060; huge amount in inventories and less amount in cash and bank in F/Y 060/061, huge amount in advances and less amount in cash and bank in F/Y 061/062 and at last huge amount of fund has invested in advances and less amount of fund has invested in cash bank.

According to this table, various current assets are in fluctuating trend. Sometimes increasing way and sometimes decreasing way can be seen. The management should try to avoid this fluctuating trend and should not neglect to invest in cash and bank and advances. According to average percentage of parts of current assets, inventories are in 1st position, receivables are in 2nd position, advances are in 3rd position and cash and bank are in 4th and last position i.e. inventories 42.78%, receivables 32.68%, cash and bank 3.01% and advances are 21.51%.

4.3 Analysis of Current Liabilities:

The management of W/C is concerned with management of relationship between current assets and current liabilities. So, the study of current liabilities is also needed for the study of working capital of SPI. These are the liabilities which must pay within an accounting year. "Such liabilities are obligation to outsiders which are repayable in a short period usually within the accounting period of operating cycle of the firm."⁵⁸

The current liabilities can be categorised into fine parts. They are Sundry creditors, Short term loan, account payable, provisions and other liabilities.

⁵⁸ Khan & Jain: Op.cit. P-105.

M/S Sarawagi Plywood Industry

Current Liabilities

| F/Y Particulars | Average | 058/059 | 059/060 | 060/061 | 061/062 | 062/063 |
|---------------------------------------|----------------|---------------------|-----------------------|---------------------|-----------------------|-----------------------|
| Short term loan percentage | 65.18% | 93,68,850 73.12% | 1,03,38,950 65.90% | 65,22,106 46.65% | 1,34,77,016 66.85% | 2,20,13,554 73.37% |
| Deposits & Advance Percentage | 1.26% | 48,120 0.38% | 39,506 0.25% | 80,707 0.58% | 9,74,930 4.84% | 80,850 0.27% |
| Account Payable Percentage | 31% | 3,32,162 25.92 | 50,37,278 32.10% | 68,71,129 49.15% | 50,44,047 25.25% | 68,44,358 22.81% |
| Deferred Liabilities Percentage | 1.25% | - | 93,770 0.60% | 2,56,290 1.85% | 4,06,611 2.02% | 5,48,432 1.83% |
| Provisions Percentage | 1.30% | 75,000 0.58 | 1,80,736 1.15% | 2,50,986 1.79% | 2,57,832 1.27% | 5,14,547 1.72% |
| Total CL | | 1,28,13,132 | 1,56,90,240 | 1,39,81,218 | 2,01,60,436 | 3,00,01,741 |

| | | | | | | |
|------------------|--|------|------|------|------|------|
| Total Percentage | | 100% | 100% | 100% | 100% | 100% |
|------------------|--|------|------|------|------|------|

Source: Appendix-2

The above presented tables show the C/L of M/S Sarawagi Plywood Industry Pvt. Ltd. and their structure for 5 years from 058/059 to 062/063. In the table main share percentage of total CL has been occupied by short-term loan and accounts payable in average of 65.18% and 31.0% respectively. It indicates that major part of CA or working capital is financed through short-term financing. By observation it is found that the higher share percentage of short term loan in F/Y 062/063 which is 73.37% and lowest share percentage of short term loan in F/Y 060/061 is 46.65. On the other hand, the 2nd major part of CL is account payable and the higher share percentage of account payable in F/Y 060/061 is 49.15% and lowest share percentage of it in F/Y 062/063 is 22.81% provisions are in 3rd position and it has higher percentage in F/Y 060/061 which is 1.79% and lowest percentage in F/Y 058/059 which is 0.58% the maximum share percentage of account payable indicates high credit purchase and minimum share percentage of A/C payable indicates low credit purchase. The share of deferred liabilities is in increasing trend up to F/Y 061/062 that is 2.02% and it decreased in F/Y 062/063 that is 1.83%. By seeing the trend of deferred liabilities the industry is in good position but if it is increased more and more in future F/Y it may decrease in goodwill of the industry.

Deposits & advances and provisions are in good position because their increasing and decreasing trend is very well except in F/Y 061/062 of deposits and advances. The increasing trend of whole CL indicates the increasing position of risk of the overall organization or industry.

4.4 Analysis of Net working capital

The net working capital of the industry is concerned with the current liabilities and current assets. The net working capital is called when the total current liabilities are subtracted from the total current assets in its net concept. Gross concept says working capital means total current assets. Net working capital is margin of safety maintain by the firm. This margin of safety is financed by the firm with long term capital. The greater the amount of net working capital the greater amount of liquidity position of the firm. So, it indicates the liquidity position of the firm.

M/S Sarawagi Plywood Industry

Net Working Capital

| | 058/059 | 059/060 | 060/061 | 061/062 | 062/063 | Average |
|-------|-------------|-------------|-------------|-------------|---------------|-------------|
| Total | 1,66,79,172 | 1,86,10,577 | 1,43,60,148 | 1,99,23,333 | 1,64,38,075 | 1,72,02,261 |
| CAs | 100 | 100 | 100 | 100 | 100 | 100 |
| % | | | | | | |
| Total | 1,28,13,132 | 1,56,90,240 | 1,39,81,218 | 2,01,60,436 | 3,00,01,741 | 1,85,29,353 |
| CLS | 76.82 | 84.31 | 97.36 | 101.19 | 182.51 | 108.44 |
| % | | | | | | |
| Net | 38,66,040 | 29,20,337 | 3,78,930 | (2,37,103) | (1,35,63,666) | (13,27,092) |
| W/C | | | | | | |

Source: Appendix-2

The above table clearly shows the position of net working capital. The position of total current assets has been increasing and decreasing year by year but the position of total current liabilities has decreased in F/Y 060/061 only. By this condition, the position of net working capital can be seen negative in F/Y 061/062 and 062/063 they are Rs. 237,103 and Rs. 13,563,666 respectively. Average of net working capital is also negative which Rs. 13, 27,092. It is not favourable for

the industry. It signifies weak liquidity position. To meet the increasing trend of current liabilities the management must invest the fund in current assets otherwise it may increase the risk and decrease the profit of the industry.

4.5 Size of working capital

The size of W/C in any manufacturing concern should not be very high and very low. High W/C implies good liquidity position and less risk position or the increasing trend of W/C of the industry will be in more liquidity position the change of insolvency will be low. On the other hand, low W/C implies poor liquidity position and high rate of return. The high-low position of W/C affects both the profitability and risk. Higher percentage of CA on total assets denotes the greater liquidity position of the industry as well as lowers the risk and vice-versa.

The size of W/C can be analyzed by taking the percentage of current assets on total assets, fixed assets, sales, net working capital etc.

4.5.1 Proportion of Current Assets to Total Assets

Current assets are normally required to meet working capital, which is used to fulfil the need of daily business requirement. The size or volume of current assets differs as the base of the size as well as the nature of the business. The participation of current assets on total assets is shown in the given table.

M/S Sarawagi Plywood Industry

(Percentage of current assets on total assets)

(In Lakh Rs.)

| F/Y | Current assets | Total assets | % of CAs on TAs | % change |
|------------|-----------------------|---------------------|------------------------|-----------------|
| 2058/059 | 166.79 | 219.07 | 76.14 | - |
| 2059/060 | 186.10 | 251.49 | 74.00 | (2.14) |
| 2060/061 | 143.60 | 207.15 | 69.32 | (4.68) |
| 2061/062 | 199.23 | 273.85 | 72.75 | 3.43 |
| 2062/063 | 164.38 | 398.7 | 41.23 | (31.52) |
| Total | 860.1 | 1350.26 | 333.44 | |
| Average | 172.02 | 270.52 | 66.69 | |
| σ | 19.14 | 68.51 | | |
| C.V. | 11.13% | 25.37% | | |
| r | | | 0.139 | |
| P.E. | | | 0.295 | |

Source: Appendix-2

This ratio represents the proportion of current assets investment to total assets investment of M/S Sarawagi Plywood Industry Pvt.Ltd. for the selected five years period. The above table shows that the proportion of current assets on total assets is fluctuating. In the F/Y 2058/059 current assets volume is Rs. 16679172 which is 76.14% of total assets. In the following F/Y it is decreased to 74.00% which is 2.14% less than F/Y 058/059. The percentage of current assets on total assets is 69.32% in F/Y 060/061 which 4.68% less than F/Y 059/060. The percentage of current assets on total assets is 72.75% in F/Y 061/062 which is 3.43% more than F/Y 060/061. Fiscal year 2062/063 has 41.23% of current assets on total assets which are very less percentage and deceased by 31.52% of previous F/Y 061/062.

The average percentage of current assets on total assets is 66.69%. High level of current assets indicates good liquidity position but it adversely affects the profitability of the company because idle money can earn nothing. The trend of the relationship between current assets and total assets is generally increasing and decreasing simultaneously.

In order to test the significance of the relationship between CA and TA during the study period, Karl Pearson's Correlations coefficient (r) is calculated as 'r' is 0.139 and P.E. is 0.295.

The value shows that correlation coefficient between CA and TA during the period of study is positive and the value of r is not more than 6 P.E. so it is not considered to be significant.

The average amount of CA is Rs. 172.02, standard deviation (σ) is 19.14% and C.V. is 11.13%. Whereas average of TA is Rs. 270.05, standard deviation (σ) is 68.51 and C.V. is 25.37%. The C.V. of TA is extremely high than C.V.of CA which indicates that the high fluctuation between CA and TA.

4.5.2 Proportion of Current Assets to Fixed Assets

M/S Sarawagi Plywood Industry (Percentage of CA on FA)

(Rs in Lakh)

| F/Y | Current Assets | Fixed Assets | % of CAS on FAS | % Change |
|----------|----------------|--------------|-----------------|----------|
| 2058/059 | 166.79 | 52.28 | 319.03% | - |
| 2059/060 | 186.10 | 65.39 | 284.60% | (34.43) |
| 2060/061 | 143.60 | 63.55 | 225.96% | (58.64) |
| 2061/062 | 199.23 | 74.62 | 266.99% | 41.03 |
| 2062/063 | 164.38 | 234.32 | 70.15% | (196.84) |
| Total | 860.10 | 490.16 | 1166.73% | |
| Average | 172.02 | 98.03 | 233.35% | |
| σ | 19.14 | 68.44 | | |
| C.V. | 11.13% | 69.84% | | |
| r. | | | -0.0000043 | |
| P.E. | | | 0.30 | |

According to the above table, the trend of fixed assets are increasing and decreasing. The comparative study of current assets and fixed assets can be got through this table. The amount of fixed assets is less as compared to current assets.

In this analysis, fiscal year 058/059 is assumed to be base year. In this fiscal year the percentage of current assets on fixed assets is 319.03% which is decreased by 34.43% in F/Y 059/060; 58.64% in fiscal year 060/061; 41.03% increased in F/Y 061/062 and 196.84% decreased in F/Y 062/063. The overall ratio shows the investment of current assets in comparison with fixed assets is favourable except in F/Y 062/063 is unfavourable because investment of fixed assets is very high as compared to current assets.

By calculating Karl Pearson's correlation coefficient (r) between Current Assets and Fixed Assets is negative which is 0.0000043 -. It indicates that there is negative relationship between current assets and fixed assets. To test the reliability between CAs and FAs Probable Error (P.E.) is calculated whose value is 0.30 and 6 P.E. (r) is greater than Karl Pearson's correlation coefficient (r) it indicates insignificant between CAs and FAs. C.V. of current assets is 11.13% and of fixed assets 68.44% comparing both CVs, current assets is the best than fixed assets because CV of CA is less than CV of CA however, fluctuation trend of CA is also better than fixed assets.

4.5.3 Proportion of Receivables to Current Assets

In this era of cutthroat competition situation of the market, a credit sale plays a vital role in the development and expansion of market. Without increasing sales volume the company cannot earn profit and therefore maximize shareholder's wealth. Hence, the company should keep some provision for credit sales. The company has to arrange some working capital for this purpose. The nature and period of term of credit should be determined in advance in order to avoid the company from the deficiency of working capital. Such arrangement is basically terms as receivable management. The receivable should be perfect. Higher degrees of receivables result in unnecessary held up to W/C and low degree of receivable may cause negative results in sales volume. The following table shows the proportion of receivable to current assets.

M/S Sarawagi Plywood Industries
Proportion of receivable to current assets

(Rs in Lakh)

| F/Y | Receivables | Current Assets | % of Rec. | % Change |
|------------|--------------------|-----------------------|------------------|-----------------|
| 2058/059 | 51.02 | 166.97 | 30.56 | - |
| 2059/060 | 88.95 | 186.10 | 47.79 | 17.23 |
| 2060/061 | 44.06 | 143.60 | 30.68 | -17.11 |
| 2061/062 | 62.78 | 199.23 | 31.51 | 0.83 |
| 2062/063 | 37.48 | 164.38 | 22.80 | -8.71 |
| Total | 284.29 | 860.10 | 163.34 | |
| Average | 56.85 | 112.02 | 32.67 | |
| σ | 18.10 | 19.13 | | |
| C.V. | 31.83% | 11.12% | | |
| r. | - | - | 0.67 | |
| P.E. | | | 0.17 | |

Source: Apendix-2

Above table shows the proportion of receivable on current assets. The proportion of receivable on current assets is 30.56 in F/Y 058/059 which is assumed as base year 47.79% is in F/Y 059/060 which is increased by 17.23%, 30.68%, 30.68% is in F/Y 060/061 which is decreased by 17.11%, 31.51% is in F/Y 061/062 which is increased by 0.83% and 22.80% is in F/Y 062/063 which is decreased by 8.71%. The above table clearly shows the trend of receivable is not constantly increase or decrease. The increasing and decreasing trend of receivable is very large sometimes and very small sometimes. The average percentage of receivable on current assets is 32.67%.

According to above table standard deviation of receivable and current assets are 18.10 and 19.13 respectively. The C.V. of receivable and current assets are 31.83% and 11.12% respectively. By calculating Karl Pearson's correlation coefficient the result is 0.67 and it indicates positive relationship between receivable and current assets. The smaller C.V. is of receivable so it has high fluctuations.

To test the significance of the relationship between receivables and current assets, 6 P.E. (r) is less than calculated Karl Person's correlation coefficient (r) so it is considered to be significant.

4.5.4 Proportion of cash to current assets

Cash is just one of the raw materials which are essential to operate business of a firm strong. Therefore, cash is the major resource of W/C. It is the most liquid assets. It is needed to pay bills, to purchase raw materials and to pay debts. It

plays a vital role to achieve efficient management of W/C in all kinds of business organizations-whether they are manufacturing or non-manufacturing. Due to this, it must not be underestimated; rather it should be managed properly.

The proportion of cash and bank balance to current assets are to be shown in the following table.

M/S Sarawagi Plywood Industry
(Proportion of cash and bank balance to CA)

(Rs. In Lakh)

| Fiscal Year | Chas & Bank | Current Assets | % of Cash & Bank current assets | % Change |
|-------------|-------------|----------------|---------------------------------|----------|
| 2058/059 | 3.90 | 166.97 | 2.37 | - |
| 2059/060 | 14.96 | 186.10 | 8.04 | 5.67 |
| 2060/061 | 2.09 | 143.60 | 1.46 | -6.58 |
| 2061/062 | 1.81 | 199.23 | 0.91 | -0.55 |
| 2062/063 | 3.88 | 164.38 | 2.36 | 1.45 |
| Total | 26.64 | 860.10 | 15.14 | |
| Average | 5.33 | 172.02 | 3.03 | |
| σ | 4.89 | 19.13 | | |
| CV | 91.74% | 11.12% | | |
| r | | | 0.32 | |
| PE | | | 0.27 | |

Source: Apendix-2

Above table shows the position of cash and bank balance to current assets. Cash and bank balance is a part of current assets which are invested very low as compared to total current assets the proportion of cash and bank to current assets in fiscal year 2058/059 is 2.37% where as it increases to 8.04% in fiscal year 2059/060. The proportion of cash & bank are 1.46%, 0.91% and 2.36% in fiscal year 2060/061, 2061/062 and 2062/063 respectively. C.V. of current assets and cash & bank are 11.12% and 91.74% respectively. The lower C.V. is of current assets and higher C.V. is of cash & bank. It indicates very high fluctuation of cash & bank balance as compared to current assets.

Above table clearly shows the Karl Pearson's correlation coefficient and probable error (P.E.) is 0.32 and 0.27. To test the significance, 6 P.E. is greater than Karl Pearson's correlation coefficient so it is not considered significant relationship between cash & bank balance to current assets.

4.5.5 Proportion of inventory to current assets

Inventory is one of the components of current assets, which should be maintained effectively and efficiently. It has already been stated that the inventory should be managed neither more nor less. High investment in inventory may increase unnecessary cost and low investment in inventory may stop production.

The proportion of inventories to current assets can be presented as following table.

M/S Sarawagi Plywood Industry Proportion of inventories to current assets

(Rs. in Lacs)

| Fiscal Year | Inventories | Current Assets | % of inventories to CAS | % Change |
|-------------|-------------|----------------|-------------------------|----------|
| 2058/059 | 107.47 | 166.97 | 64.36 | - |
| 2059/060 | 79.84 | 186.10 | 42.90 | 21.46 |
| 2060/061 | 92.79 | 149.60 | 64.62 | -21.72 |
| 2061/062 | 31.30 | 199.23 | 15.71 | 48.91 |
| 2062/063 | 43.19 | 164.38 | 26.27 | -10.56 |
| Total | 354.59 | 860.10 | 213.86 | |
| Average | 70.92 | 172.02 | 42.77 | |
| δ | 29.09 | 19.13 | | |
| c.v | 41.02% | 11.12% | | |
| γ | | | -1.89 | |
| P.E. | | | -0.77 | |

Source: Appendix 2

Above table shows the position of inventories to current assets. The proportion of inventory to CAs is 64.36% in F/Y 2058/059 where as it decreases to 42.90% by 21.46% in F/Y 2059/060. In F/Y 2060/061 the proportion of inventory to current assets in 64.62% and it decreases to 15.71% in F/Y 2061/062. The proportion of inventory to current assets in F/Y 2062/063 is 26.27% which is 10.56% greater then former fiscal year.

According to above table the CV of inventory and current assets are 41.02% and 11.12% respectively. The lowest C.V is of current assets so it has less fluctuation as compared to inventories. The management should try to decrease the funds to inventory which are unnecessary. The Karl Pearson's correlation coefficient is -1.89 which indicates negative relationship between inventories and current assets. To test the significance of the relationship χ^2 P.E (γ) is calculated which results -4.62 it is less than γ so it is considered to be significant.

4.5.6 Proportion of Receivable to Sales;

Receivable is also one of the major components of working capital. In order to increase the business activities the company has to increase the sales volume. The sales volume can be increased by giving product in credit to the customers. When the firm provides its product on credit to customers the level of receivable goes up, because generally, receivable is created credit sales. The credit sales policy is applied to increase the sales volume. Hence, the increase in receivable should increase in sales level.

The following table shows the proportion of receivable to sales.

**M/S Sarawagi Plywood Industries
Proportion of Receivable to Sales**

(In Rs Lakhs)

| Fiscal Year | Receivable | Sales | % of Rec. to Sales | % Change |
|--------------------|-------------------|--------------|---------------------------|-----------------|
| 2058/059 | 51.02 | 349.14 | 14.61 | - |
| 2059/060 | 88.95 | 377.77 | 23.55 | -8.94 |
| 2060/061 | 44.06 | 382.14 | 11.53 | 12.02 |
| 2061/062 | 62.78 | 431.44 | 14.55 | -3.02 |
| 2062/063 | 37.48 | 440.11 | 8.52 | 6.03 |
| Total | 284.29 | 1980.60 | 72.76 | |
| Average | 56.86 | 396.12 | 14.55 | |
| δ | 25.29 | 34.41 | | |
| c.v | 44.48 | 8.69% | | |
| γ | | | -0.25 | |
| P.E. | | | 0.28 | |

Source: Appendix 2

The above table shows that the proportion of receivable to sales is 14.61% in F/Y 2058/059 23.55% in F/Y 2059/060, 11.53% in 2060/061, 14.55% in 2061/062 and 8.52% in 2062/063. 23.55% is the highest and 8.52% is the lowest percentage among all the Fiscal Year.

CV. of receivable is 44.48% which indicates very high fluctuation and also CV of sales is 8.69% which indicates fluctuation comparing between two CVs there is high fluctuation of receivable as compared to sales.

The correlation coefficient between receivable and sales is -0.25 which indicates negative relationship between receivable and sales. To test the significance 6.P.E is calculated, which results 1.68 which is greater than correlation coefficient ($r = -0.25$) so it is not considered to be significant.

4.6 Efficiency of Working Capital.

This segment of analysis intends to analyze the efficiency of W/C in M/S Sarawagi Plywood Industry. The efficiency of managing assets directly influences the sales volume. Business enterprises keeping high level of C/A can be demand as sound from liquidity point of view but in reality , it may be fail to achieve the anticipated profitability .Activity ratio reflects . Therefore, these ratios measure the degree of effectiveness in use of resources of firm. Thus, these ratios are also called turnover or efficiency ratio.

4.6.1 Current Assets Turnover

Sales are the most important activity for manufacturing company like Sarawagi Plywood industry. It is depended upon the rules policy market demand to survival and growth of the company. The requirement of total current assets and working capital by the company to run it as per plan. There should always be coordination among these there units as sales policy, production policy and market demand.

They directly affect each other like increase in sales volume due to increase in production. If credit sales are increased, more W/C will be required to meet the daily requirement. On the other hand, if tight sales policy is applied the amount of W/C to replace the amount held by audit sales is decreased.

The following table shows the current assets turnover.

**M/S Sarawagi Plywood Industries
Current Assets Turnover**

Rs. in Lakhs

| F/Y | Sales | CA | Ratio Sales/ CA | % Change |
|----------------|----------------|---------------|----------------------------|-----------------|
| 2058/059 | 349.14 | 166.79 | 2.09 | - |
| 2059/060 | 377.77 | 186.10 | 2.03 | 0.97 |
| 2060/061 | 382.14 | 143.60 | 2.66 | 1.31 |
| 2061/062 | 431.44 | 199.23 | 2.17 | 0.82 |
| 2062/063 | 440.11 | 164.38 | 2.68 | 1.24 |
| Total | 1980.60 | 860.10 | 11.63 | |
| Average | 396.12 | 172.02 | 11.63 | |
| C.V. | 8.72% | 11.13% | 2.33 | |

Source: Appendix 2

According to the above table sales is in increasing trend and current assets has both the increasing and decreasing trend. The average position of sales is 396.12 and average position of CA is 172.02.

The above table shows the position of current assets turnover. The current assets turnover ratio is 2.09 in fiscal year 2058/059; 2.03 in F/Y 2059/060; 2.66 in F/Y 2060/061; 2.17 in F/Y 2061/062 and 2.68 in F/Y 2062/063.

C.V. of sales is 8.72% which indicate that there is fluctuation and C.V. of current assets is 11.13% it also indicates fluctuation. Comparing both CVs of sales and current assets, there is low fluctuation of sales than current assets.

4.6.2 Net working capital turnover

Net working capital is the difference between current assets and current liabilities. This ratio explains how the net working capital has been utilized to generate sales in an organization. This ratio also gives the knowledge of the number of times the net working capital turned over during the year. It may compute net working capital turnover by dividing sales by net working capital.

$$\text{Net working capital turnover} = \frac{\text{Sales}}{\text{Net working capital}}$$

This ratio can be explained by the following table.

M/S Sarawagi Plywood Industry Net working capital turnover

(Rs. in Lakhs)

| Year | NWC | Sales | NWC Turnover |
|-------------|------------|--------------|---------------------|
| 2058/059 | 38.66 | 349.14 | 9.03 |
| 2059/060 | 29.20 | 377.77 | 12.94 |
| 2060/061 | 3.79 | 382.14 | 100.83 |
| 2061/062 | -2.37 | 431.44 | -182.04 |
| 2062/063 | -135.64 | 440.11 | -3.24 |

| | | | |
|---------|---------|---------|--------|
| Total | -66.36 | 1980.60 | -62.48 |
| Average | -13.27 | 396.12 | -12.49 |
| C.V. | -475.21 | 8.69% | |

Source: Appendix 2

From the above table, it can be said that there is a very great fluctuation of net working capital due to its negative results. The net working capital turnover ratio is 9.03 times in fiscal year 2058/059. It is increased to 12.94 times in fiscal year 2059/060. Again it is increased to 100.83 times in fiscal year 2060/061. In fiscal year 2061/062 and 062/063 there are -182.04 times and -3.24 times respectively.

C.V. of net working capital is negative which is -475.21% and C.V. of sales is 8.69% comparing both the C.V.s, net working capital has a great fluctuation.

4.6.3 Receivable Turnover and Average Collection Period

Trade credit creates book debits or account receivables. It is used as a marketing tool to maintain or expand the firm's sales. Every manufacturing firm should try to decrease credit collection period. The management has to create better credit policy. Credit policy includes credit standards, credit terms and collection efforts.

Receivable turnover indicates the number of times debtors turnover each year. Higher the value of debtor turnover, more efficient is the management of credit.

Debtors turnover ratio can be computed using this formula.

$$\text{Debtor} = \frac{\text{Credit Sales}}{\text{Average debtors}}$$

In the absence of credit sales and average debtors (i.e. opening debtors + closing debtors/2) it can be computed by dividing total sales by the year end balance of debtors.

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

Collection Period: - The average collection period measures the quality of debtors since it indicates the speed of their collections. The shorter the AP, the better the quality of debtors. An excessively long collection period implies a very liberal and inefficient credit and collection performance or too low collection period is not necessarily favourable. The industries' receivable turnover and average collection period can be seen by the following table.

$$\text{AcP} = \frac{360 \text{ days}}{\text{Re ceivable Turnover}}$$

M/S Sarawagi Plywood Industry

Receivable Turnover and Average Collection Period

| Fiscal year | Debtors/ Receivables | Sales | Rec. Turnover | ACP |
|--------------------|---------------------------------|--------------|--------------------------|------------|
| 2058/059 | 51.2 | 349.14 | 6.84 times | 52.63 days |
| 2059/060 | 88.95 | 377.77 | 4.25 | 84.71 |
| 2060/061 | 44.06 | 382.14 | 8.67 | 41.52 |
| 2061/062 | 62.78 | 431.44 | 6.87 | 52.40 |
| 2062/063 | 37.48 | 440.11 | 11.74 | 30.66 |
| Total | 284.29 | 1980.60 | 38.37 | 261.92 |
| Average | 56.86 | 396.12 | 7.67 | 52.38 |
| C.V. | 44.48% | 8.69% | | |

Source: Appendix 1 & 2.

The above table shows the receivable turnover has a fluctuating trend. It is the highest of 11.74 times in fiscal years 2062/063 and the lowest of 4.25 times in fiscal year 2059/060. The average collection period has also a fluctuating trend. It

has the highest of 84.71 days in fiscal year 059/060 and the lowest of 30.66 days in fiscal year 2062/063 and the average of 52.38 days.

From the above table it can be seen that less receivable turnover implies the highest average collection period (ACP) and more receivable turnover implies the lowest average collection period (ACP) of M/S Sarawagi plywood Industry .Comparing the both CVs there is less C.V of sales since it has less fluctuating trend.

4.6.4 Inventory Turnover and inventory conversion period (IT & ICP)

Inventory turnover ratio shows how rapidly the inventory is turning up into receivable through sales. Generally, a high inventory turnover is indicator of good inventory management. A low inventory implies excessive inventory levels than warranted by production and sales activities or a slow moving or absolute inventory. This ratio indicates the efficiency of the firm in setting its product. It also shows the relationship between inventory production and sales. Due to the help of this relation, it indicates the no. of times inventory is replaced during the year. It is calculated by dividing of sales by inventory.

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

Inventory conversion period: - Inventory conversion period is defined as the length of time required to convert raw material into finished goods. Low inventory conversion period indicates good management of processing the inventory or management production system is efficient. On the other hand, high period is not preferable because it indicates slow processing system of inventory and idle investment of it. ICP can be calculated as days in year divided by inventory turnover ratio.

$$ICP = \frac{\text{Days in a year (360)}}{\text{Inventory Turnover}}$$

Inventory Turnover Ratio (ITR) and inventory conversion period (ICP) of M/S Sarawagi Plywood Industries Pvt.Ltd. can be presented as the following table.

M/s Sarawagi Plywood Industry
Inventory conversion period

| Fiscal Year | Inventory | Sales | Inventory TR (times) | ICP (days) |
|--------------------|------------------|--------------|---------------------------------|-------------------|
| 2058/059 | 107.47 | 349.14 | 3.25 | 110.77 |
| 2059/060 | 79.84 | 377.77 | 4.73 | 76.11 |
| 2060/061 | 92.79 | 382.14 | 4.12 | 87.38 |
| 2061/062 | 31.30 | 431.44 | 13.78 | 26.12 |
| 2062/063 | 43.19 | 440.11 | 10.19 | 35.33 |
| Total | 354.59 | 1980.60 | 36.07 | 335.71 |
| Average | 70.92 | 396.12 | 7.21 | 67.14 |
| C.V. | 41.02% | 8.69% | | |

The above table shows the inventory turnover ratio and inventory conversion period of M/S Sarawagi Plywood industry. Inventory turnover ratio has a fluctuating trend. It has the highest of 13.78 times in fiscal year 2061/062 and the lowest of 3.25 times in fiscal year 058/059 and the average 7.21 times. The highest inventory turnover is preferable for the company.

The inventory conversion period of M/S SPI has also a fluctuating trend. It has the highest of 110.77 days in fiscal year 2058/059 and the lowest of 26.12 days in fiscal year 2061/062 and the average of 67.14 days. The lower inventory conversion period is preferable for any company.

Comparing the both CVs there is a great fluctuating trend of inventory than sales due to its highest C.V.

4.6.5 Credit Turnover and Payables Deferral period

Credit turnover indicates the number of times creditor's payment made in a year. Generally, low credit turnover ratio is preferable. Lower turnover ratio creates longer period to make the payments to creditors. This ratio can be calculated as purchase divided by creditors.

$$\text{Credit turnover} = \frac{\text{Purchase}}{\text{Creditors}}$$

Payable Deferral period is defined as the average length of times between the purchase of raw materials and payment of cash for them. The firm might have to pay for labour and material on average 30 days. It can be calculated as number of days in a year divided by credit turnover. Generally, longer period of payments days are preferable.

$$\text{PDP} = \frac{\text{Number of days in a year}}{\text{Credit Turnover}}$$

Credit turnover and payable deferral period of M/S Sarawagi Plywood Industry can be presented by the following table.

M/S Sarawagi Plywood Industry
Credit turnover ratio and payable deferral Period

| F/Y | Creditors | Purchase | CT | PDP |
|------------|------------------|-----------------|------------|------------|
| 2058/059 | 33.21 | 247.43 | 7.45 times | 48.32 days |
| 2059/060 | 51.31 | 217.22 | 4.23 | 85.11 |
| 2060/061 | 71.27 | 278.79 | 3.91 | 92.07 |
| 2061/062 | 54.51 | 251.16 | 4.61 | 78.09 |
| 2062/063 | 73.93 | 273.17 | 3.69 | 97.56 |
| Total | 284.23 | 1267.77 | 23.89 | 401.15 |
| Average | 56.85 | 253.55 | 4.78 | 80.23 |
| C.V. | 26.03% | 8.61% | | |

The above table shows the fluctuating trend of credit turnover ratio of M/S Sarawagi Plywood Industry for the study period. It has the highest credit turnover 7.45 times fiscal year 2058/059 and the lowest 3.69 times in fiscal year 062/063 and the average is of 4.78 times.

Payable deferral period of M/S SPI has also fluctuating trend. It has the highest of 97.56 days in fiscal year 2062/063 and the lowest of 48.32 days in fiscal year 2058/059. The average pdp is 80.23 days.

Comparing both the CVs; 26.03% is of creditors which is greater than CV of purchase. It indicates that creditors have less consistency and great variability.

4.6.6 Cash Conversion Cycle (CCC)

Cash conversion cycle is the combination of three components which are ICP, RCP and PDP. It is the length of times of the firm's actual expenditure on productive sources to its own collection of cash from the sale of products. The cash conversion cycle measures the length of time of the firm's funds has tied up on working capital. It is calculated by using following formula.

$$CCC = ICP + RCP - PDP$$

Cash conversion cycle of M/S Sarawagi Plywood Industry can be presented by the following table.

M/S Sarawagi Plywood Industry
Cash Conversion Cycle

| F/Y | ICP | RCP | PDP | CCC |
|------------|-------------|------------|------------|-------------|
| 2058/059 | 110.77 days | 52.63 days | 48.32 days | 115.08 days |
| 2059/060 | 76.11 days | 84.71 | 85.11 | 75.71 |
| 2060/061 | 87.38 days | 41.52 | 92.07 | 36.83 |
| 2061/062 | 26.12 days | 52.40 | 78.09 | 0.43 |
| 2062/063 | 35.33 days | 30.66 | 97.56 | -31.57 |
| Total | 335.71 | 261.92 | 401.15 | 196.48 |
| Average | 67.14 | 52.38 | 80.23 | 39.30 days |
| C.V. | 47.51% | 34.52% | 21.50% | |

According to the above table it can be seen that the highest CCC is 115.08 days in fiscal year 2058/059 and the lowest CCC is –31.57 days in fiscal year 2062/063. The negative CCC has come due to the higher payable deferral period. The average CCC is 39.30 days. As the result of C.V., the highest is 47.57% of ICP and the lowest is 21.50% of PDP. From these results, it can be said that ICP has least consistency and great variability and PDP has great consistency and least variability.

4.7 Liquidity Ratios

Liquid assets play vital role for every business organization. It is very necessary to operate business transaction smoothly. The company needs liquid assets to meet its current or short term obligations when they become due for payment. The most important objective of adopting appropriate working capital policy is to maintain appropriate liquidity position. Liquidity should be neither high nor low. Higher liquidity indicates better positions of the company which reduce the risk of insolvency as well as it increases the cost of holding unnecessary current assets and decrease the profitability of the company. On the other hand, lower liquidity indicates weak financial position of the company and it creates the problem to make the payment for daily operation to the workers, creditors and short term obligation. Lower liquidity position reduces the goodwill of the firm. The firm should ensure that it does not suffer from lack of liquidity and it does not have excess liquidity.

Liquidity ratios of the firm measure the short term ability to pay its outsiders obligations. It is necessary to calculate and analyze liquidity position to support the working capital management of the firm liquidity ratios involve (i) current ratio and (ii) quick ratio.

4.7.1 Current Ratio (CR)

Current ratio is the relationship between current assets and current liabilities. It measures the short term solvency of the firm. It indicates the availability of current assets in rupees for every one rupee of current liability. Current ratio greater than one means current assets is greater than current liabilities and it indicates the soundness of liquidity position of the firm.

The standard current ratio is 2:1. If the ratio is less than 2:1 it is not good solvency position of liquid assets. If the current ratio is more than 2:1, the company may have an excessive investment in current assets that do not produce a return.

The following table shows the current ratio of M/S Sarawagi Plywood Industry.

M/S Sarawagi Plywood Industries
Current Ratio

| Fiscal Year | Current Assets | Current Liabilities | Current Ratio |
|--------------------|-----------------------|----------------------------|----------------------|
| 2058/059 | 166.79 | 128.13 | 1.30:1 |
| 2059/060 | 186.10 | 156.90 | 1.19:1 |
| 2060/061 | 143.60 | 139.81 | 1.03:1 |
| 2061/062 | 199.23 | 201.60 | 0.99:1 |
| 2062/063 | 164.38 | 300.02 | 0.55:1 |
| Total | 860.10 | 926.46 | 5.06 |
| Average | 172.02 | 185.29 | 1.01 |
| C.V. | 11.13% | 33.76% | |

Source: Appendix-2

The above table shows that the current ratio of M/S Sarawagi Plywood Industry. The highest current ratio is 1.30 times and the lowest is 0.55 times. According to the standard norms, a current ratio having 2:1 is satisfactory but it is not necessary to maintain this standard norms. Generally this ratio should be more than one. Current ratio having 0.99 and 0.55

times in fiscal year 2061/062 and 2062/063 respectively are below the general standard. So, it is not good solvency, position in the last two fiscal years except earlier three fiscal years. In the case of SPI, the industry is not able to pay its obligation in the last two fiscal years. Holding of higher level of current assets affect the profitability of the industry because holding the maximum level of current assets earn nothing but increase the holding cost which could be utilized in other productive purpose.

The C.V. of current assets and current liabilities are 11.13% and 33.76% respectively. Comparing the both CVs current liabilities has greater CV. So it has less consistency and great variability.

4.7.2 Acid Test or Quick Ratio

Acid test or quick ratio is the relationship between quick assets and current liabilities. Quick or liquid assets are those types of assets which can be converted into cash immediately or within a year. This type of assets includes cash and bank balance, bills receivable or debtors and marketable securities. Inventories and prepaid expenses are not included into quick or liquid assets. Acid test or quick ratio can be calculated by using following formula.

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

The standard norms of this ratio are 1:1 and higher quick ratio is better for liquidity position. The following table shows the quick ratio of SPI.

M/S Sarawagi Plywood Industry

Quick Ratio

| Fiscal Year | Quick Assets | Current Liabilities | Quick ratio (times) |
|--------------------|---------------------|----------------------------|----------------------------|
| 2058/059 | 59.32 | 128.13 | 0.46 |
| 2059/060 | 106.27 | 156.90 | 0.68 |
| 2060/061 | 50.81 | 139.81 | 0.36 |
| 2061/062 | 167.93 | 201.60 | 0.83 |
| 2062/063 | 121.19 | 300.02 | 0.40 |
| Total | 505.52 | 926.46 | 2.73 |
| Average | 101.10 | 185.29 | 0.55 |
| C.V. | 42.36% | 33.76% | |

Source: Appendix-1

The above table shows the quick ratio in fluctuating trend. The highest of the ratio is 0.83 times in fiscal year 061/062 and the lowest of the ratio is 0.36 times in fiscal year 060/061 and the average is 0.55 times. The quick ratio indicates the availability of rupees of liquid assets for every rupee of current liabilities. Higher the ratio the greater margin of safety for

short term creditors and vice-versa. The liquidity ratio is not satisfactory due to below the standard level. To maintain it optimum, the industry should increase its quick assets.

The C.V. of quick assets is 42.36% and the C.V. of current liabilities is 33.76%. Comparing both the C.V.s quick assets has more than current liabilities. Hence, it has great variability and less consistency.

4.8 Profitability Position

Every company has the objective of maximizing profit and their value of share. Every business organizations are to the motivated to earn more profit to survive and grow over a long period of time. But the business organization should consider the social responsibilities as well as profit. Profit is necessary to sustain the operations of the business to be able to obtain funds from investors for expansion and growth and to contribute towards the social overheads for the welfare of the society. The profitability ratios are calculated to measure the operating efficiency of the company.

4.8.1 Gross profit margin

Profitability position is evaluated by calculating the gross profit margin. Gross profit is the amount which is the excess of net sales over cost of goods sold. The gross profit margin measures the efficiency of the firm. A high gross profit margin indicates that the firm is able to produce at relatively lower cost. A high gross profit margin may increase due to the higher sales price and lower cost of production. High gross profit margin indicates the symbol of good management.

The gross profit margin is calculated dividing gross profit by ratio.

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

The following table shows the gross profit margin of M/S Sarawagi Plywood Industry.

**M/S Sarawagi Plywood Industry
Gross Profit Margin**

(Rs. in Lakhs)

| F/Y | Gross Profit | Sales | Gross Profit Margin |
|----------------|---------------------|----------------|----------------------------|
| 2058/059 | 43.84 | 349.14 | 12.56% |
| 2059/060 | 74.92 | 377.77 | 19.83% |
| 2060/061 | 62.79 | 382.14 | 16.43% |
| 2061/062 | 77.57 | 431.44 | 17.98% |
| 2062/063 | 114.73 | 440.11 | 26.07% |
| Total | 373.85 | 1980.60 | 92.87% |
| Average | 74.77 | 396.12 | 18.57% |
| C.V. | 23.26% | 8.69% | |

The above table shows that the gross profit margin of M/S Sarawagi Plywood Industry. The gross profit margin of this industry is in fluctuating trend over the study period. The highest gross profit margin is 26.07% in fiscal year 062/063 and the lowest is 12.56% in 058/059 and the average is 18.57%. It indicates better gross profit margin of this industry. Since, the C.V. of gross profit is 23.26% and it is greater than the C.V. of sales which indicates greater variability in gross profit.

4.8.2 Net Profit Margin

Net profit margin indicates the relationship between net profit and sales. Net profit is the margin after deducting office overheads, administrative overheads and selling overheads from the gross profit. A firm with a high net profit margin ratio would be in an advantageous position to survive in the face of falling sales price, rising cost of production or declining demand for the product. If the net profit is adequate the firm will be able to achieve satisfactory return on shareholder's funds.

The net profit margin ratio can be calculated by using the following formula.

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

The following table shows the net profit margin of M/S Sarawagi Plywood Industry.

M/S Sarawagi Plywood Industry

Net Profit Margin

(Rs. in Lakhs)

| F/Y | NPAT | Sales | NPM |
|----------|---------|---------|--------|
| 2058/059 | 3.88 | 349.14 | 1.11% |
| 2059/060 | 4.51 | 377.77 | 1.19% |
| 2060/061 | 4.25 | 382.14 | 1.11% |
| 2061/062 | 4.91 | 431.44 | 1.14% |
| 2062/063 | 26.44 | 440.11 | 6.01% |
| Total | 43.99 | 1980.60 | 10.56% |
| Average | 8.80 | 396.12 | 2.11% |
| C.V. | 100.31% | 8.69% | |

The above table shows the net profit after tax is in increasing trend. According to net profit margin the percentage is very low but it is good indication for the industry. The highest percentage of net profit margin is 6.01% and the lowest percentage of NPM is 1.11% which is in two fiscal years. The average net profit margin is 2.11%. Although the net profit margin is in good condition, it is necessary to increase the percentage of NPM.

According to the above table the C.V. of net profit is 100.31% which is very high as compared to sales. It indicates that net profit has very high variability and very less consistency.

4.8.3 Return on Total Assets

This ratio shows the relationship between total assets and net profit. This ratio measures the capacity of the company to generate profit from its investment on total assets. The higher the ratio the greater is the performance of the company. Low ratio indicates low return in respect of investment. Return on total assets can be obtained by using following formula.

$$\text{Return Total Assets} = \frac{\text{Net profit after Tax}}{\text{Total Assets}}$$

The following table the position of return on total assets.

M/S Sarawagi Plywood Industry
Return on total assets

| F/Y | NPAT | Total Assets | Return on Total Assets |
|------------|-------------|---------------------|-------------------------------|
| 2058/059 | 3.88 | 219.07 | 1.77% |
| 2059/060 | 4.51 | 251.49 | 1.79% |
| 2060/061 | 4.25 | 207.15 | 2.05% |
| 2061/062 | 4.91 | 273.85 | 1.79% |
| 2062/063 | 26.44 | 398.71 | 6.63% |
| Total | 43.99 | 1350.27 | 14.03% |
| Average | 8.80 | 270.05 | 2.81% |
| C.V. | 100.31% | 25.37% | |

From the above table, it can be seen that return on total assets are in fluctuating trend. The highest ratio is 6.63% in fiscal year 2062/063 and the lowest ratio is 1.77% in fiscal year 2058/059. The average return on total assets is 2.81%. The percentage of return on total assets is very low due to the higher administration expenses and previous year's losses. The

ratio has come positive but it is not satisfactory level. In the case of M/S SPI, it is inefficient in investing and utilization its resources. It can be concluded that the ratio should be increased in respect of M/S SPI.

4.8.4 Return on working Capital

The ratio of return on working capital measures the profit with respect to total current assets. It measures the success and failure to utilize the working capital of the company. Higher ratio indicates greater utilization of current assets. In other word, higher ratio is preferable for the company.

Return on working capital is calculated as net profit after tax divided by current assets.

$$RWC = \frac{\text{Net profit after Tax}}{\text{Current Assets}}$$

Return on working capital of M/S Sarawagi Plywood Industry is presented to the following table.

M/S Sarawagi Plywood Industry Return on Working Capital

(Rs. in Lakh)

| F/Y | Net profit after tax | Working Capital (CA) | RWC |
|-----|----------------------|-------------------------|-----|
| | | | |

| | | | |
|----------|---------|--------|--------|
| 2058/059 | 3.88 | 166.79 | 2.33% |
| 2059/060 | 4.51 | 186.10 | 2.42% |
| 2060/061 | 4.25 | 143.60 | 2.96% |
| 2061/062 | 4.91 | 199.23 | 2.46% |
| 2062/063 | 26.44 | 164.38 | 16.08% |
| Total | 43.99 | 860.10 | 26.25% |
| Average | 8.80 | 172.02 | 5.25% |
| C.V. | 100.31% | 11.13% | |

The above table shows the position of return on working capital of M/S Sarawagi Plywood Industry. It has the fluctuating trend of RWC. It has the highest of 16.08% in fiscal year 062/063 and the lower of 2.33% in fiscal year 058/059. The average RWC is 5.25%. The high ratio indicates better financial position of the industry and low ratio indicates poor management of working capital. The management of working capital should try to increase this ratio as for as possible. According to the above table this industry has satisfactory level of return on working capital.

The C.V. of net profit after tax is 100.31% and current assets are 11.13%. Net profit after tax has higher C.V. as compared to CA so; it has higher variability and less consistency.

4.9 Correlation Analysis

Correlation is defined as the relationship between the one dependent variable and one independent variable. In other words, correlation is the relationship between two or more variable. If the two variables are so related that the change in the value of one independent variable results the change in the value of dependent variable then they are said to have correlation.

Correlation analysis is defined as the statistical technique which measures the degree and direction of relationship between or among the variables. In other words, it helps in studying the co-variance of two or more variables. If both the variables move in the same direction then the two variables are said to be positively correlated. On the other hand, if both the variables move in opposite direction then the variables are said to be negatively correlated. In negative correlation, if the value of one variable increases then the value of other variable decreases and vice-versa.

It is noted that the numerical measurement of relationship between the two variables is denoted by the symbol 'r' whose value ranges from -1 to $+1$, i.e. $-1 \leq r \leq +1$.

If $r=0$, there is no relationship between the variables.

If $r<0$, there is negative relationship between the variables.

If $r>0$, there is positive relationship between the variables.

If $r=+1$, the relation is perfectly positive.

If $r=-1$, the relation is perfectly negative.

4.9.1 Correlation Coefficient between TCA and TCL

TCA and TCL are the two wheels of a cart, thus they cannot separate each others but they can be managed effectively. The correlation coefficient between TCA and TCL shows the relation between TCA and TCL. The help of following table can present the relationship between TCA and TCL.

Correlation between TCA and TCL of M/S Sarawagi Plywood Industry

(Rs. in Lakhs)

| Year | TCA(X) | TCL(Y) | X ² | Y ² | XY |
|---------|------------------|------------------|---------------------------------|---------------------------------|----------------------|
| 058/059 | 166.79 | 128.13 | 27818.90 | 16417.30 | 21370.80 |
| 059/060 | 186.11 | 156.90 | 34636.93 | 24617.61 | 29200.66 |
| 060/061 | 143.60 | 139.81 | 20620.96 | 19546.84 | 20076.72 |
| 061/062 | 192.23 | 201.60 | 36952.37 | 40642.56 | 38753.57 |
| 062/063 | 164.38 | 300.01 | 27020.78 | 90006.00 | 49315.64 |
| | ΣX=853.11 | ΣY=926.45 | ΣX²=147049.94 | ΣY²=191230.31 | ΣXY=158717.39 |

Now, the help of Karl Pearson's correlation coefficient express the relationship between TCA and TCL.

$$\begin{aligned}
r &= \frac{N \sum XY - \sum X \cdot \sum Y}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 158717.39 - 853.11 \times 926.45}{\sqrt{5 \times 147049.94 - (853.11)^2} \sqrt{5 \times 191230.31 - (926.45)^2}} \\
&= \frac{3223.19}{86.33 \times 312.80} = 0.12
\end{aligned}$$

Where,

$$\begin{array}{lll}
N = 5 & \sum XY = 158717.39 & \sum X = 853.11 \\
\sum Y = 926.45 & \sum X^2 = 147049.94 & \sum Y^2 = 191230.31
\end{array}$$

Since, $r=0.12$, there is positive relationship between TCA and TCL of SPI. The reliability of the correlation coefficient between TCA and TCL can be measured by the help of probable error (P.E.)

$$\begin{aligned}
P.E. &= 0.6745 \times \frac{1-r^2}{\sqrt{N}} \\
&= 0.6745 \times \frac{1-(0.12)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{0.99}{2.24}
\end{aligned}$$

$$=0.30$$

The reliability of P.E. can be interpreted by multiplying P.E. with 6.

$$= P.E. \times 6$$

$$= 0.30 \times 6$$

$$= 1.80$$

Since, r is less than 6 (P.E.) thus, it is insignificant evidence of correlation between TCA and TCL.

4.9.2 Correlation Coefficient between CA to Sales

The relationship between CA to sales means how much volume of sales is correlated with current assets. There is essential relationship between CA to sales because CA includes cash and bank, receivable, inventory etc.

The relationship between current assets and sales can be presented by calculating Karl Pearson's correlation coefficient using the following formula.

$$r = \frac{N \sum XY - \sum X \cdot \sum Y}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}}$$

Correlation coefficient between TCA and sales of M/S Sarawagi Plywood Industry

(Rs. in Lakh)

| Year | TCA(X) | Sales (Y) | X ² | Y ² | XY |
|---------|---------------|----------------|------------------|------------------|------------------|
| 058/059 | 166.79 | 349.14 | 27818.90 | 121898.74 | 58233.06 |
| 059/060 | 186.10 | 377.77 | 34633.20 | 142710.17 | 70303.00 |
| 060/061 | 143.60 | 382.14 | 20620.96 | 146030.98 | 54875.30 |
| 061/062 | 199.23 | 431.44 | 39692.59 | 186140.47 | 85955.79 |
| 062/063 | 164.38 | 440.11 | 27020.78 | 193696.81 | 72345.28 |
| | 860.10 | 1980.60 | 149786.44 | 790477.17 | 341712.43 |

Here, N = 5

$$\Sigma X = 860.10$$

$$\Sigma Y = 1980.60$$

$$\Sigma X^2 = 149786.44$$

$$\Sigma Y^2 = 790477.17$$

$$\Sigma XY = 341712.43$$

$$r = \frac{5 \times 341712.43 - 860.10 \times 1980.60}{\sqrt{5 \times 149786.44 - (860.10)^2} \sqrt{5 \times 790477.17 - (1980.60)^2}}$$

$$= \frac{5048.09}{\sqrt{9160} \sqrt{29609.49}}$$

$$= \frac{5048.09}{95.71 \times 172.07}$$

$$= 0.31$$

Since, $r = 0.31$, it seems that there is positive relationship between TCA and Sales.

The relationship between TCA and Sales can be further analyzed by calculating probable errors (P.E.)

$$P.E. = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1-(0.31)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{0.90}{2.24}$$

$$= 0.27$$

$$\text{Now, } 6 \times P.E. = 6 \times 0.27 = 1.62$$

Since, r is less than $6(P.E.)$. Hence, there is insignificant relationship between TCA & Sales.

Findings:

- 1) According to the calculation of correlation coefficient between TCA&TCL, the result of ' r ' 0.12, P.E. is 0.30 and $6(P.E.)$ is 1.80. Karl Pearson's correlation coefficient ' r ' denotes the positive relationship between TCA & TCL and the result of $6(P.E.)$ is greater than r . Hence, there is insignificant relationship between TCA & TCL.

- 2) According to the calculation of correlation coefficient between TCA & Sales, the result of 'r' is 0.31, P.E. is 0.27 and 6 P.E. is 1.62. Karl Pearson's correlation coefficient 'r' denotes the positive relationship between TCA & Sales but the result of 6 (P.E.) is greater than 'r'. Hence, there is insignificant relationship between TCA & Sales.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATION

6.1 Summary:

This is the last and important chapter of this study. In this chapter, the findings of this study are summarized briefly, concluded and recommended on the basis of the data available of the industry. The suggestions are made on the basis of analysis of data.

Nepal is economically very poor country. The country has been facing various serious problems such as brain-drain of young people, political instability, and problem of modernization on agriculture, lack of electricity, cut down of industries, unemployment, and corruption and so on. These problems directly affect the economic growth rate, per capita income and gross domestic products. The development of Nepal and standard of living of Nepalese people are mostly depending upon agriculture and industrialization. In this context, M/S Sarawagi Plywood Industry is a forest-based industry located in Bhadrapur-2, Jhapa. It is the leading plywood industry among all the plywood industries.

This industry uses raw materials named Face veneer, Teak Face veneer, Core veneer, Fail veneer, Rolla golichiran and chemicals. This present study has been undertaken to evaluate the working capital management of M/S Sarawagi Plywood Industry for the evaluation. The necessary data and information has been taken from the audited B/S and

income statements of the industry for the period of five year i.e. from 2058/059 to 2062/063 B.S. Analysis of working capital management has done by using various financial and statistical tools.

This study has been divided into five main chapters. They are introduction, review of literature, research methodology, presentation and analysis of datas and summary, calculation and recommendation.

In the first chapter, background of the study (which contains background of the industry also), statements of the problems, objectives of the study, significance of the study, limitation of the study, and organization of the study are discussed briefly. Similarly, in the second chapter, review of literature working capital management, concept of working capital, types and determinants of working capital, policy of W/C, optimum level of W/C, components of CA, motives for holding cash, aspect of credit policy, inventory management, EOQ, ABC inventory management, review of related dissertations, journals and articles are described. The third chapter consist of research design, nature and sources of data, population and sample of the study, tools for analysis. In the fourth chapter, analysis of current assets, analysis of current liabilities, analysis of net working capital, size of working capital, efficiency of W/C, turnover position, liquidity position, profitability position are discussed. The major findings of this study are briefly collected below.

M/S Sarawagi Plywood Industry has the current assets of inventories, trading and other receivables, cash and bank balances and advances, loans and deposits. Current liabilities consist of liabilities and provisions. The industry holds inventory of 42.78%, receivable of 32.68%, cash and bank balances of 3.02% and advances of 21.51%. The highest fund is

invested in inventories and the least fund is invested in cash and bank balance. Every component of current assets is in fluctuating trend.

Current liabilities has the components of short term loan, deposits and advances, account payable, deferred liabilities and provisions. The industry has invested most of the funds in short term loan (65.18%) and least of the funds in deferred liabilities (1.25%). The current liabilities have also in fluctuating trend.

Net working capital position of M/S SPI has in deceasing trend. The net working capital of this industry has negative in last two fiscal years. This decreasing trend of net working capital is not favourable for the industry. The management must invest more amounts in current assets. Due to the increment of current liabilities, the net W/C is deceasing year by year. The percentage of total current liabilities are 76.82%, 84.3%, 97.36% 101.19% and 182.51% in fiscal year 058/059, 059/060, 060/061, 061/062 and 062/063 respectively. The management should try to decrease the amount invested in current liabilities.

The percentage of current assets on total assets is in fluctuating trend. It has the highest of 76.14% in fiscal year 058/059 and the lowest of 41.23% in fiscal year 062/063. It has the average percentage of 66.69%. This proportion indicates that the investment of current assets to total assets. The C.V. of current assets is 11.13% and C.V. of total assets is 25.37%. Total assets has the highest CV. it indicates that total assets has the great variability and less consistency.

The investment made on fixed assets has very low as compared to current assets except in fiscal year 062/063 over the study period. The fixed assets have great C.V. (69.64%) which indicates the great variability as compared to current assets.

The proportion of receivable on current assets has also in fluctuating trend. It has the highest of 47.79% in fiscal year 059/060 and the lowest of 22.80% in fiscal year 062/063. The average percentage of receivable on current assets is 32.67%. The high percentage indicates inefficient management of receivable and the low percentage indicates good management of receivable. Higher percentage of receivable means the industry is unable to collect receivable on time.

The industry has invested very low proportion on cash & bank balance. Due to low investment on cash & bank it affects the liquidity position of the industry. The highest percentage of cash & bank balance to current assets is 8.04% and the lowest percentage it is 0.91%. Due to low investment on cash & bank balance which creates a problem in day to day operation as well as grabbing an opportunity to expand the business.

The proportion of inventory to current assets has also fluctuating trend during the study period. The industry holds very high amount of inventories in fiscal year 058/059 except remaining four fiscal year. The maximum investment on inventories will increase cost of holding inventories and reduce the profitability of the firm. It also shows the poor inventory management of the firm.

The proportion of receivable to sales indicates receivable creates at time of selling goods. Increment of receivables indicates loose collection policy. Both loose and tight credit collection policy is not favourable for the industry. Tight credit

collection policy may decrease the volume of sales. So, the management of receivable has to maintain balance credit collection policy. The highest percentage of receivable on sales is 23.55% and the lowest percentage of receivable on sales is 8.52% in fiscal year 059/060 and 062/063 respectively. The average percentage is 14.55%.

The turnover position of M/S Sarawagi Plywood Industry includes various turnover ratios. It has current assets turnover, inventory turnover ratio net working capital turnover, receivable turnover, credit turnover, cash conversion cycle. The turnover position measures the efficiency of the industry. The current assets turnover of the industry is very low and they are fluctuating. The higher of 2.68 times and the lower of 2.03 times. It has average of 2.33 times. The lower ratio indicates the poor utilization of current assets. The position of net W/C is not good. It has great fluctuation and negative also. The higher ratio indicates better utilization of working capital. It has -182.04 times and -3.24 times in the fiscal year 061/062 and 062/063. The average net working capital turnover ratio is -12.49 times.

Receivable turnover and average collection period shows the management of receivable and the average collection period indicates the industries speed of collection. Receivable turnover ratio has the highest of 11.74 times and lowest of 4.25 times. It has average turnover of 7.67 times. The highest receivable turnover is preferable for the industry. The average collection period of receivable has the highest of 84.71 days and the lowest of 30.66 days. Highest period of receivable collection is not good for the industry.

Inventory turnover has also fluctuating trend. It has the highest of 13.78 times in fiscal year 061/062 and the lowest of 3.25 times in fiscal year 058/059. The average inventory turnover ratio of the industry is 7.21 times. The highest ratio

indicates the better management of inventories. It has the highest of 110.77 days of inventory conversion period and lowest of 26.12 days. The highest period indicates more time taken to convert raw materials into finished goods. The average inventory conversion period is 67.14 days. The creditor turnover is decreasing year by year except in fiscal year 061/062. it has the highest of 7.45 times and lowest of 3.69 times. The average creditor turnover is 4.78 times. The payable deferral period is the highest of 97.56 days and the lowest of 48.32 days. The average payable deferral period is 80.23 days. The low turnover and longer credit facility is good for the industry.

The cash conversion cycle of SPI has the great fluctuation. It has very high cash conversion cycle and very low-too. The highest cash conversion cycle is 115.08 days in the fiscal year 058/059 and the lowest CCC is -31.57 days in the fiscal year 062/063. It has average of 39.30 days. The CCC of SPI has come negative due to the highest PDP.

The liquidity position of SPI contains current ratio and quick ratio. Generally the current ratio of SPI has good position with the highest of 1.30 times and the lowest 0.55 times in the fiscal year 058/059 and 062/063 respectively. The average ratio is 1.01 times. The quick or acid-test ratio of SPI has the highest of 0.83 times in the F/Y 061/062 and the lowest of 0.36 times in the fiscal year 060/061. The average quick ratio is 0.55 times. Even it has the lowest ratios as compared to standard norms; the industry is running in good liquidity position.

Profitability position is one of indication of the efficiency with which the operations of the industries are carried on profitability ratio indicates the degree of success in achieving desired profit. The profitability of the industry includes gross profit ratio, return on total assets, and return on net working capital at the time of study period. The gross profit margin of

the industry is in fluctuating trend. It has the highest of 26.07% in the fiscal year 062/063 and the lowest of 12.56% in the fiscal year 058/059. The average gross profit margin is 18.57% the industry has to try to increase its gross profit margin so that it may meet its operating expenses. The position of gross profit margin of this industry in the study period is good.

The net profit margin of this industry is generally stable position except in the fiscal year 062/063. It has the great net profit margin of 6.01% in the fiscal year 062/063 and the lower of 1.11% in the fiscal year 058/059 and 060/061. The management should try to increase its net profit margin in coming years.

The return on total assets is in fluctuating trend. It has the highest of 6.63% in the fiscal year 062/063 and the lower of 1.77% in the fiscal year 058/059. The average position of return, on total assets is 2.81% and it is good indication of the industry. The return on net working capital is also generally stable position. The average return on net working capital is 5.25%. This indicates good management of working capital of this industry.

6.2 Conclusion:

This section has been used to conclude the overall variations on the basis of analysis of the data. The major variations and conclusions are drawn on the position of current assets, current liabilities, turnover position, liquidity position and profitability position. The major conclusions are listed below:

- 1) Current assets include inventories, receivables, cash and bank balance and advances. The industry has invested highest percentage on inventories and lowest percentage on cash and bank. The highest investment made on

inventories will increase unnecessary holding cost and the lowest investment on cash and bank will decrease the liquidity position.

- 2) On the basis of study of current liabilities, the percentage of short term loan is 65.18%, account payable is 31%, provisions is 1.30%, deferred liabilities 1.25% and deposits and advances are 1.26%. The industry has taken-short term loan and account payable as the major part of current liabilities. The net working capital of this industry has come negative in last two fiscal years. It indicates that the industry has not good position of liquidity.
- 3) Size of working capital includes proportion of current assets on total assets, fixes assets, the proportion of receivable, cash and bank and inventories on CA, receivable to sales etc. It has the average 66.69% of CA to TA, 233.35% of CA to FA, 32.67% of receivable to CA, 3.03% of cash to CA, 42.77% of inventories to CA and 14.55% of receivable to sales. By observing the average percentage, the smallest proportion of fixes assets and cash & bank are used but others are in suitable proportion.
- 4) Whole examining the turnover position of SPI, it has found that the average turnover of current assets (2.33 times), net working capital turnover (-12.49 times), receivable turnover (6.67 times), inventory turnover (7.21 times), credit turnover (4.78 times) and cash conversion cycle (39.30 days). The low turnover indicates the poor management of working capital. The negative net working capital turnover indicates poor management of current assets. All the turnover position is generally low so it is necessary to increase turnover position to survive for a long period of time.

5) According to the liquidity position of M/S Sarawagi Plywood Industry, the current ratio and quick or acid test ratio are used for the analysis. The current ratios are in decreasing trend. The higher of 1.30 times in the fiscal year 058/059 and the lowest of 0.55 times in the fiscal year 062/063. The average ratio is 1.01 times. The decreasing trend of current ratio indicates poor liquidity position. Acid test or quick ratios are in fluctuating trend. The highest of 0.83 times in the fiscal year 061/062 and the lowest of 0.36 times in the fiscal year 060/061. The average quick ratio is 0.55 times. The quick or acid-test ratio of M/S Sarawagi Plywood Industry is generally good.

6) Profitability is the indication of the efficiency the business enterprises which can run every business transactions smoothly. Profitability position of the industry includes gross profit margin, net profit margin, return on total assets and return on net working capital. The gross profit margin of M/S Sarawagi Plywood Industry has in fluctuating trend. It has the highest of 26.07% in the fiscal year 062/063 and the lowest of 12.56% in the fiscal year 058/059. The average gross profit margin is 18.57%. The net profit margin is generally stable except in the fiscal year 062/063. It has the average of 2.11%.

7) Return on total assets is in fluctuating trend. It has the highest of 6.63% in the fiscal year 062/063 and the lower of 1.77% in the fiscal year 058/059. The average return on total assets is 2.81% Return on working capital is generally in stable position except in the fiscal year of 062/063. The highest of 16.08% in the fiscal year 062/063 and the lower of 2.33% in the fiscal year 058/059. The average return on working capital is 5.25%. The position of profitability of M/S Sarawagi Plywood Industry is good.

6.3 Recommendation:

On the basis of this study, the following recommendations are made for the improvement of working capital management in the M/S Sarawagi Plywood Industry Pvt.Ltd.

- 1) From the analysis of working capital of SPI, it has been seen that highest proportion of total liabilities in the last two fiscal years so that the net working capital has come in negative. The management should try to increase the investment in current assets.
- 2) During the study period, the investment of fixed assets is very high in last fiscal year. Due to high investment on fixed assets, the Karl Pearson's correlation coefficient has come negative. It shows negative relationship between current assets and fixed assets. The fixed assets should be used properly in productive sector. By the proper management of fixed assets, the SPI can get sufficient return and achieve successive goal.
- 3) During the study period, the proportion of cash and bank balance to current assets is very low. Cash is the most liquid assets so it should never be underestimated. The SPI should hold higher amount of cash to meet its day to day operation as well as the expansion of the business. In other words, there should be a policy to have optimal cash management policy.
- 4) The proportion of inventories and receivables to current assets is satisfactory. The financial manager should try to maintain this level.

- 5) The industry holds maximum level of inventories in first three years so its inventory turnover has come low and ICP is high. Higher level of inventory reduces the profitability. Therefore, SPI has to reduce the level of inventories to increase the profitability position.
- 6) The payable deferral period of SPI is satisfactory. The financial manager of SPI should try to maintain this level of PDP.
- 7) The net working capital turnover is not satisfactory. This means current assets is not used properly. The SPI should try to increase the level of this turnover.
- 8) The receivable turnover ratios and average collection period is favourable. As the receivable turnover ratio come lower, ACP also comes lower. Lower collection period is better for the industry. This helps to increase the profitability position of the industry. The industry should try to maintain this level optimum.
- 9) The net profit margin of this industry is very low in four preceding fiscal year. So, the industry should forecast for financial planning, rate on its investment, sales forecast, production scheduling plant design and other planning. All the financial function should be set to overcome the problem of lower profit and losses.
- 10) Liquidity position of SPI is below the standard level. Current ratio and quick ratio both are below the standard level. So the management of SPI should have to increase this level up to the standard level.

11) During the study period, return on total assets and return on working capital are very low except last fiscal year. To increase the profit, SPI should minimize its operating costs and administrative costs by increasing the operating efficiency of their employee.

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