CHAPTER – I

INTRODUCTION

1.1 Background of the Study

Every firm wants to maximize the value of the firm it is the main goal of the enterprise. In this context, the firms always concentrate on providing quality product and service in the timely manner. In addition, they must to effect job in marketing, employees relation, and so fourth. It is most sufficient to maximizing the value of the firm, it is also concern in the financial prospective these are three curial areas; (I) directly affects the value of the firm, (II) investment decision, (III) Financing decision-making process of all the enterprise. In the Nepalese context, it is not effectively manage due to the inefficient manpower. Financing decision on working capital is necessary to operate the enterprise's ordinary business activity but it is not so easy decision to manage the working capital then the fixed investment decision.

In the context of Nepal, working capital management is not satisfactory. Many studied reports relating the performance of public enterprise have found that managers often lack basic knowledge of working capital. It affects on the operating efficiency and financial ability of the enterprise of the firm, effective utilization of funds, efficiency of the firm, profitability position and maximizing of shareholders wealth. This situation leads the liquidity position of the firm due to the inefficient management of working capital and vice versa. So the working capital management plays the crucial role of the success and failure of the enterprise. The management of working capital in private sector is not satisfied but comparatively the private industries more satisfactory than public enterprise, it is running in Nepalese industries and other business organization.

The study of working capital management is important for the Nepalese enterprise. It is most necessary to involve the study of working capital management for healthy industrial and business organizations. It has affected by the various factors. Here is trying to search the affecting reasons for the sound management of working capital from the case study of Bottlers Nepal Limited. Study of working capital management is important at least four reasons (i) the adequacy of investment in current assets other wise it would seriously erode their liquidity position (ii) they must select the type of current assets for the raising their operative efficiency (iii) they are required to

ascertain the turnover of current assets that greatly determined the profitability of the enterprise (iv) they must find out the appropriate source of funds using to finance current asset.

The four reasons defined the public enterprise management of working capital. It is suitable definition for every enterprise. The management of working capital seriously involves maintain the liquidity position, turnover position and profitability position although it's adverse effect; the raising the cost of money and capital expenditures usually become a primary target for cutback. So that the working capital management is concerning the liquidity position, turnover position and profitability position of the firms. It also analyzes the trade of between risk and return. The financial manager often overlooks the area of working capital, where effective cost saving control can be applied. Working capital management is overseeing the firm's day-to-day financial activity. It is a process of short-term decision-making. It is usually described as involving the administration of current assets and currents liabilities. The firm's assets and liabilities are normally classified as either current or long-term. Current assets include the cash and Bank balance, marketable securities, inventory, sundry debtors and other current assets that are expected to be concert in to cash within one year. Current liabilities include short-term debts, accounts payable, accruals (such as tax and wages) and other current liabilities. Current liabilities represent the firms that come due in one year or less. The working capital management focusing on the coordinated control of the firm's current assets and current liabilities.

There is a two-concept of working capital (a) Gross working capital (b) Net working capital: The gross working capital refers to the firm's investment in current assets. Net working capital can be defined into two ways; firstly the most common definition of the networking capital is the different between current assets and current liability. Second, an alternative definition of networking capital is that portion of firm's current assets which is financed with long-term funds.

Moreover, the working capital is called circulating capital as it keeps on circulating in the course of business operation. Firstly, business starts by cash, which is percentage of total cash converted into inventory after some time. Inventory is raw material, semi-finished goods and finished goods.

The working is capital concerned to adjust to change of firm's level of sales activity by seasonable, cyclical and random factor to contribute the maximizing value of the firm. So, the working capital management perform significance role in the over all business areas.

All the corporate, whether public or private manufacturing or non-manufacturing have just adequate working capital to survive in competitive market. Excess investment of working capital affects a firm's profitability just an ideal investment yields nothing. In the same way, inadequate investment in working capital affects the liquidity position of the company and leads to financial and failure of the company. Thus, the amount of working capital invested should be neither low no more; it should be as optimum, as possible. However, there are various factors which affect the size of working capital such as nature of business time lay on operational cycle, purchasing capacity of company and so on. Financial manager must be able to manage their working capital in optimum level

1.2 Focus of the Study

The study is focusing on the following heads. It included the study of financial concept and research related with the working capital practice used by Bottlers Nepal (Balaju).

- Profit and Loss account of the company
- Balance sheet.
- Cash flow statement.
- Interrelation of current assets and current liability.
- Trade off between profitability and risk of working capital management
- Financial and control of working capital.

1.3 Introduction of the Company

Bottlers' Nepal Ltd Company is one of the manufacturing and processing company, which is manufacturing the soft drinks under the brand name of the Coca Cola Company. The Company also makes the sales of the soft drinks under the registered trademark of the Coca Cola Co. that is managed by Singapore based F & N Coca Cola

Pvt. Company Ltd its registered office is located at Balaju, Ktm and the head office being the same.

The Company is located in Balaju in an area of 10,648 sq. m. of land and the buildings of the company covers 5,823 sq. m.

The company covers roughly 90% of the Nepalese market when compared with other brands of the similar products. This figure is inclusive of the subsidiary Company's figure.

Share Capital of the Company:

The company has authorized share capital of Rs 500000 thousands and paid up value per share is Rs. 100 it has issued capital of Rs. 370,000 thousands number of shareholders in this company are 37. The paid up capital is Rs. 194,889 thousands and value per share is Rs. 100.

Bottlers Nepal Ltd is one of the tops ten companies listed in the NEPSE in terms of the market capitalization. This company produces fine varieties of soft drinks that are Coke, Fanta, Lime, Sprite, Soda and drinking water. This company is managed by F & N Coca-Cola Pvt. Company Ltd. Based in Singapore. In Nepal, there are two factories under Coca-cola company. My study is about BN Ltd, Co located at Balaju. There is also subsidiary company known as BN (Terai) Ltd, at Chitwan District of Nepal. BN Ltd Co. distributes its product throughout the Bagmati Zone. Companies don’t have policy of direct distribution. Company uses two types of distribution channel i.e. through the dealer & retailer to the consumers. This company is using two types of plant for production process. The old line has capacity of 220 bottles per minute and the recently installed which is produce 430 bottles per minute. To maintain the leadership in the market the company always concentrates for its raw material from approved suppliers that are decided from head office. Raw material like concentrate Crown crokes, sugars are import from international and National market and CO_2 gas is produce in factory. The whole process i.e. raw material to finished goods is prepared by company secretly and sold without disclosures after introducing new package, the company has increased sales effort; Recently company is also looking for new area of distribution but want to have more profit from the competition market. The company has its planning system but they don’t forecast the sales. In last few years data we can see that sales has been increasing. The company has been able

to increase the production efficiency of the plant giving better outputs as compared to the previous year. The newly installed line is now in full operation gibing better yields and lower breakage rates. With installation of new line the company is now able to fulfill the market demand without any production consists. The company has introduced new packages of its products to counter the competition. In order to stay ahead of the competition the company has been launching various types of promotional activities with financial and technical support from the Coca-Cola Company. The company is putting its full efforts into increasing the per capital consumption of its beverage in the market.

1.4 Statement of the Problem

Working capital management decision is the most sensitive for every firm. I bewilder the activity in the working capital decision. It has various factors affecting the decision, it should maintain optimal level of working capital determining he optimal level of working capital is the crux of the problem of every business organization. It constrained to maintain the trade-off between risk and return.

The present study, which intends to improve the following basic question to bridge the present gap in the literature of B.N. Ltd.

a. What is the size of investment in each type of current assets?
b. What is the significance of current assets management?
c. Is there any need to control over investment in current assets?
d. Has there been any change in the variability in investment in the current assets over a period of time?
e. How difficult are the current assets of Bottlers Nepal to manage?
f. What are the motives for holding cash and investment?

In the context of Nepal, enterprises face the various problems to manage the working capital due to the unproductional manpower, unclear financial market, unclear government policies, etc. Managers still focus their attention on the procurement aspect of working capital but on the efficient utilization of funds defined information of working capital, there is not on the efficient utilization of funds defined information of working capital, there is no budgeting in enterprise for the next year, clear market research and other scenario for the future planning. In the unclear vision

every business puzzles the management of working capital decision and other business decision, every enterprise wants to earn return on their investment. There are several indication of working capital management, in the context of BN Ltd, has tried to find out the issue of working capital management. The working capital management not only attacks profitability position in the short-run but it also affects the survival in the long run of the organization. So, every firm must maintain the sound working capital components for the effective and efficient utilization of the funds in business organization. Nepalese industrialization process is going in a very slowly progress. In spite of various attractive policies of government in respect to industrialization; new investment, on industrial sector is not satisfactory.

The established manufacturing industries, the financial composition and performance of Nepalese enterprises are not so satisfactory. Most of the industries were operating in losses and such conditions discourage the new investment due to established enterprises financial position. The poor performance of manufacturing industrial atmosphere affects various reasons in the internal, external and financial environment. Such problem should be investigated and removed from the organization is the most important to corrective measurement for the improvement of their performance. The firm is not reached of this target point.

1.5 Objective of the Study

Working capital plays the crucial role of success or failure of any enterprises; the excess working capital as well as inadequate working capital both are harmful for business. The aspect of working capital concerned with short-term financial decision has never received much attention in the literature of finance. Because of the earlier emphasis of financial management was more on long term financial decision, which led to the growth and development of many useful theories concerning this decision as compared to short-term financial decisions. The main objective of this study is to examine the working capital management of Bottlers Nepal Limited Company. The specific objectives of this study are as follows.

a. To let the entrepreneurs acquaint with how important the management of working capital in the long run.
b. To analyze the liquidity, long-term solvency, asset utilization and profitability position of the BN Ltd.

c. To know whether the adequacy of working capital depends upon the nature of financing current assets or not.

d. To evaluate the relationship between the separate items of current assets.

1.6 Significance of the Study

Working capital is depending on the nature of the business. Every firm determines the working capital of its nature. The essential factors of the working capital of a firm operate of its current assets and various concepts of the working capital to focus the profitability of the enterprise and success of the business guide line by the effective management of working capital. The Bottlers Nepal recognizes the strange and weakness of this working capital management.

Working capital management is important for this reason.

a. To identify the size of investment in each type of current assets.

b. To find out the significance of current assets management.

c. To know whether the adequacy of working capital depends upon the nature of financing current assets or not.

d. To evaluate the relationship between the separate items of current assets.

Working capital is the size of investment in each type of current assets. Each of the current assets should be manage efficiently. It is basic division that regarding working capital not only affects profitability of the firm in the short term but also it affects the survival in the long-run.

It is the most crucial area in enterprises management because many instances have shows that regardless of excellent products, efficient marketing, efficient production wide fixed assets of its firm because liquidity crisis resulted in takeover by creditor forced margin or bankruptcy. So inquire into the efficient of current assets management and its association with their financial performance of manufacturing enterprise in Nepal. In the present context, this study is timely relevant.

1.7 Limitation of the Study

Every research has its own limitations. The main focus of this study is to point out the financial position and its analysis of BN Ltd. Company.

In spite of the data is accurate, the most of the private companies' financial data may be invalid in Nepalese context. In other words, financial statement may not disclose the true financial data and information. In the case of companies set up in private sector access to internal information for outsider is not possible, preparation of multiple financial statements is open secret and common practice in private sector. So the conclusion is based on the available financial statement might not be correct in reality.

Similarly conclusion of this stuffy might not be an application to other manufacturers because of the possibility of the gross variation in financial data. However, following factors are the limited scope of the study. This study is simply a partial requirement of MBS programme. This study will limit by following factors.

a. The research design followed for this study is based on historical which covers the period of last five years trend and data will be analyzed.
b. The analysis will be based upon the primary as well as secondary data, which will be provided from the BN Ltd. Company.
c. Time and resources constraints may limit the area covered by the study. The study covers the time period of five years from 2061/62 to 2065/66.
d. The major sources are the secondary data of financial statement of BN Ltd which are extracted from the progress report of BN Ltd, Nepal stock exchange company, CBS and other published and unpublished articles.

1.8 Origination of the Study

This study has been organized into following chapters.

Chapter I: Introduction

This deals with the general background of the study with the subject matter of the study. This chapter consists the statement of the problem focus of the study, objectives of the study needs and importance of the study and limitation of the study.

Chapter II: Literature Review

This chapter deals with review of literature. It includes review of books and review of previous thesis journals and a brief profile of BN Ltd.

Chapter III: Research Methodology

This chapter deals with research methodology adopted to achieve the objectives of he study research questions, the models specification of the variables, data collection.

Chapter IV: Data Presentation and Analysis

This chapter deals with presentation and analysis of relevant date and information through a definite course of research methodology.

Chapter V: Summary, Conclusion and Recommendations

This chapter deals with summarizes the whole study. Moreover, it draws the conclusions which are forwards the recommendation of the improvement of working capital management of BN Ltd.

At the last, an appendix has been included according to the test of relationship between various variables of working capital and a bibliography cards have also been included according to the literatures, are reviewed.

Every firm will know the weakness in current assets mix and financing in the firm of financial performance period to indicate and show the way by the help of the study.

CHAPTER – II

REVIEW OF LITERATURE

2.1 Review of Book

2.1.1 Introduction

Working capital simply means circulating capital in current assets (cash, inventory, receivables) and current liabilities to operate the ordinary business transaction within a year. Working capital management is essential for day-to-day operation of business. So it is very sensitive activity. Its operation which is very difficult to manage; hence it is controlling nerve of business. The success and failure of any enterprise depends upon the management of working capital. So far as the management of working capital in Nepalese companies is concerned, different management experts have undertaken a number of studies and students of MBS have described the working capital management of various enterprises (Aryal, 1995).

The main purpose of this chapter is to provide an insight in the working capital and give a bird eye view of different experts thought regarding theory of working capital. It's implication while making review of related literatures of working capital management the researchers have gone through different financial books, bulletins, documents, repots and journals. This chapter aims to review the available literature on working capital management in the context of Nepalese enterprises including available literature on Bottler's Nepal Limited. Working capital is firm's investment in short-term assets-cash, short-term security, account receivables and inventories. Working capital is a firm's investment in short-term assets. The term working capital is closely related to the term funds and has common meanings. It is used to mean current assets or current assets minus current liabilities. The term working capital is often used to refer to the firm's current assets (primarily cash, marketable securities, account receivables and inventory). For his reason working capital management is often referred to, as short-term finance. Gross working capital is the firm's total current assets. Net working capital is current assets minus current liabilities. The gross working capital is simply called as working capital refers to the firm's investment. Working capital may be defined more particularly as the assets held for current use within a business less then one. Working capital represents portion that circulates form one to another in the ordinary conduct of business. This idea embraces the

recurring transacting from cash to inventory to receivable to cash that forms the conventional chain of business operation. Funds deployed for short-term are mainly working capital for operational purpose. Towards the day-to-day operation, a firm will have to provide money for the purchase of raw materials, payments for wages and salaries to extend credit to buyers of goods as well as to meet other day-to-day operation. The term working capital deals with the matrix of current assets and current liabilities. The conversion process of current assets that include cash, inventories and account receivables etc. must be quick as possible to get readily available cash with one year to meet current obligations. In a like manner, the current liabilities comprising sundry debtors, trade creditors, account payables, short-term bank loans, outstanding expenses etc. must be paid within one year as they become due Working capital management is concerned with the problems that arise in attempting to manage the current assets, current liabilities, and the interrelationships that exist between them. The current assets refers to those assets, which in ordinary course of business can be or will be turned into cash within one year without undergoing a diminution in value and without disruption the operations of the firm (Giri, 1986).

2.1.2 Concept of Working Capital

There are two concepts of working capital, gross and net. Gross working capital refers to the firm's investment in current assets. Current assets are assets, which can be converted into cash within a accounting year (or operation cycle) and include cash, short-term securities, debtors, account receivables or book debts, bills receivables and stock (inventory) (Shrestha, 1986).

Net working capital: The term "Net Working Capital" can be defined in two ways. (i) The most common definition of net working capital is the difference between the firm's current assets and its current liabilities. (ii) Alternatively it can be defined as the portion of the firm's current assets financing with long-term, the sum of long-term debt and stockholders' equity. Since current liabilities, represent the firm's source of short-term funds as long as current assets exceed current liabilities, the amount of the excess must be financed with long-term funds. Net working capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets. (Pandey, 1999)

Working capital is an operation into two parts, which is net and gross. Gross working capital is the sum of current asset and net working capital is current asset minus current liability or which is financed from the long-term fund to the purpose of operating the short-term business obligation.

The gross working capital management analyze the optimize investment in current assets and investment in current assets should be just adequate, not more not less to the needs of the business firm. And, another aspect of gross working capital is to need of arranging fund to finance current assets (Shrestha, 1987).

Net working capital is a qualitative concept. It indicates the liquidity position of the firm and suggests the extent to which working capital needs may be financed by permanent source of funds.

The definitions described above convey in some way or other, the same meaning. They virtually represent the characteristics of the working capital. It seems that there is consensus on the following special characteristics of the working capital. (Pandey, 1999)

a) Short Life: - Working capital is characterized by assets with a life span of less than one year such as cash, marketable securities, account receivables, and inventories etc. This short life span leads to high volatility in the level of investment required to finance working capital.

b) Nearness to cash or liquidity: - This basic characteristic constitutes the first line defense against technical insolvency. Cash is the most liquid asset having zero conversion time and 100 percent conversion rate. But for inventory and marketable securities two factors i.e. (i) nearness to cash or amount of time required converting asset into cash and (ii) price realized on conversion must be considered.

c) Lack of Synchronization: - Since the enterprise cannot produce on order only and cannot insist on cash payments there is always the problem of synchronization in cash receipts and disbursements. It is also due to the level of investment in working capital that is affected by sales volume, production policies and collection policies.

The basic characteristics of working capital as mentioned above indicate that it is a term of capital intended to be kept moving or circulating and its potential for earning

comes from movements. Though the expenditures can be controlled and planned its income is usually subject to random variation and is not controllable (Basant, 1978).

2.1.3 Determination of Working Capital

The factors that influence the working capital requirement may be internal or external. Internal factors are those, which are within the control and competence of management, and external factor are those beyond the control of management. Internal factors include turnover of receivables and inventories, terms of purchase and sales and credit rating. External factors consist of nature of business, volume of production and sales and business conditions (Mathur, 1979).

a) Volume of Sales: - A firm maintains the current assets 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 working capital, in the cost of operation, in inventories and in receivables.

b) Manufacturing Process: - In the manufacturing process in an industry entails a longer period because of its complex character, more working capital is required to finance the process. An extended manufacturing time span means a large tie-up of funds in inventories and higher amount of working capital.

c) Size of Business: - The size of business also has an important bearing in determining working capital needs of a firm. A firm with large-scale operations will need more working capital than a smaller firm.

d) Terms of Purchase and Sales: - The credit terms of purchases are more favorable and those of sales less liberal, less cash will be invested in inventory. A firm, which can get credit easily on favorable conditions, will require less amount of working capital than a firm without such facility.

e) Changes in Technology: - Technological development related to production process has the sharp impact on the need for working capital. Changes in technology will need additional amount of working capital due to fresh investment in new fixed assets.

f) Inventory Turnover: - With a better inventory control a firm is able to reduce its working capital requirement. If the inventory turnover is high the working capital requirement will be low.

g) Growth and Expansion of Business: - A growing firm has to invest funds in fixed assets in order to sustain its growing production and sales. This will

increase investment in current assets to support enlarged scale of operations; it will require more working capital.

h) Cash Requirement: - Cash is one of the current assets, which is essential for the successful operation of the production cycle.

i) Other Factors: - Absence of co-ordination in production and distribution policies in a company leads to a high demand for working capital. Hampton (1993) has suggested that a firm's working capital requirements are affected by some factors which are as follows:

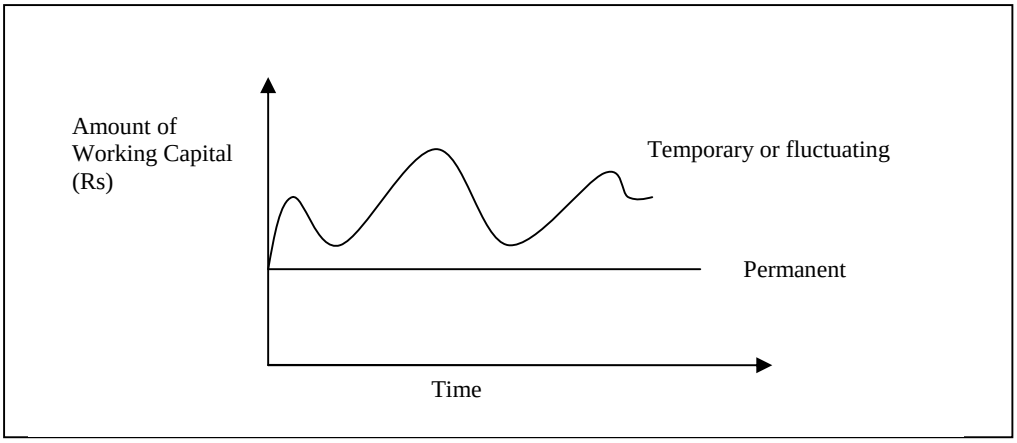
Sources of Changes in Working Capital Needs

Sources of Changes	Working Capital Affected	Reasons
Sales Volume	Permanent	Different level of cash receivable and inventory need at new sales level.
Seasonal and cyclic factors	Variable	Receivables and inventory must be available on temporary basis.
Technology	Permanent	Level of inventory must support the new production capability.
Policies of firm	Permanent and Variable	Some Policies tie up working capital others free it.

2.1.4 Components of Working Capital

The working capital comprises two components of times view of firm.

- Permanent Working Capital: Permanent Working capital refers to that level of current assets, which requires on a continuous basis over the entire year. A manufacturing concern cannot operate regular production and sales functions in the absence of this portion of working capital. Therefore the manufacturing concern holds certain minimum amount of working capital to ensure uninterrupted productions and sales functions. This portion of working capital is directly related to the firm's expansion of operation capacity. (Sirvastav,1984)
- Variable Working Capital: This represents additional assets required at certain times during the year. Added inventory must be maintained to support peak selling period. Receivables will increase and must be financed after a period of high sales. Extra cash may be needed to pay for increased supplies preceding high activity.(Van Horne, 1996)



2.1.5. Sources of Working Capital

There are various sources to finance in the working capital. The financing depends upon the need for working capital in the enterprise. The need of a firm in working capital involves the volatility nature of the funds. H.R. Machiraju defined the sources of finance as follows.

Working capital may be obtained from different sources such raising funds from capital market through issue of share and debentures borrowing from bank directors, shareholders and trade credit. Internal source such as retained earning and depreciation may be good for an established unit. In the case of a new unit a portion of working capital, working capital margin, may be financed by equity.

The firm's financing requirements can be separated into a permanent and a seasonal need (Machiraju, 1997)

I. Permanent Need: The permanent working capital is also known working capital or core current asset. This type of working capital is required to ensure continuous production in the minimum level.

II. Variable of Seasonal Need: Seasonal need financing requirement for temporary current asset, which is vary throughout the year. The source of variable working capital could be financed from spontaneous and secured and unsecured sources of short- term financing and long-term source of financing. The decision to finance in variable working capital depends on the financing policy of a firm. The variable or seasonal short-term sources are spontaneous source of short-term financing, unsecured sources of short-term loans, commercial papers and secured source of short-term financing. The source are

account payables, accrual (spontaneous source), bank loans, commercial paper (unsecured source), collateral and terms, accounting receivable as collateral, inventory as collateral, warehouse receipt loans, trust receipt, inventory loan, floating inventory liens etc. (secured term loan).

2.1.6 Aim of the Working Capital Management

Firms intended two important aims of working capital management are: profitability and solvency. Solvency is used in the technical sense, refers to the firm's continuous ability to meet maturing obligations. The solvency refers to another words the liquidity. Profitability of the firm related to the profit maximizing. When the firm does so, its profitability will improve as fewer funds are tied up in idle current assets, but its solvency would be threatened and would be exposed to greater risk or cash shortage and stock out. (Van Horne, 1969)

2.1.7 Liquidity

Liquidity define the money and assets that readily convertible into money. There may be exhibited different degree of liquidity on the nature of assets. Marketable securities, which are short-term investment for excess cash, are highly liquid, and account receivables are less liquid than marketable securities. Inventory is often less liquid than accounts receivable. Liquidity is an important factor in determining a firm's working capital policy. It is function of current asset and liability levels and composition, and the ability to raise cash when needed. Liquidity has two major aspects- ongoing liquidity and protective liquidity. Protective liquidity refers to the ability to adjust rapidly to unforeseen cash demand, and to have backup means available to raise cash. The firm's ongoing liquidity is a function of its cash cycle. (Varlym and Laughlin, 1985)

2.1.8. Working Capital Policy

Working capital policy involves the adequate level of current asset financing depend the policy of the firm. Policy refers to the firm's appropriate level for current assets and working capital policy involve the adequate level of current asset financing depend on the policy followed by the firm. Working capital involves two basic questions (i) what is the appropriate level for current asset, both in total and by specific amount? (ii) How should current asset be financed? Or how current liability will be used to finance current asset? The working capital policy interested to solve

the arising questions by the firm. There are two alternative policies (i) current asset investment policies (ii) current asset financing policies (Pradhan, 1986).

2.1.8.1 Current Asset Investment Policy

Current asset investment policy involves the three alternative policies. The three alternative policies regarding the total amount of current assets carried. Essentially these policies differ in that different amount of current assets are carried to support any given level of sales. The three alternative policies are (i) Relaxed current asset investment (or fat cut) policy (ii) Restricted current asset investment (or lean-and mean) policy (iii) Moderate current asset investment policy. (Rai, 1978)

a) Relaxed Current Asset Investment Policy

This policy firm hold relatively large amount of cash, marketable securities inventories and receivables to support a given level of sale. This policy creates longer inventory and cash conversion cycle.

It also creates the longer receivable collection period due to the liberal credit policy. Thus this policy provides the lowest expected return on investment with lower risk.

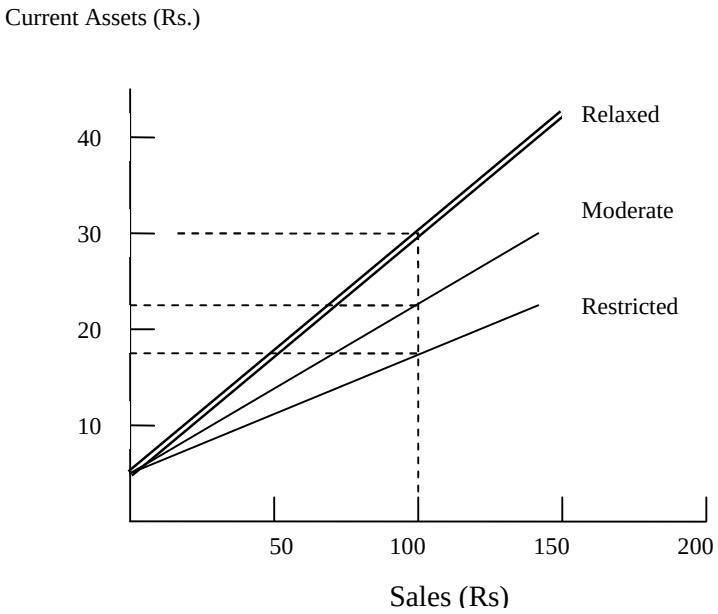
b) Restricted Current Asset Investment Policy

In this policy, the firm holds the minimum level of cash, marketable securities, inventories and receivables to support the given level of sales. This policy is greater risky than other policies. The policy always tries to reduce the timber or cash conversion cycle. In this policy, the firm follows a fight credit policy. The fight credit policy reduces the level of sales. Although the sale as decrease in the policy, the financial manager intends to maximize the profit by low requirement in investment (low cost and low opportunity cost) and high cash conversion cycle make low investment and increase the profit.

c) Moderate Current Asset Investment Policy

In the moderate investment policy, the firm hold the amount or current asset in the between the two policies. Risk and return in moderate in this policy.

Level of current Assets



Pradhan, 1986

Current Assets to Support

Policy	Sales of Rs. 100
Relaxed	Rs. 30
Moderate	23
Restricted	16

Note: The sales/current asset relationship is shown here as being linear, but the relationship is often curvilinear.

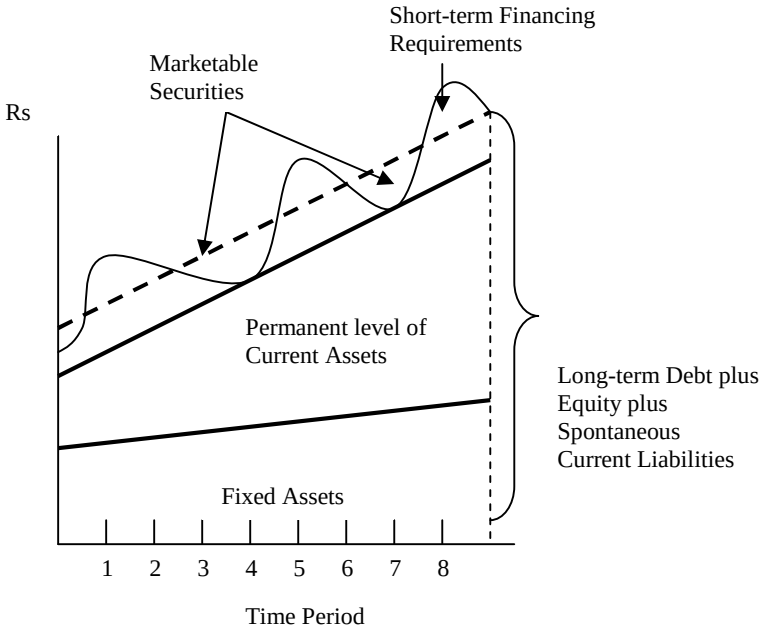
2.1.8.2 Current Asset Financing Policy

It is the manner in which the permanent and temporary current assets are financed. Current assets are financed with funds raised from different sources. But cost and risk affect the financing of any assets of financing of current assets. There are three variants aggressive, conservative and Matching policies of current assets financing.

I) Conservative Approach

This approach suggests that the estimated requirement of total funds should be net from long-term sources; the use of short-term funds should be restricted to only emergency situations or when there is an unexpected outflow of funds. Under a conservative plan, the firm finances its permanent asset and a part of temporary

current asset with long-term financing. Thus in periods when the firm has no temporary current assets, it stores liquidity by investing surplus funds into marketable securities. The conservative plan relies heavily on long-term financing and therefore is less risky.

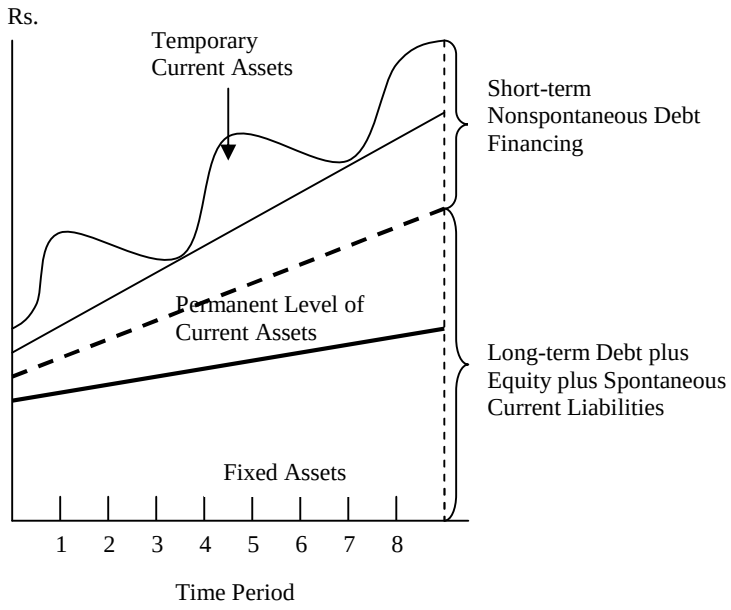


Pradhan, 1986

II) Aggressive Approach

In aggressive policy, the firm finances a part of its permanent current assets with short-term financing and rest with long-term financing. In other words, the firm finances mot only temporary current assets but also a part of the permanent current assets with short-term financing. Figure 3 show that short-term financing finances 50% of the permanent current assets. In general, interest rate increases with time i.e. lower the interest rate. It is because lenders are risk adverse and risk generally increases with the length of lending period. Thus under normal, the firm borrows on a short-term financing rather than long-term financing. On the other hand, if the firm finances its permanent current assets by short-term financing, than it runs the risk of renewing the borrowing again and again. This continued financing exposes the firm to certain risk. It is because, in future, interest expensive will fluctuate widely, and also it may be difficult for the firm to raise the funds during the stringent credit period, in

conclusion, there is higher risk, higher return and low liquidity position under this policy.



Pradhan , 1986

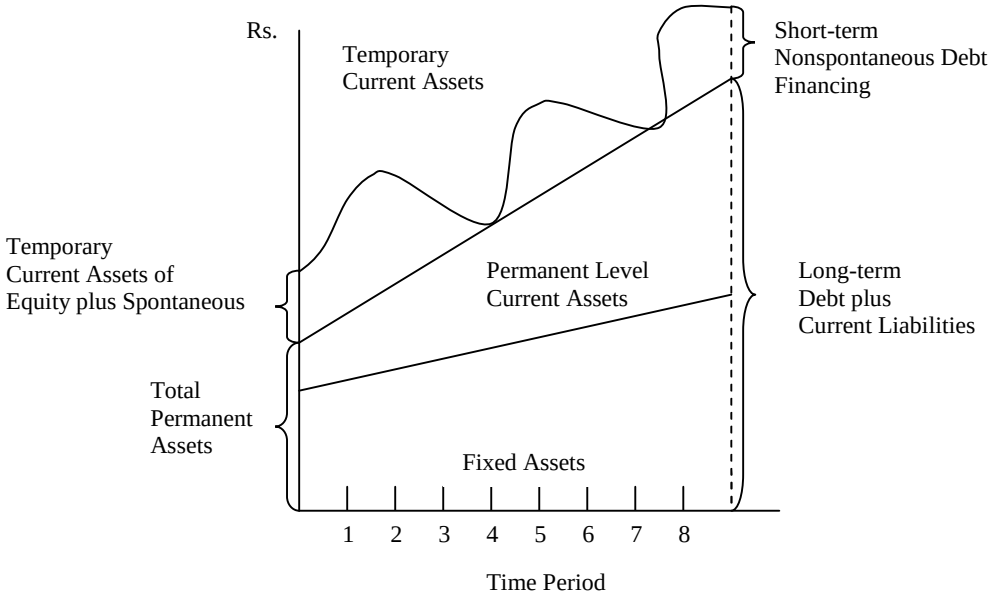
III) Maturity Matching or "Self Liquidating" Approach

Under this approach, unlike the aggressive strategy, the conservative strategy requires the firm to pay interest on unneeded funds. The lower cost of aggressive strategy therefore makes it more profitable than the conservative strategy; however the aggressive strategy involves much more risk. For most firms a trade-off between the externs represented by these to strategies should result in an acceptable financing strategy.

The justification of the exact matching is that since the purpose of financing is to pay for assets, the financing should be relinquished. When the asset is expected to be relinquished using long-term financing for short-term is expensive, as the funds will mot be utilized for the full period similarly, financing long-term assets with long-term financing is costly as well as inconvenient as arrangement for the short-term financing will have to be made as continuing basis.

Thus when the firm follows matching approach long-term financing will be used to finance fixed assets and permanent assets and short-term financing to finance temporary or variable current assets. But this situation may not be realized due to the

uncertainty about the expected lives of assets. The approach of working capital management entails moderate risk with moderate return.



Pradhan ,1986

2.1.9 Trade-off between Profitability and Risk

Profitability is the relationship between revenue and cost. Profit can be increase in two ways (i) by increasing revenues, or (ii) decreasing costs. Risk is the probability that the firm will be unable to pay its bill as they come due. The firm is technically insolvent means it's will be unable to pay its bills. Current asset holding will depend upon its working capital policy. The firm may follow the three policies conservative, aggressive, and moderate (Sharma, 1986).

The risk can be measured by net working capital. We have already defined that working capital is the difference between current asset and current liabilities. The working capital increase in two conditions, either by increasing in current asset or decrease in current liabilities. The chances of insolvent will be low in that case. In the same way if the working capital decreases, the risk increase and side by side there will be more chance of insolvent. (Westorn and Bringham , 1981.

2.1.9.1 Effect of Changes in Current Asset

The effect of changing in level of current assets on its profitability risk trade off can be demonstrated the ration of current asset to total assets. The current asset ratio indicates the percentage of total asset that is current. (Gitman, 1988)

I. Effect of decrease in Ratio: If the ratio decreases, the risk increases and profit also increase. The investment in current assets decrease and investment in fixed asset increase. Assumption that the level of total cost remains unchanged.
II. Effect on increase in current asset: The increased ratio shows that the risk of firm is decreasing and side the profitability will also be decrease current assets are less profitable than the fixed asset.

2.1.9.2. Effect of Changing Current Liabilities

The profitability risk trade off can be demonstrated using the ratio or current liabilities to total assets. The effect of current liabilities on profitability risk trade off can be shown by current liability ratio. Current liability ratio is the ratio of current liability to total asset. Assuming that the total assets remains unchanged, the ratio indicates the percentage or the firm's total assets that have been financed by current liabilities, current total asset ratio.(Gitman,1988)

I. Effect of an increase the current liabilities ratio: When the ratio increase, the profitability increase because the firm uses more long-term financing and the risk also increase.
II. Effect; of decreasing ratio of current liabilities: When the ratio decrease, the profitability decrease, risks also decrease and increase in net working capital. The long-term financing must be raised in current asset, which are more expensive for the business, as a result it wills leas to decrease in profitability.

Effect of changing ratios on Profits and Risk

Ratio	Change in ratio	Effect on Profit	Effect on Risk
Current assets	Increase	Decrease	Decrease
Total assets	Decrease	Increase	Increase
Current liabilities	Increase	Increase	Increase
Total assets	Decrease	Decrease	Decrease

L.J. Gitman ,1988

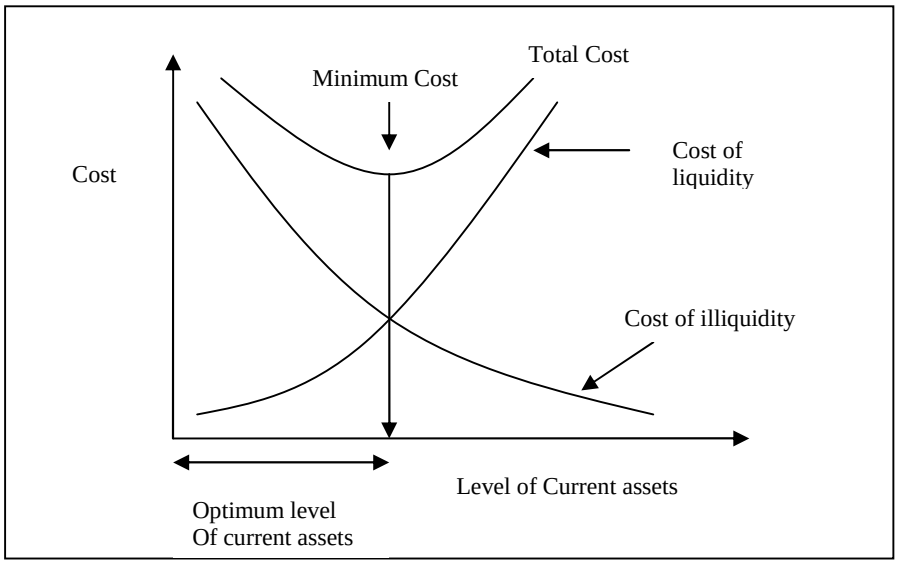
Working capital management gives focus to optimum combination of current assets and fixed assets portfolio in the business. This decision involves trade off between risk and profitability. There are two types of cost in valued. The cost of liquidity and the cost illiquidity, if the firm's level of current assets very high, it has excessive liquidity.

Its return on assets will be low, as funds tied up in ideal cash and stocks earn nothing and high level of debtors reduces profitability. Thus the cost of liquidity (though low rates or return) increases with the level of current assets.

The cost of illiquidity is the cost of holding insufficient current assets. The firm will not be in a position to honor its obligation if it carries too little cash. This may force the firm to borrow at high rate of interest. This will also adversely affect the current worthiness of the firm and it will face difficulties in obtaining funds in future. All this may force the firm into insolvency.

Similarly, the low level of stock will result in less of sales and customers may shift to competitors. Also low level of bank debts may be due to Fight credit policy, which would impair sales further.

Optimum level of current assets, the firm should balance the "{profitability solvency tangle by minimizing the total costs and cost of liquidity (Pandey, 1999)



Cost trade-off

It is in indicated in the figure that with level of current asset the cost of liquidity increase while the cost of illiquidity decrease and vice versa. The firm should

maintain its current assets at that level where the sum of these two costs is minimized. The minimum cost point indicates the optimum level; of current assets in the figure.

2.2. Review of Journals/Articles

This part is mainly focused on the review of journals/articles published by different management experts in working capital management.

Acharya, K. (1988) in this study reports and journals it is clear that the proper management of working capital is a neglected factor in most of the public enterprises. In number of public enterprises, there are dazzling instances of inefficient cash management, defective inventory policy and tax account receivable management. In dealing with management of working capital the problem common to all public enterprises, as we use the term "triangular" convey the message that not only these public utilities are experiencing inefficient cash management but at times, extended to existence of defective inventory policy and account receivable management.

Public utilities are found to be operationally sick not only because of managerial imprudence in one determinant factor of such sickness but at times, caused by lack of operational approach in the management of working capital. Since, public management is dependency motivated on government support for financing the working capital needs Shrestha (1983) found in his study the fact that the payment, the managerial failure to maintain tangible net working capital and rough and ready operational plan of working capital.

Determining the desired investment in account receivables is proving to be one of the weakest decision variables in most of the public enterprises. In fact, no other problem is as serious as the collection of account receivables. It is stated in the report that the non-existing of effective collection policy is the fundamental reason behind the increment of doubtful and bad debts losses in public enterprises.

The study on cash management in public enterprises conducted by Shrestha (1987) concluded that cash turnover has been a neglected factor. In determining the cash management in the public corporations, opinion survey has been made by Dr. Shrestha. He found that many of PEs did not maintain yearly cash budget properly .The operational inefficiency in respect of cash management failure to control cash budget both shortage and excess of cash of different times.

A study was conducted by the management consultant and company (1985) on the mismanagement of the resources. The report also pointed out that because of the lack; of operational objectives, application of long range planning, use of modern management tools, capital budgeting and efforts towards cost control had not been made so far. The study thus opined that there is poor CA management and mismanagement of resources in PEs of Nepal thereby causing poor financial performance.

In a research jointly conducted by Pradhan and Koirala (1982) they focus on evaluating the working capital position of selected manufacturing and non-manufacturing and corporations of Nepal. They compared between manufacturing and non-manufacturing for the fiscal year 2053/054 and 2058/059. Mainly the problems were size of investment, trend of investment and need to control investment in current assets as well as significance of current assets management, motive for holding cash, inventory and factors affecting investment. They concluded that investment in current assets had declined over the period of time in both types of corporations. Due to more liberal and less consistent credit policies, the MPEs has consistently more investment in cash and receivables as compared to non-manufacturing corporations. Inventory management is of great importance to manufacturing enterprises and the cash and receivables to non-manufacturing enterprises.

The major motive for holding inventories was to facilitate smoothly operation of production and sales and motives for holding cash in Nepalese enterprises was to provide a reserve for routine net outflows. In this study they found that working capital was more difficult to manage than fixed capital. The inventory, cash and receivables were problematic to manage for manufacturing and non-manufacturing enterprises. With reference to above they recommended the need to control investment in working capital as a whole for manufacturing enterprises as the average proportion of working capital to sales increased over time. Since manufacturing and non-manufacturing enterprises had been trying to control investment in receivables. In this study the main focus is on the control of investment in cash and inventory.

Ultimately they concluded that manufacturing enterprises should pay sufficient attention to control the investment in inventory.

Pradhan (1986) studied on the demand of working capital by Nepalese corporations for the analysis mine manufacturing public corporations were selected with the 12 years data from 1985 to 1996. He had studied about the various aspects of the working capital management in manufacturing PEs of Nepal.

The specific objectives undertaken in this study are:

i. To conduct risk return analysis of liquidity of working capital position.
ii. He examined to ascertain the short-term financial liquidity position of the enterprise.
iii. To examined the structure of working capital in the enterprise.
iv. To examine the working capital utilization in the enterprise.
v. To examined the combined effect of two or more ratios for maintaining the liquidity prediction contract.
vi. To estimate the transitive demand function or working capital and its various components.

His study findings are as follows:

1. Most of the selected enterprises have been activating a trade off between risks and thereby following neither an aggressive nor conservative approach.
2. There is poor liquidity position of most of the enterprises. This poor liquidity position has been noticed as the enterprises have either negative cash flows or negative earning before tax or they have excessive net current debts, which cannot be paid within a year.
3. The Nepalese manufacturing PEs have on average half of their total assets in the firm of CAs of all the different components of CAs the share of inventories in total assets, on an average is largest followed by receivables, and cash most of he selected enterprises.
4. The economics of sales has been highest for inventories followed by cash and gross working capital receivable and net working capital.
5. The regression result also show that the level of working capital and its components on enterprise desires to hold depended not only on sales but on holding costs also.

His study is concerned with interrelationship that exists between managing CAs and CLs. The study manages to focus on net working capital concept. The study has

employed ratio analysis, discriminate analysis and econometric models for its analysis.

This study is limited to study only selected manufacturing companies not trading or banking sectors. The manufacturing PEs selected for the study differs in their working and nature. There are findings and conclusions only not recommendations and suggestions for solving the problems.

These studies show that working capital management is the weakest or neglected part of financial management in most of the PEs in Nepal. It seems that Nepalese firms are following conservative approach in financing as well as investing working capital.

A comparison of financial performance of MPEs and private manufacturing enterprises was made by Sharma (1995) altogether 6 textile industries, three from each public and private sector were selected for the study. In the study it was concluded that the each public and private sector, although fluctuation had positive WC. There was very high liquidity position of public sector industries whereas majority of private sector industries has adverse situation. Among cash there was encouraging use of cash and bank. Though inventory covered the largest share (more than 60%) of the total assets in the both sectors. The inventory turnover in public sector industries was relatively lower than that of private sectors which debtor's turnover was more or less similar in both sectors. All majorities of private sector industries had relatively better use of fixed assets than other industries. Moreover the earning power of public sector textile industries were very low and even negative for many years while that of private sectors was quite encouraging. He also pointed out that both sectors seemed to have neither any sort of divided policy nor did they pay any sort of dividend. Thus there was negligible direct contribution of textile industries in the revenue generation of government during the period under study.

2.3. Review of Related Dissertations

A number of studies have been made by students of MBS relating to working capital management in different enterprises in Nepal. This section hence will review some of them.

Aryal (1995) has carried out an analysis of working capital management of Hetauda Taxtile and Balaju Textile Ltd. The objective of this study of analysis the liquidity, solvency, utilization and profitability position, and overall comparison of working capital management of both textile companies. He has used ratio analysis and T-test. The findings of this study are as follows:

i. The liquidity position of Hetauda Textile Ltd was better than that of Balaju Textile Ltd. But both companies have not followed a proper working capital policy.
ii. Cash balance maintained by Balaju Textile Ltd was better than that of Heatauda Textile Ltd.
iii. Total assets turnover of both were not satisfactory and there was not significance difference of total assets turnover.
iv. Solvency position of Hetauda Textile was better than that of Balaju Textile.
v. Profitability position of Hetauda Textile was better than that of Balaju Textile, however both companies have not good profitability position during the study period.

An analytical study of working capital management in public sector brick factory has been conducted by Shrestha (1999). He has analysed various components of working capital like cash, inventory, receivables and current liabilities. The study was based on two government brick factories. Harisidhi & Bhaktapur. He found that there is not proper relation in between liquidity turnover and profitability of two brick factories. There is no combination in between fixed capital and working capital. The analysis indicated that the working capital portion is totally neglected. He has suggested using financial tools to forecast the working capital. The factors have to keep the record up to date according to standard format. The management must be serious regarding working capital management.

Sharma (2000) has focused in his study of working capital management of manufacturing companies of Nepal (listed on Nepal Stock Exchange Ltd.) has tried to analysis the management of working capital of manufacturing industries. The objectives of this study are as follows: (i) the study ;of working capital management and policies adopted by these manufacturing industries, (ii) empirical testing of variables affecting working capital management such as current assets, sales, current liabilities, net profit, total assets, cost of good sold, operating ratios. On the basis of this study he has analyzed turnover position, liquidity, and profitability. It also aims to evaluate the relationship between variables, for this, research have set proper research methodology, use of quantitative method, statistical method and qualitative method. From this he has found that overall profitability of listed companies is suffering from sickness and they mist determine the appropriate financing mix. These manufacturing companies undertake measures like identification of needed funds, regular checks, development of marketing information system, the attitude towards risk and profit determination, right combination of short-term and long-term sources of funds to finance working capital needs.

He has further recommended that appropriate combination of investment in CA, minimizing operating cost, preparing effective sales plan, specific working capital policy improving liquidity position, speedy cash conversion period by improving financing.

Performance is the measurement to make healthy efficient management of working capital of manufacturing PEs of Nepal.

Another study made by Giri (2002) “on working capital management "A case study on Balaju Textile Industry Ltd". He observed five years data from 056/057 to 060/61 for the analysis of working capital. He used ratio analysis as tools for this analysis. From the study he concluded that the low utilization of plant capacity and lack of efficient management of the corporation push it to bear loss. Poorly utilitized owner's funds. He also found that there was no efficient and productive use of working capital. From these findings, he recommended that the corporation should make regular checks to identify both excess and deficit of current assets. There should be need to finance current assets from the appropriate combination of short-term and long-term sources. It should take actions for dispensing of huge inventory, which tied up

working capital and involved huge carrying costs, and risk of losses. The long-term marketing strategies should be formulated. Lastly it should strengthen its production capacity with the help of sound incentive schemes to workers and preferably wages incentive plan.

Another study relating to working capital management was made by Joshi (2004). He set out to analyze the problems of poor liquidity position, stockpiles, minimum cash balance and heavy dependency on bank credit on Biratnagar Jute Mill. Therefore, he focused his study to have an insight into the problem of working capital management on Birtnagar Jute Mill. For the analysis he considered the five years financial statement from 2061/062 to 2065/066 and basically used the financial tools for analysis. The major findings of his study were inventories hold the major share of current assets followed by the debtors and very negligible cash balance, inventory turnover had fluctuating trend, negative net working capital, lack of sufficient cash balance, problem of net working capital even for short average collection period, poor liquidity position, heavy dependency as short-term bank credit threatening to the Mill's profitability and solvency and insufficient earning to pay its interest on short-term loans. He has also described the various issues and constraints for the above findings and made some suggestions for the future course of action. He has suggested planning realistic turnover target specimen, design effective inventory management programme, follow productive investment approach, prepare effective sales and exhaustive market research programmes, use short-term bank loan, maintain optimum cash balance, make proper utilization of accumulated collection of debts, prepare all financial reports, develop self consciousness and spirit and also suggested for having situational tackling managers with the qualities of far-sightedness.

Pradhan (2004) in his study on working capital policy of manufacturing PEs in Nepal sought to sort out the problems of low economic performance and poor financial managements in MPEs. He also examined is there any association between the various aspects of working capital policy in financial management and the poor financial performance of MPEs. Hence the study dealt with liquidity position, utilization of working capital, profitability position, sources of financing of current assets and determination of working capital in MPEs. The main findings of his study are a follows:

i. The selected MPEs has sufficient liquidity.

ii. The use of current assets in selected MPEs was satisfactory and there was high turnover of cash and receivables in comparison to inventory.
iii. Most of the MPEs were incurring losses and were unable to meet even the operating expenses with their sales revenue.

Ultimately, he has made some suggestions for the improvement of working capital management and efficient of MPEs. The MPEs should follow aggressive working capital policy.

Another study made by Sapkota (2005) "A study on Working Capital Management in Himal Cement Company Ltd." He took five years data from 2054/55 to 2058/59 for this study. He used ratio analysis only for the analysis of working capital. From the study he concluded that the inventory, cash and receivable should be managed in optimum level. He suggested that the company should determine certain rate of return on its investment and sales target should be set to recouped and overcome the problems of loss. The HCCL has to maintain proper liquidity position. He has also found that the absence of proper guidelines for funds, inventory control, cost control-selling process, investment policy in current assets and management responsibilities and lack of proper rule and regulations of government policy.

Tamrakar (2007) in his thesis named "A study of Management of Working capital in National Trading Ltd." Has studied the working capital management and its significance in National Trading Ltd. This study has covered the span of six years (2058\059 to 2063/064). The objectives of this study were to analyze the importance of the proper management of working capital and relation between the different components of the current assets and current liabilities. He has used financial ratios as the major tools for analysis. In this study, he found very low inventory turnover and high collecting period of outstanding debts, further he found the improper financing of current assets and low earning capacity from his study he has drawn the conclusion that the working capital management of NTL in general is poor. He also tried to the management of working capital's affect in long run.

Joshi (2008), in his study seeks to have true insight into the working capital management in Biratnagar Jute Mill. The study has embodied various financial ratios for measuring Biratnagar Jute Mills financial viability. The study is based on

secondary data with opinion survey method and limited to the concept of WC. The study has indicated mismanagement of inventory, no proper policy of cash holding and heavy dependence on short term bank credit. He has recommended for the effective WC management program, following productive investment approach preparing effective sales plan and exhaustive research program using short term bank credit up to certain reasonable limit, maintaining optimum cash balance and making proper utilization of accumulated collection debts. The scope of study is to identify the loopholes and managerial deficiencies of BJM on the part of WC management. He has used ratio analysis to study but not hypothesis and correlation coefficient to verify the significance and relation between WC components.

Sharma (2009), A study on Working Capital Management of Nepal Battery Company Ltd., has found that inventory and receivable should be proper. The non-moving and obsolete items should be discarded to avoid unnecessary blockage up. Inventory and receivables management should be integrated with credit policy. He has suggested to employs effective inventory control techniques. It is better to adopt appropriate WC policy rather than conservative WC policy, so that it can improve its profitability in short run as well as long run. Company should be liberal in its credit policy.

2.4 Research Gap

All the above studies are conducted with the research title "Working Capital Management". Some researchers have selected various manufacturing companies for the research and some have concentrated in only one or two companies. As to research gap is concerned, there are many changes taken place in the working capital environment and production process as compared to the last few years. So, fresh study related to working capital management of BNLtd has been done in this research. The most of the studies has been considered many more objectives which made their study more complicated but in this research report only four objectives are taken into study. Some researcher uses both primary and secondary data but only secondary data are considered in this research. Both financial as well as statistical tools like ratio analysis, turnover, cash conversion cycle, mean, standard deviation, coefficient of correlation and probable error are used in this research. Almost all the ratios have been applied to cover the analytical part and fulfill the objective of this study.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Introduction

The various objective of this chapter is to show the financial ratio from which liquidity, structure of working capital and utilization of working capital of the factory can be measured. Those ratios will reflect the working capital position of the factory to achieve the working capital of the Bottler's Nepal Ltd. To achieve the mentioned objectives an appropriate research methodology has to be followed. Thus in this chapter focuses have been made on research design, nature of data processing procedures and tools used for analysis. Data of F.Y. 2061/62 to 2065/66 have been presented and analyzed through financial ratios. With the help of this analysis, we can know the working capital as well as financial position of Bottler's Nepal Ltd. (Balaju).

3.2 Research Design

Research design is highlighted for obtaining the basic objective of the study. It includes definite procedures and evaluating the study. This study attempts to make composition and establish the relationship between two or more variables this study to be termed as analytical informative, descriptive challenging and feedback study. For the study of working capital management financial tools, as well as statistical tools as a secondary data, and primary data as qualitative analysis of BN Ltd. are employed to achieve prescribed result.

3.3 Nature and Scope 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 employees with reference to the research questions designed. The secondary data has been collected from annual reports and financial statements and unpublished official records of BN Ltd. All the collected data and information has been properly arranged tabulated and calculated to arrive at the realistic analytical steps.

3.4 Data Analysis Tools

Generally, there are two methods for data analysis, they are: Quantitative and Qualitative method. But in this study, two types of analytical tools are used. They are:
(i) Financial Tools (ii) Statistical Tools.

3.4.1 Ratio Analysis

Ratio analysis is the widely used tools to identify the financial position of the enterprise. It is the essential tool in the financial analysis. The ratio is calculated by dividing one component to another to show their corresponding relationship with each other. The ratio shows the relationship only two components, which are, depend on the calculated variable.

The ratio grouped into (i) liquidity ratio and cash conversion cycle applied to liquidity analysis; (ii) composition of working capital which ratios used in assessing the structure of working capital; (iii) activity or turnover ratios used in assessing working capital circulation or utilization.

i. Liquidity and cash conversion cycle:

Liquidity position shows the ability in paying of its short-term obligation. Conversion cycle also analyses the liquidity position of the firm. In cash conversion cycle the cash outflows from the business and it return by inflow in business this period is the cash conversion cycle. This liquidity position and cash conversion cycle of BN Ltd are analyzing below.

Current Ratio (CR):- Current ratio is computed by dividing the total current assets by current liabilities. The result shows the number of times the current assets pay off the current liabilities.

$$\text{Current Ratio (CR)} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

It is considered as an index of solvency of a company. It indicates the ability of the company to meet its current obligations. A current ratio of 2:1 is generally considered satisfactory for a manufacturing company.

Quick Ratio (of Acid-test): Quick ratio is computed by dividing the quick assets by current liability.

$$\text{QR or ART} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

It includes assets which can be quickly or immediately converted to cash. Inventories are excluded because they cannot be sold at anything before fore-sale prices. Generally, the quick ratio of 1:1 of company is considered to be sound.

Cash Conversion Cycle:- Cash conversion cycle can be exposed by this equation:

Cash conversion cycle = Inventory conversion + Receivables collection -Payables deferred period

Cash conversion cycle model, which focuses on the length of time between when the company makes payments, or invests cash inflows, or realizes a cash return from its investment in production.

The following terms are used in the model.

i. **The Inventory conversion Period:-** The inventory conversion period is calculated by dividing inventory by the cost of goods sold per day. It is computed as

$$\text{Inventory Conversion period} = \frac{\text{Inventory}}{\text{Cost of Good Sold/360}}$$

The inventory conversion period is the average length of time required to convert materials into finished goods and then to sell these good; it is the amount of time the product remains in inventory in various stages of completion.

ii. The Receivable Collection Period (DOS):- It is calculated by dividing accounts receivable by the average credit sales per day.

$$\text{DOS} = \frac{\text{Receivables}}{\text{Sales/360}}$$

The receivable collection period is the average length of time required to convert the firm's receivables into cash that is to collect cash following a sale.

iii. Payable Deferred Period:- It is computed by dividing accounts payable by the daily credit purchases. It is defined as:

$$\text{PDP} = \frac{\text{Account Payable}}{\text{Cost of Good Sode/360}}$$

The payable deferred period is the average length of time between the purchase of raw materials and labour and the payment of cash for them.

3.4.2 Structure of Working Capital

The analysis of structure of working capital enables management of an enterprise to know as to how the working capital is being administered. It also furnishes valuable

information to short-term creditors and others regarding the strength of working capital of the undertaking.

The structure of working capital can be analyzed by measuring the change of proportion of cash, receivable, inventory and other items to the total current assets in course of time.

The structure of working capital has been studies by analyzing the following ratios:

1. Ratio of Current Assets (CATA):- The ratio of current asset to total assets indicates what percentage of an enterprise's total assets is invested in the form of current assets. It is calculated as:

$$\text{CATA} = \frac{\text{Current Assets}}{\text{Total Assets}} \times 100$$

As the ratio increase the risk and profitability of enterprises would decrease. The low ratio indicates the small working capital.

2. Cash to total Assets Ratio (CTA):- This ratio indicates what percentage of total assets is in the form of cash. It is defined as:

$$\text{CTA} = \frac{\text{Cash}}{\text{Total Assets}} \times 100$$

The increase in the ratio decreases the risk and profitability and vice versa.

3. Receivable to Total Assets (RTA):- What percentage of total assets is in the form of receivable is shown by this ratio. It is stated as:

$$\text{RTA} = \frac{\text{Amount Receivables}}{\text{Total Assets}} \times 100$$

The increase in the ratio indicates the liberal credit policy followed by the enterprise.

4. Inventory to Total Assets (ITA):- This ratio is calculated as under:

$$\text{ITA} = \frac{\text{Inventories}}{\text{Total Assets}} \times 100$$

This ratio indicates the percentage of total assets invested in the form of inventories. Inventory is a part of working capital, so if the percentage increases, the working capital automatically increases. The increase in the ratio also indicates liberal inventory policy of blocking of materials in stock.

5. Cash to Current Assets (CCA):- What portion of current assets is in the form of cash is shown by this ratio.

$$CCA = \frac{Cash}{Current\ Assets} \times 100$$

This ratio should not be large because higher ratio indicates the poor cash management.

6. Receivable to Current Assets (RCA):- This ratio shows the share of receivables on current assets and is derived as:

$$RCA = \frac{Receivables}{Current\ Assets} \times 100$$

An increase in the ratio shows that the management of receivable has an important bearing on the performance of the enterprise.

7. Inventory to current Assets (ICA):- This ratio implies the percentage of current assets in the form of inventories and derived as:

$$ICA = \frac{Inventories}{Current\ Assets} \times 100$$

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

3.4.3 Turnover Ratios used in Assessing Working Capital Circulation or Utilization

An analysis of circulation aspect throws light on the efficiency with which working capital is being utilized in the company. Various turnover ratios covering each component of current assets have been developed to analyses the efficiency in the use of working capital. The higher the turnover of these components, the lower will be the requirement of working capital. With the help of this ratio, we can easily know whether the funds have been used efficiently or not. The relationship between sales and various assets of the firm can be defined with the help of turnover ratio. Thus, the activity ratios are employed to evaluate the efficiency with the firm.

i. Inventory Turnover (IT)

The inventory turnover ratio shows how rapidly the inventory turnover into receivable through sales. This ratio is obtained by dividing the net sales in a year by the value of inventory at the end of the year. It is computed as:

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

The higher turnover of inventory quickens the flow of funds from inventory. A low turnover ratio indicates an over investment in inventory in relation to sales.

ii. Turnover of Current Assets(TCA)-

This ratio measures the turnover of total current assets used in business operations. The ratio is obtained by dividing the sales by total current assets. It is specified as

$$TAC = \frac{\text{Sales}}{\text{Total Current Assets}}$$

The lower turnover of current assets indicates tax utilization of working capital and reverse is the case with a higher turnover.

iii. Net Working Capital Turnover (NWCT)

The ratio is obtained by dividing net sales by working capital. This ratio show the number of tines the average net working capital turned over during the year. It is defined as:

$$NWCT = \frac{\text{Sales}}{\text{Net Working Capital}}$$

This ratio indicates the efficiency with which the working capital has been used in the company. The higher turnover of working capital represents lower investment in it and greater profitability. But a very high turnover of working capital may also indicate the efficient utilization of working capital in the enterprise

iv. Turnover of Cash (CT)

This ratio shows the turnover of times the average cash balance is turned over during the year. It is specified as:

$$CT = \frac{\text{Sales}}{\text{Cash Balance}}$$

This ratio shows the relationship between cash balance plus other liquid assets and operating cost and expenses. It shows the adequacy of liquid assets to meet current

operating needs. A high turnover of cash indicates an inefficiency of cash to provide for emergencies. A low turnover of cash shows that as excess cash balance is lying with the enterprise.

v. Receivables Turnover Ratio (RT)

This receivable turnover ratio is computed by dividing annual credit sales by total receivables.

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

A declining turnover of account receivable indicates an over investment of funds in receivables which may raise the requirement of working capital of a firm.

3.4.4 Efficiency or Profitability Position

These ratios are employed to judge how efficiently a company is using its assets. It should, however, be noted that there is quite a bit of ambiguity about these ratios.

i. Sales to Total Assets (STA)

This ratio shows how hard the firm's assets are being to put to use. The ratio is represented by

$$STA = \frac{\text{Sales}}{\text{Average Total Assets}}$$

Which reveals how close a company is operating to capacity? A high ratio would imply that sales cannot be stepped up without an increase in capital invested in the company.

ii. Net Profit Margin (NPM)

The ratio helps in establishing the proportion of sales that finds its way into profits. It is computed by:

$$NPM = \frac{\text{Net Profit After Tax}}{\text{Sales}}$$

iii. Return on total Assets (RTA)

The ratio of income to total assets is used to measure the performance of company.

$$RTA = \frac{\text{Net Profit After Tax}}{\text{Total Assets}} \mid 100$$

The RTA is a useful measure of the profitability of all financial resources invested in the company's assets.

iv. Gross Profit Margin (GPM)

It is computed by dividing gross profit (obtained by deducting cost of goods sold from net sales) by sales;

$$GPM = \frac{\text{Gross profit}}{\text{Sales}} \mid 100$$

The gross profit margin-ratio reflects the efficiency with which company produces each unit of product. The higher percentage indicates the better efficiency of the company.

v. Operating Ratio (RO)

The operating is an important ratio that explains the changes in the net profit margin ratio. This ratio is computed by dividing all operating expenses by sales;

$$OR = \frac{\text{Cost of Good Sold + Operating Expenses}}{\text{Sales}} \mid 100$$

Higher ratio indicated the lower efficiency of the company and vice-versa. Higher operating ratio means small amount of operating income to meet Interest, dividends etc.

vi. Return on Net Worth (RNW)

It is computed by dividing net profit after tax by net worth.

$$RNW = \frac{\text{Net Profit After Tax}}{\text{Net Worth}} \mid 100$$

It indicates the return to the shareholders how well the firm has used the resources of the owners. It judged whether the firm has earned of satisfactory return for its shareholders or not. Higher the ratio returns to the shareholders and vice-versa.

vii. Return on working capital (RWC)

It is computed by dividing net profit after tax by current assets (working capital). It measures the profit with respect to current assets.

$$RWC = \frac{\text{Net Profit After Tax}}{\text{Current Assets}} \times 100$$

3.4.5 Statistical Tools

The statistical tools are essential to measure the relationship of two or more variables. The statistical tools are as follows:

3.4.5.1 Coefficient of Correlation or Covariance Method

Coefficient of correlation is defined as the association between the dependent variables and independent variables. It is a method of determining the relationship between these two variables. If the two variables are so related the change in the value of dependent variable, then it is said to have correlation coefficient. For this, the method of Karl Pearson's coefficient of correlation is used:

$$r = \frac{dxdy - \frac{dx \; dy}{N}}{\sqrt{dx^2 - \frac{(dx)^2}{N} \quad dy^2 - \frac{(dy)^2}{N}}}$$

Where,

x = The First Variable,

y = The Second Variable,

N = Number of Years (Observations),

dx = Deviation of first variable from assumed mean,

dy = Deviation of second variable from assumed mean.

Assumption

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

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

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

iv) If r = +1, the relationship is perfectly positive.

v) If r = -1, the relationship is perfectly negative.

3.4.5.2 Probable Error (P.E.)

P.E. of r is very useful in interpreting the value of r and is worked out as under for Karl Pearson's Coefficient of Correlation.

$$P.E. X \frac{0.6745 \mid (1 - r^2)}{\sqrt{N}}$$

If r < P.E., it is not all significant, no evidence of correlation between variables.

If r > P.E., there is no correlation, but not significant.

If r > 6 |P.E. and greater than ±0.5, it is considered significant at all.

CHAPTER – IV

DATA PRESENTATION AND ANALYSIS

4.1 Financial Analysis

The various objective of this study as stated in chapter researcher has to examine the management of working capital of BN Ltd. The major variables in this chapter, efforts have been made to analyze the working capital management in terms of composition of current assets, turnover position, profitability position and liquidity position of BN Ltd. The compositions of current assets are analyzed by making relationship of each component of current assets as well as total assets. The turnover position is analyzed with the help of gross working capital turnover, networking capital turnover, turnover of cash, receivable turnover and inventory turnover. The liquidity position is analyzed through current ratio, quick ratio and cash conversion cycle and size of networking capital. Moreover, the profitability position is analyzed with the help of gross profit margin, net profit margin, operating ratio, return on net worth and return on working capital. All these are in detail and presented in tabular from below.

4.1.1 Working Capital Policy

Working capital policy refers to the firm's basic policies regarding the target level for each category of current assets and liabilities. Working capital management refers to the administration of all assets and current liability policies, which affect the overall functional areas of the firm.

Every firm wants to maximize its shareholders wealth. In order to achieve the target goals, it has to perform many functions. For this purpose, firm has to determine the suitable current assets investment policy, maintain proper relation of current assets with fixed and total assets, and finance the current assets with short term as well as long term sources. Thus, the better performance of current assets is the integrals part of working capital management.

4.1.2 Current Assets Investment Policy

Every firm needs to invest the current assets as well as fixed assets. Current assets policy refers to the policy regarding the total amount of current assets required to support the give level of sales. Firm may adopt the different investment policy

according to their attitude. For this purpose firm invest proper portion of current assets and fixed assets. The current assets policy has been analyzed here in the term of composition of different types of current assets in total assets and relationship between current assets with fixed assets.

Table - 4.1

Portion of current assets in total assets

(In Rs. 000)

F/Y	2061/62	2062/63	2063/64	2064/65	2065/66	Average
Total assets	626091	733762	812765	842642	951868	793425.6
Current assets	240196	288615	353658	369405	393848	329144.4
Percentage of current assets	38.36	39.33	43.51	43.84	41.38	41.28

Current asset investment to total assets of BN Ltd. (Balaju) in fiscal year 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 are 38.36, 39.33, 43.51, 43.84 and 41.38 respectively. Investment in current assets is fluctuating 38.36 to 43.83 percent with the average of 41.28 percent. Sundry debtors inventory misc. current and cash and bank balance covers average of 4.266, 34.03, 53.164 and 8.54 percent of total current assets.

Company has been investing in loan and advance as current assets which can be converted into cash early such as investment in sundry debtors, other subsidiary companies (BN Ltd. of Terai, Troika Traders Pvt. Ltd.) staff loans, advances for expenses, deposits others, letter of credit margins etc.

It shows that the company has followed relaxed current asset investment policy in the figure given below.

Relaxed current asset investment policy

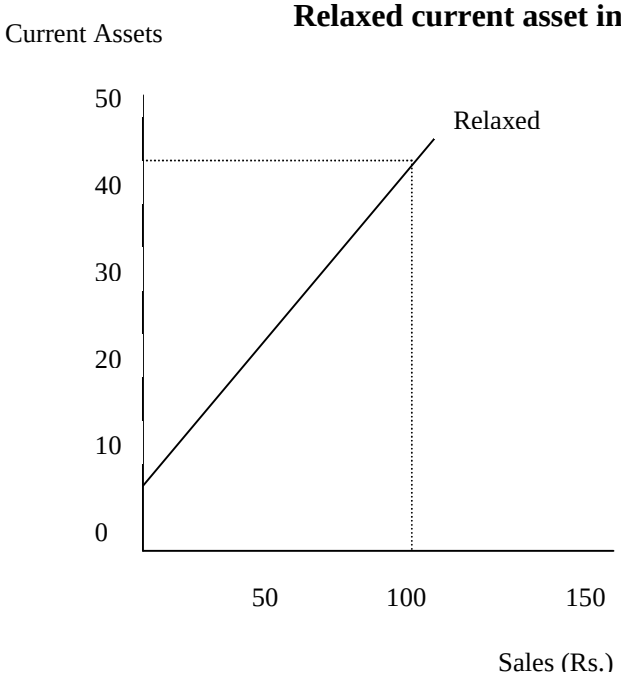


Figure No . 1

Policy current assets to support sales of Rs. 100

Relaxed Rs. 41.28

4.1.3 Current Assets Financing Policy

Table 4.2

Current assets financing policy

(In percentage)

F/Y	2061/62	2062/63	2063/64	2064/65	2065/66	Average
Current asset	38.36	39.33	43.57	43.84	41.38	41.28
Long term asset	61.64	60.67	56.49	56.16	58.62	58.72
Current liability	21.16	25.08	24.42	21.07	28.16	23.98
Long term liability	78.84	74.92	75.58	78.93	71.84	76.02

In above table percentage of current assets to total assets in fiscal year 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 are 38.36, 39.33, 43.57, 43.84 and 41.38 respectively. Its fluctuating ranges 38.36 to 43.84 percent with average of 41.28 percent. Similarly long term assets to total assets of respective fiscal years are 61.64, 60.67, 56.49, 56.16 and 58.62 with average of 58.72 percent. It ranges from 56.16 to

61.64 percent. Current liabilities in fiscal year 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 are 21.16, 25.08, 24.42, 21.07 and 28.16 respectively with an average of 23.98 percent. It ranges from 21.07 to 28.16 percent. Similarly long term liabilities of respective fiscal years are 78.84, 74.92, 75.58, 78.93 and 71.84 percent with an average of 76.02 percent. It ranges from 71.84 to 78.93 percent.

Substituting the average values of current asset, long-term assets, current liabilities and long-term liabilities the given figure is constructed.

Current assets financing policy

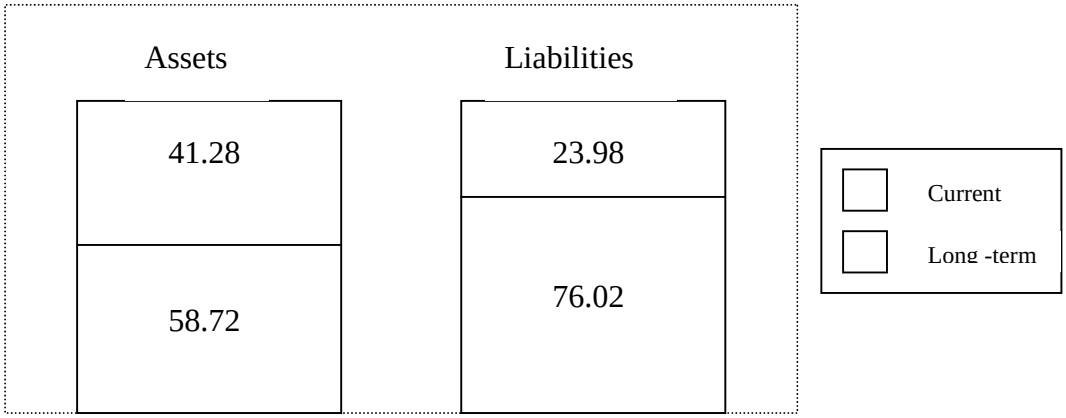


Figure No. 2

Figure shows that average the 41.28 percent of the assets 23.98 percent is financed from short-term sources and remaining of which is from long-term sources. Therefore it can be said that BN Ltd. (Balaju) is following the conservative current assets financing policy.

4.1.4 Composition of Current Assets

Any firm has to maintain the appropriate level of current assets to run the business smoothly. As stated in conceptual Frame work, the major components of current assets are Misc. current assets, inventory, cash and Bank balance and sundry debtors. The firm who followed the conservative current assets policy maintains the high liquidity of the firm by holding the large portion of liquid assets in total working capital. So, here composition of current assets has been analyzed in order to fix the current assets policy in terms of the holding of more liquid assets. The stock of raw materials is kept in order to ensure smooth production and to protect the risk of non-available of raw materials. To meet this obligation cash is also needed. Any business organization aims to maximize return on shareholders investment. In order to

accomplish these objectives, the business organization should earn sufficient return from this operations which is depend upon the volume of sales. So, the firm has to invest enough funds in current assets in order to increase sale. As the sales do not convert into cash immediately, the extra amount of working capital in deeded. The efficient management of current assets is an integral part of overall part of financial management and has the grater impact on maximization of owner's capital. It is necessary to have proper analysis of current assets management. The proper analysis of current assets of industrial concern reflects the nature of performance and operation of its management. So the overall current assets are firstly analyzed.

Table - 4.3

Composition of current assets

(In Rs. 000)

Fiscal Year	Sundry Debtors		Inventory		Misc.		Cash and Bank balance		Total Current Assets
	Amounts Rs.	Percentage	Amounts Rs.	Percentage	Amounts Rs.	Percentage	Amounts Rs.	Percentage	Amounts Rs.
2061/62	431	0.18	78136	32.53	127658	53.15	33971	14.14	240196
2062/63	1261	0.44	86354	29.92	161307	55.89	39693	13.75	288615
2063/64	907	0.26	136775	38.67	212945	60.21	3031	0.86	353658
2064/65	73	0.02	121106	32.78	200398	54.25	47828	12.95	369405
2065/66	80480	20.43	142734	36.24	166694	42.32	3940	1.00	393848
Total									
Average		4.266		34.03		53.164		8.54	

Source: Calculated from the data extracted from the balance sheet of B.N. Ltd.

Table shows the composition of current assets of Bottlers Nepal Limited (Balaju). In current assets and their investment fluctuate in the five year period. As per the table, the major share investment in Misc. current assets, the proportion of misc. current assets to total current assets are 53.15%, 55.89%, 60.21%, 54.25% and 42.32% respectively. It means the more then 50% above investment in Misc. current assets cover major person in the five year study period. Proportion of Misc. current assets

has been fluctuating between 42.32% to 60.21%. The average percentage of Misc. current assets in 53.164% which is the less than the 2061/62 to 2064/65. Company's Misc. current assets include the investment to Troika Traders (Pvt.) Ltd, a subsidiary company, investment in Bottlers Nepal (Terai) Ltd. A subsidiary company, other related companies, staff loans, advance for expenses (staff, managing director), deposit others, advance value added tax, letter of credit margin, advance to suppliers, prepaid expenses, prepayment contains, advance income tax and income tax deposit against appeal.

Inventory is the components of current assets. The proportions of inventory to total current assets are 32.53%, 29.92%, 38.67%, 32.78% and 36.24% respectively during the study period of 2061/62 to 2065/66. The average proportion of totals current assets to inventory is 34.03%. The proportion of investment in inventory has been fluctuated between 38.67% to 29.92% during the five year period. The average percentage of inventory is less than that of inventory fiscal year 2061/62, 2062/63 and 2064/65. The proportion of inventory shows the fluctuating tendency up to the study period except in five year 2061/62 to 2065/66.

The third holding component of current assets in cash and Bank balance which also fluctuates during the study period. The cash and Bank balance proportion are 14.14%, 13.75.

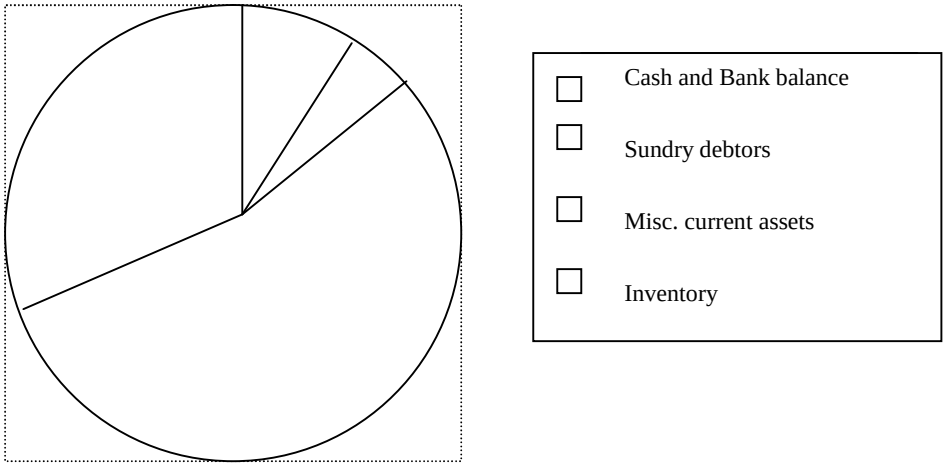
The third holding component of current assets in cash and Bank balance which also is fluctuating during the study period. The cash and Bank balance proportion are 14.14%, 13.75%, 0.86%, 12.95% and 1% in the fiscal year 2061/62 to 2065/66 respectively. The average percentage of cash holding is 8.54% and its standard deviation is 6.22% of cash and bank balance to total current assets.

The last investment proportion of sundry debtors to total current assets. It is 0.18%, 0.44%, 0.26%, 0.02% and 20.43% during observed fiscal year respectively. The four year investment in sundry debtors too much low which is average 0.45%. In the year 2065/66 increased 20.43% which is the very high investment in sundry debtors then previous four year.

Figure shows the components of current assets investment pattern of BN Ltd., in average in the study period, investment in sundry debtors, cash and bank balance holding are fluctuating is highly then the other current assets. The company invests

average 66% liquid assets, which are cash and Bank balance, Misc. current assets and sundry debtors. It is the more liquid assets then other components of current assets. More then 30% investment in inventory, which is less degree of liquid assets of all current assets holding by BN Ltd.

Composition of current assets average



4.2 Liquidity Position and Cash Conversion Cycle

Liquidity position of the firm depends on its working capital policy. It the firm follows aggressive policy; it has low liquidity position, while conservative policy has to high liquidity position. So, for the analysis of working capital policy of BN Ltd. With measure the liquidity position indicates the ability to pay of its short term obligation. The liquidity position of BN Ltd. Can be analyzed with help of these ratios-current ratio, acid test ratio and cash conservation cycle. Cash conversion cycle also analyses the liquidity position of the firm. In cash conversion cycle the cash outflow from the business to purpose the paying its short-term obligation and other paying purchasing having activity and it return by inflow sales in business this period is called cash conversion period.

4.2.1 Current Ratio

Current ratio serves a similar purpose and is frequently used. It is also called working capital ratio. It is considered as an index of solvency of a company. It indicates the ability of the company to meet its current obligations. If a company raises money through commercial paper and invests the amount in marketable securities net working capital is unattached but the current ratio changes. Current ratio of 2:1 in generally considered satisfactory for manufacturing company. It constitutes a rule of

thumb for measuring liquidity. The ratio of BN Ltd for the period of study is calculated in Table- 4.4 as under:

Table - 4.4

Current Ratio

(In Rs. 000)

Year	Current Assets	Current liabilities	Ratio %	% Change
2061/62	240196	132473	1.81	-
2062/63	288615	184041	1.57	0.24
2063/64	353658	198457	1.78	0.21
2064/65	369405	177526	2.08	0.30
2065/66	393848	268073	1.47	0.61
Total	1645622	960570		
Average	329144.4	192114	1.7421	

The above table shows that the current ratio of the BN Ltd. In the F/Y 2061/62 is 1.81:1 and it is decreased by 0.24 and reached under 1.57:1 in the F/Y 2063/64 the ratio of the company has increased gone up to 1.78:1 in F/Y 2064/65 the current ratio of the company has gone up to 2.08:1 which is the highest liquidity position maintained by the company during the study period. In the F/Y 2065/66 is 1.47:1, it is the lowest current ratio during the study period. In this way the average current ratio of BN Ltd. is found 1.742:1. The current ratio of 2:1 is generally considered satisfactory for a manufacturing company. During the study period, the company maintains the current ratio is less then 2:1 so the company's current ratio has not found to be satisfactory.

4.2.2 Quick Ratio

Quick ratio or acid test ratio is relationship in between current assets and current liabilities. The ratio which measures immediate solvency. It includes assets which can be quick or immediately converted to cash. Such assets include only cash, marketable securities and bills customers has not yet paid (receivable). Inventories are excluded because they can not be sold at anything above fore-sale price. The liquidity arises because finished goods cannot be sold for more then production cost. The quick ratio of BN Ltd. during the study period is presented in table 4.5.

Table - 4.5

Quick Ratio

(In Rs. 000)

Year	Quick Assets	Current liabilities	Ratio (times)	Changes
2061/62	162060	132473	1.22:1	
2062/63	202261	184041	1.10:1	
2063/64	216883	198457	1.09:1	
2064/65	248299	177526	1.40:1	
2065/66	251114	268073	0.94:1	
Total	1080617	960570	5.75:5	
Average	216123.4	192114	1.15:1	

The above table shows that the quick ratio of BN Ltd. where quick assets consists of cash bank balance, sundry debtors, advance, loan and deposits, prepaid advance tax and other current assets. In the F/Y 2061/62, the quick ratio is 1.22:1 and it is decrease to 1.10:1 in the next F/Y 2062/63. Further the study shows that the quick ratio of the company has slightly decrease to 1.09:1 in the F/Y 2063/64 and to 1.40:1 in F/Y 2064/65. Which is increase from the provide ratio and it is the highest ratio during the study period. In the F/Y 2065/66 it is decrease to 0.94:1 due to the over increase in current liabilities. The quick ratio is considered as perfect when the ratio comes 1:1. The company has able to meet his obligation during the study period. The average quick ratio under the period of observation is found 1.15:1. So the quick ratio of BN Ltd. is favorable.

Inventory Conversation Period

Table - 4.6
Inventory Conversion Period

(In Rs. '000)

Year	Inventory	Cost of goods sold	Days in Year	Conversion Days
2061/62	78136	119773	360	234.84≈235
2062/63	86354	147316	360	211.01≈211
2063/64	136775	206484	360	238.46≈239
2064/65	121106	209704	360	207.90≈208
2065/66	142734	270789	360	189.75≈190
Average				

Table shows that inventory conversion period in days. The inventory conversion period of the company in F/Y 2061/62 in 235 days and in F/Y 2062/63 it is slightly decrease and observe 211 days. In F/Y 2063/64 it is increasing 239 days which is the highest inventory conversion period in the study period. In 2064/65 in decrease by 31 days and observe 208 days and last F/Y 2065/66 it is again decrease 18 days and observe 190 days. This is the lowest conversion period in the five years study period. In the average period of the year is 217 days. It shows that the inventory conversion period of the bottlers Nepal Limited is very high. It indicates the inventory is less degree of liquidity. The inventory conversion times average in year only 1.66 times in a year.

Receivable Collection Period

Receivable collection period is the average length of time required to convert the times receivable into cash. The receivable collection period also is called the day sales outstanding. The table shows the receivable collection period of Bottlers Nepal limited in the five years study period.

Table - 4.7

Receivable Collection Period

(In Rs. '000)

Year	Receivable	Sales	Days in year	Receivable collection p (in days)
2061/62	431	231746	360	0.67≈ 1
2062/63	1261	293820	360	1.55≈ 2
2063/64	907	368623	360	0.89≈ 1
2064/65	73	372783	360	0.07≈ 1
2065/66	80480	414583	360	69.89≈ 70
Average		414577	360	

The above table shows the length of time of the receivable collection period in the study period. The receivable collection period in F/Y 2061/62 to 2064/65 is 1 to 2 days. In 2065/66 is highly increased in collection period which is 70 days. In F/Y 2064/65 is very low which is near to 0 then reasons is high provision for doubtful debts which sundry debtors is 324 thousand and provision for doubtful debts is 252 thousand. The company's receivable collection period is very low, but in F/Y 2065/66 is highly increased. The average collection periods in 15 days due to the high

receivable collection period in 2065/66. It is near to 1 day in four years average. It indicate the collection policy of BN Ltd. is adopted the hard collection policy. In 2065/66 adopted the liberal collection policy, but it is hardly to say that collection policy changed by company. Receivable is the lightly liquid assets of the company.

Payable Deferral Period

It is indicate the average length of time between the purchase of raw material and labour and the payment of cash for them. The table shows the payable deferral period during the study period.

Table - 4.8

Payable deferral Period

(In Rs. '000)

Year	Account payable	Cost of goods sold	Days in year	Payable deferral time
2061/62	18137	119773	360	54.051≈ 55
2062/63	38051	147316	360	92.99≈ 93
2063/64	37998	206484	360	66.25≈ 67
2064/65	19105	209704	360	32.80≈ 33
2065/66	41375	270789	360	55.00≈ 55
Average			360	60.31≈ 61

The above table shows the payable deferral period. In F/Y 2061/62 is 55 days and F/Y 2062/63 in 93 days which is the highest payable deferral period in the study period. In F/Y 2063/64 in 67 days and in F/Y 2064/65 is 33 days which is the lowest payable deferral period during the study period in last F/Y 2065/66 days. It is very fluctuating the payable deferral period. It indicates there is not certain duration of time payable the accounts payable made by company. The average payable deferral period is 61 days during the five years study period.

4.2.3 Cash Conversion Cycle

It is the length of time between paying for labour and materials and collection of receivable. It is the concentrate the cash in business or collection of receivable or sales. The table shows the cash conversion cycle of BN Ltd. during the five year period.

Table - 4.9

Cash Conversion Cycle

	2061/62	2062/63	2063/64	2064/65	2065/66
Inventory conversion period	235	211	239	208	190
Receivable collection period	1	2	1	1	70
Operating cycle	236	213	240	209	260
Less Payable deferral period	55	93	67	33	55
Cash conversion cycle	181	120	173	176	205
Conversion cycle in year (in times)	1.99	3	2.08	2.04	1.77

The above table 4.9 shows the cash conversion cycle of BN Ltd. in the F/Y 2061/62 in 181 days and the period in F/Y 2062/063 decrease by 61 and absorb 120 days which is the high turnover of cash in the study period this is 3 times in year. In F/Y 2063/64 is 173 days and 2064/65 in 176 days, it is the 2.08 and 2.04 times in a year. In last F/Y 2065/66 is 205 days, which is the highest long time or cash conversion cycle during the study period. It is only 1.77 times in a year. This table represent the cash conversion cycle of BN Ltd. is fluctuating 120 days to 205 days range to the inventory conversion cycle during the study period.

4.3 Structure of Working Capital

The structure of working capital can be analyzed by measuring the change of proportion of cash, receivables, inventory and others items to the total assets and total current assets in course of time. The composition of working capital is analyzed by the help of the following ratios.

4.3.1 Proportion of Current Assets to Total Assets

The requirement of the current assets depends upon the nature of the business; it is required to meet the working capital which is required to run the day to day activities. The Table 4.10 given below represents the percentage of current assets to total assets.

Table - 4.10

Current Assets to total Assets

(In Rs. 000)

Year	Current Assets	Total Assets	Ratios %	% Change
2061/62	240196	626091	38.36	-
2062/63	288615	733762	39.33	0.97
2063/64	353685	812765	43.51	4.18
2064/65	369405	842642	43.84	0.33
2065/66	393848	951868	41.38	(2.46)
Total	1645722	3967128	206.42	3.02
Average	329144.4	793425.6	41.284	0.604

This table 10 shows the proportion of current assets to total assets investment of BN Ltd. during the selected 5 years study period. The current assets to total assets ratio (in percentage) has increasing trend year after year. In F/Y 2061/62 observe the 38.36% current assets of total assets which is slightly increasing pattern at F/Y 2064/65 but in 2065/66. It is decreasing by 2.46% in comparison with 2064/65. In the 5 year the average of current assets is 41.284 of total assets with increasing trend of 0.604 percentages each year. In the study period the current assets to total assets observe the 43.83% is the highest observation percentage.

The increasing pattern is affected by the investment increase in inventory and Misc. current assets.

4.3.2 Proportion of Cash and bank Balance to Total Assets

The proportion of liquid cash in comparison to the total assets shows the investment in cash out of total assets. The more ratio decrease the risk and provide more working capital but the excess cash earns nothing. The profitability would decrease. The table 11 standing below shows the percentage of cash and bank balance to total assets.

Table - 4.11

Cash and Bank Balance to Total Assets

Year	Cash and Bank	Total Assets	Ratios %	% Change
2061/62	33971	626091	5.43	-
2062/63	39693	733762	5.41	(0.02)
2063/64	3031	812765	0.37	(5.04)
2064/65	47828	842642	5.68	5.31
2065/66	3940	951868	0.41	(5.27)
Total	128463	3967128	17.30	
Average	25692.6	793425.6	3.46	

The above table shows the investment in cash out of it's total assets in BN Ltd. during the study periods. In F/Y 2061/62 observe the 5.42% Cash and Bank balance to total assets. In the study period 2061/62, 2062/63 and 2064/65 observe the 5.43%, 5.41% and 5.68% but F/Y 2063/64 and 2065/66 is only 0.37% and 0.41% of the Cash and Bank balance to total assets. The above table shows that there is decreasing train in the ratio only increase in 2064/65which is increase by 5.31% of Cash and Bank to total assets. In each year of study period cash holding ratio is fluctuating. Thus shows the management attitude towards risk during overall study period, the average ration is 3.46%.

4.3.3 Proportion of Inventory to Total Assets

Inventory is the important part of the current assets. Inventory of raw materials as well as spare parts are very important for the manufacturing industry like BN Ltd. The shortage of required inventory result irregular production, high manufacturing cost, unfavorable labour variance etc. caused. In the other hand excess inventory cause unnecessary holding of capital. It result increased in cost and nothing earn. So the inventory must be in optimum position so that neither it arises the excess inventory problem nor shortage inventory problem. The ratio calculated in Table 4.12 shows the proportion of inventory to total assets.

Table - 4.12

Inventory to Total assets

Year	Inventory	Total Assets	Ratios %	% Change
2061/62	78136	626091	12.48	-
2062/63	86354	733762	11.77	(0.71)
2063/64	136775	812765	16.83	5.06
2064/65	121106	842642	14.37	(2.46)
2065/66	142734	951868	14.995	0.625
Total	565105	3967128	70.445	
Average	113031	793425.6	14.09	

The above table shows the percentage of inventory with respect to its total assets in F/Y 2061/62 to 2065/66. The percentage of investment on inventory is fluctuating during the five year period. The low investment in inventory is 29.52% and highest is 38.67%. The inventory fluctuation is between 29.92% to 38.67%. In F/Y 2061/62 observe 32.53% and then 2062/63 decreased by 2.61% and observes 29.92%. Inventory to current assets ratios in F/Y 2063/64 in highest investment inventory is 38.67% which is increase in inventory percentage by 8.75 and again in 2064/65 decreased by 5.89% and observed the 32.78% from F/Y 2063/64. In F/Y 2065/66 again increase in investment on inventory percent, which is 36.24%, the increase by 3.46 from F/Y 2064/65. The above inventory ratio is 34.26%. The large amount investment in invests in inventory shows that the liberal inventory policy.

4.3.4 Receivable to Total Assets

In the context of contemporary market situation credit sales plays vital role in development and expansion of market credit facilities should be given to customers to increase the sales. Hence the company has to arrange some working capital for this purpose. The nature and period of credit facilities should be determine in advanced, so that the company does not has to suffer from working capital deficiency. The arrangements of these all are known as receivable management. The receivable must be in optimal level. High degree of receivable results unnecessary had up to working capital, and in the other hand lower degree of receivable may case negative result in sales level. The receivables should be in perfect combination with current assets and total assets.

Table - 4.13

Receivable to Total Assets

Year	Sundry debtors	Total Assets	Ratios %	% Change
2061/62	431	626091	0.069	-
2062/63	1261	733762	0.172	0.103
2063/64	907	812765	0.112	(0.06)
2064/65	73	842642	0.009	(0.103)
2065/66	80480	951868	8.455	8.446
Total	83152	3967128	8.817	
Average	16630.4	793425.6	1.7634	

The above table shows the proportion of investment in receivable to total assets. The proportion of investment in receivable during the study period are 0.069%, 0.172%, 0.112%, 0.009% and 8.455% respectively in F/Y 2061/62 to 2065/67. The tendency of receivables of the study period shows increase, decrease, and decrease and increase phenomena except 2061/62 to 2065/66 with respect to total assets. The average ratio is 1.7634% during the five year study period. The investment in receivable is very low with comparison the other current assets. The low percentage indicates the hard credit policy of BN Ltd. four year period and in F/Y 2064/65. Company follows liberal credit policy, but it is not to say liberal credit policy for one year by the F/Y 2065/66 data.

4.3.5 Proportion of Cash and bank Balance to Current Assets

Every company must hold cash to meet its requirement. The reason for holding cash is for transactional motive, precautionary motive and speculative motive. The holding cash is to meet daily business requirement. Cash is necessary to pay bills, purchase raw material, to pay sundry creditors and other payable obligation. The optimum cash and bank balance has to maintain for the purpose of the above three motives and other daily requirements. The table 14 shows the proportion to cash to current assets.

Table - 4.14

Cash and Bank balance to Current Assets

Year	Cash and bank balance	Current Assets	Ratios %	% Change
2061/62	33971	240196	14.14	-
2062/63	39693	288615	13.75	
2063/64	3031	353658	0.86	
2064/65	47828	369405	12.95	
2065/66	3940	393848	1.00	
Total	128463	1645722	42.7	
Average	25692.6	329144.4	8.54	

This table shows the proportion of cash to current assets. The ratio in F/Y 2061/62 is the highest ratio which the company 2061/62 holds the 33.97 million cash and its percentage is 14.14% of total current assets. In F/Y 2063/64 is the lowest cash hold in the study period, which ratio is 0.86% and cash hold is3031 thousand. The proportion in F/Y 2061/62 is 14.14% which is decreased in F/Y 2062/63 with 3.39 percent and then in F/Y 2062/63 again highly decrease by 12.89% from F/Y 2062/63 cash to current assets ratio. After the year 2063/64 the ratio down readily. But the F/Y 2063/64 it is increased by 12.09%. In F/Y 2065/66 readily decrease and observe only 1% cash to current assets ratio. By this table figure shows the cash holding pattern is too much fluctuating during the study period.

As the holding cash trend of BN Ltd's highest ratio indicate the inefficient management of cash and bank balance. It seems, there is not transparent vision in cash holding policy during the study period. The average cash and bank balance to current assets ratio is 8.54% during the five year study period.

4.3.6 Proportion of Receivables to Current Assets

Table - 4.15

Receivable to Current Assets

Year	Sundry Debtors	Current Assets	Ratios %	% Change
2061/62	431	240196	0.179	-
2062/63	1261	288615	0.437	0.258
2063/64	907	353658	0.256	(0.181)
2064/65	73	369405	0.02	(0.236)
2065/66	80480	393848	20.434	20.414
Total			21.326	
Average			4.265	

The above table shows the proportion of receivable to current assets for the F/Y 2061/62 to 2065/66 during the study period. The sundry debtors of BN Ltd. is very low which is observe below 0.54% and four year average is 0.223% only but in 2065/66 is increased very high then the other four year period. Which observe 20.434% of total current assets. The tendency of receivable of study period shows increase, decrease, decrease and increase phenomenon, in five year period. The average holding in receivable is 4.27% during the study period. It indicates the hard credit policy followed by BN Ltd. in four year period but in 2065/66 companies follow the liberal policies. It is hardly to say that company is adopted liberal credit collection policy by the F/Y 2065/66 data.

4.3.7 Proportion of Inventory to Current Assets

Table - 4.16
Inventory to Current Assets

(Rs. '000)

Year	Inventory	Current Assets	Ratios %	% Change
2061/62	78136	240196	32.53	-
2062/63	86354	288615	29.92	(2.61)
2063/64	136773	353658	38.67	8.76
2064/65	121106	369405	32.78	(5.89)
2065/66	142734	393848	36.24	3.46
Total				
Average	113021	329144.4	34.03	

The above table shows the percentage of inventory with respect to its current assets. In F/Y 2061/62 it is 32.53% of current assets. Then it is found to be decrease by 2.61% over all its current in the F/Y 2062/63. in F/Y 2063/64 it is increased by 8.76% over all its current assets and reached 38.67%, which is the highest inventory holding proportion during the study period. In F/Y 2063/64 decreased by 5.89% then previous year and observe 32.78%. In last F/Y 2065/66 increases by 3.46% and reach 36.14% The inventory holding proportion of BN Ltd. is increasing and decreasing phenomenon year by year during the study period. But investment in inventory is proportionally increasing trend. The average percentage of inventory indicates the liberal inventory policy followed by the company.

4.4 Turnover Position or Utilization of Current Assets

Only investing in working capital is not sufficient to get good result and return, it should efficiently be utilized. The behaviour of working capital utilization and improvement can be analysed with the help of activity or turnover ratio. This reflects the speed and rapidity with which assets are concerted into sales there by resulting in the efficiency of the enterprise. Though there is no standard or ideal measurement, generally a greater turnover of regarded as efficient utilization of the assets. For this purpose, the advantage turnover of the factory itself may provide a standard measurement for comparison with the means of measurement; this section examines the turnover position of the BN Ltd.

4.4.1 Current Assets Turnover

Every business firm is main objective is to sell of his product and services, so the sale is the most important activity. The survival and growth of the company depends on the sales of the product. The company should make their sales policy as per the resource availability and market demand. The sales policy directly affects the production policy and in the same way the production policy affects the financial policy, i.e. the requirement of total assets and working capital by the company to run it as per plan. Hence there should always be co-ordination between these three units of the company; each and every information should smoothly pass through these units. Increase in sales certainly causes increase in production, which requires more inputs. To keep the stock of material there should be adequate amount of working capital. The amount of working capital is also affected by sales policy. If the credit sales are increased more working capital will be required to meet the daily

requirement. In the other hand, if tight credit sales policy is applied the amount of working capital to replace the amount held by credit sales will be decreased. The ultimate effect will be decrease in working capital need. The table 4.17 represents the current assets or gross working capital turnover during the study period in BN Ltd.

Table - 4.17

Current Assets Turnover

(In Rs. '000)

Year	Sales	Current Assets	Ratio%
2061/62	231746	240196	0.965
2062/63	293820	288615	1.018
2063/64	368623	353658	1.042
2064/65	372783	369405	1.009
2065/66	414577	393848	1.053
Total	1681549	1645722	5.087
Average			1.0174

The above table shows the current assets turnover ratio in times. Current assets are 0.965 times turnover the sales in the F/Y 2061/62. In the F/Y 2062/63 increase ration is 1.108 times, which is slightly increase from previous year. In next year 2063/64 is 1.042 times. In F/Y 2063/64 is slightly decreased the ratio which is observed 1.009 times and then in 2065/66 increase by 0.044 times and observed 1.053 times. The average of the study period the current assets turnover position of the company is 1.0174 times. Thus the current assets turnover position of the company is very low, which is moving around the 1 time in a year only. Company has financed the greatest amount in current assets with respect to the overall study period. Company cannot success to effective circulating the current asset.

4.4.2 Net Working Capital Turnover

It is the excess amount of current assets over current liabilities. Such working capital is the margin of safety maintained by the company. In case of trading and financial times, the need of working capital depends upon production cycle and business cycle. The net working capital position maintained by the BN Ltd. is presented below in table- 4.18.

Table - 4.18

Net working capital turnover

(Rs., 000)

Year	Sales	Net Working Capital	Ratio %
2061/62	231746	107723	2.151
2062/63	293820	108624	2.705
2063/64	368623	155201	2.375
2064/65	372783	191879	1.943
2065/66	414577	125775	3.296
Total	1681549	689202	12.47
Average			

The above table shows the net working capital turnover position of BN Ltd. during the study period. Net working capital ratio of BN Ltd was fluctuating year after year. The lowest ratio was 1.943 times in the FY 2064/65 and highest ratio was 3.296 times in F/Y 2065/66. In the year 2061/62net working capital turnover ratios was 2.151, it indicated that a rupee employed on net working capital generated sales only Rs. 2.151 in the year 2061/62 this ratio goes up to 2.705 due to relative increase in sales. In the year 2063/64 slightly decrease in ratio and observed 2.375 times then in F/Y 2063/64 ratio and in F/Y 2064/65 again decrease by 0.432 times which observed 1.943 times. In F/Y 2065/66. The increase the ratio is 3.296 times which is the highest ratio in the study period. The average net working capital turnover ratio is 2.494 times during the study period.

4.4.3 Cash Turnover

It is one of the main parts of current assets which have greatest value to meet the current obligations occurred in the business. It should be just adequate to run the business and excess cash no meaning as it earns nothing. So the company always sees the risk return trade off to maintain the just adequate cash balance. The table shows the cash turnover position of the BN Ltd. during the study period.

Table - 4.19

Cash Turnover

(Rs, 000)

Year	Sales	Cash	Ratio %
2061/62	231746	33971	6.822
2062/63	293820	39693	9.402
2063/64	368623	3031	121.618
2064/65	372783	47828	7.794
2065/66	414577	3940	105.223
Total	1681549	128463	248.859
Average			49.772

Table shows the cash turnover position of BN Ltd. The ratio indicate that a rupee invested in cash generate sales in times. In F/Y 2061/62 the ratio 6.822 times and in 2062/63 it slightly increased and reached 7.402 times in F/Y 2063/64 it jumped to 121.618 which is less hold cash in that year and next year 2064/65 vastly decrease and observe 7.794. In 2065/66 again huge increase in ratio which is 105.223. This sales to cash and Bank balance turnover ratio is very fluctuated during the study period. In 3 years (2062/63, 2063/64 and 2064/65) cash holding trend proportionally equal but in F/Y 2063/64 and 2064/65 cash hold in decrease and ratio is highly increased which are 121.618 and 105.223 respectively.

4.4.4 Receivable Turnover

Receivable is one of the 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 given products in credit to customer the level of receivables goes up, because generally receivable in credited by credit sales. The credit sales policy is applied to increase the sales level. Hence the increase in receivable should increase the sales volume. The proportion of receivable to sales presented here under.

Table - 4.20

Receivable Turnover

(Rs., 000)

Year	Sales	Sundry debtors	Ratio (times)
2061/62	231746	431	537.69
2062/63	293820	1261	233.01
2063/64	368623	907	406.42
2064/65	372783	73	5106.62
2065/66	414577	80480	5.15
Total	1681549	83152	6288.86
Average		16630.4	1257.772

The table presents the receivable turnover in the five year study period. In F/Y 2061/62 the receivable turnover ratio is 537.69 time has found to be decreased by 304.68 times in next year 2062/63 and in F/Y 2063/64 it has increased by 173.41 times which is 406.42 times from F/Y 2062/63. In F/Y 2064/65 is the highest receivable turnover in the study period which is 5106.62 times. In a year and F/Y 2065/66 has the lowest receivable turnover during the study period. The average receivable turnover is 1257.77 times. The fluctuation ratio is some times very high and but some times it is very low. It shows the receivable collection policy of BN Ltd. is changing year by year. That means company follows some times hard collection policy and sometimes liberal collection policy. In F/Y 2065/66 it has followed liberal policy than other four years period. But the looking one year period data it is hardly to say that company is adopted liberal collection policy. In other four-year period company followed the hard collection policy.

4.4.5 Inventory Turnover

It has already been stated that the working capital, production and sales are correlated in general cases. The production should be increased to meet the high level of target sales. To produce more, more raw materials will be required. The stock level of production is here to fulfill the requirement the company. It has to increase its working capital. In this way the inventory is affected by sales volume. The proportion of inventory to sales has been presented under.

Table - 4.21

Inventory

(Rs., 000)

Year	Sales	Inventory	Ratio (times	Changes
2061/62	231746	78136	2.966	-
2062/63	293820	86354	3.403	0.437
2063/64	368623	136775	2.695	(0.708)
2064/65	372783	121106	3.078	0.383
2065/66	414577	142734	2.905	0.173
Total	1681549	565105	15.047	
Average	336309.8	113021	3.01	

The above table shows the ratio in times inventory replaced during the five year period. The ratio of average inventory turnover during the study period has been 3.0094 times. The inventory turnover position in F/Y 2061/62 is 2.966 times. In this year company has to keep stock for 132 days. Inventory turnover is in other F/Y 2062/63, 2063/64, 2064/65 and 2065/66 is 3.403, 2.695, 3.078 and 2.905 times respectively. The company lowest and highest inventory turnover position in 2.695 times and 3.403 times respectively. The company's sales is in increasing pattern also inventory holding is in increasing trend but 2065/66, it decrease. The company's inventory average turnover times in every 4 months company is satisfied during the study period.

4.5 Profitability Position

The profitability of a firm can be measured by its profitability ratio. For BN Ltd., the profitability position is analyzed with the help of following ratios.

4.5.1 Gross Profit Margin

The profitability ratio shows the relationship between sales and gross profit margin. The ratio indicates the average spread between the cost of goods sold and sales revenue. The ratio measures the efficiency of company and sundries of management. Higher percentage indicates the better efficiency. It is computed by dividing the gross profit by sales. The profit margin of BN Ltd. is presented in the following.

Table - 4.22

Gross Profit Margin

(Rs., 000)

Year	Gross profit	Sales	Ratio (times)	Changes
2061/62	64710	231746	27.92	
2062/63	84781	293820	28.85	
2063/64	100815	368623	27.35	
2064/65	99577	372783	26.71	
2065/66	87239	414577	21.04	
Total	437122	1381549	131.87	
Average	87844.2	336309.8	26.374	

The above table shows that the gross profit margin during the five year study period. The ratio indicate the gross profit margin of company is satisfactory. The ratio is not very fluctuated which is 21.04% to 28.87% range. In F/Y 2061/62 the ratio in 27.92% and increase to 28.82% in F/Y 2062/63 which is the highest gross profit general expenses also increase in F/Y 2065/66 margin during the study period. In F/Y 2063/64 is 27.35% which slightly decreased from previous year and next year in 2064/65 again decreased, the ratio is 26.71%. In 2065/66 the ratio is 21.64% which is the lowest gross profit margin decrease from 2063/64 due to the increase in the cost of goods sold, cost of raw material and the average gross profit margin is 26.374% during the study period.

4.5.2 Net Profit Margin

Net profit shows the relationship between net profits and sales, it indicates management efficiency in overall management function of the firm. It also indicates the firm's capacity to withstand adverse economics after deducting operating expenses and income tax from the gross profit. The ratio of net profit to sales essentially expresses the cost price effectiveness of the operation. The operating expenses mainly affect the net profit of company. The table shows the net profit margin of BN Ltd, during the study period,

Table - 4.23

Net Profit Margin

(Rs. 000)

Year	Net Profit after tax	Sales	Ratio	Changes
2061/62	37669	321746	11.71	
2062/63	58982	293820	20.07	8.36
2063/64	62191	368623	16.87	3.20
2064/65	55612	372783	14.999	1.87
2065/66	35883	414577	8.66	6.34
Total				
Average			14.462	

The above table shows that the net profit margin of the company in the five year study period. The ration is fluctuates during the period. The fluctuation is between 20.07% to 8.7% the range is very high. In F/Y 2061/62 is 11.7% and next is highly increase and absolve 20.07% which is the highest next profit margin during the study period in F/Y 2063/64, 2064/65 and 2065/66. The ration is in decreasing trend which 16.9%, 15% and 8.7%. In F/Y 2065/66 is the lowest net profit margin in the study period. The average net profit margin is 14.462% is satisfactory. Although the net profit margin is decreasing trend, the average net profit margin is 14.462% maintain by company is satisfactory in the five year.

4.6 Return on Total Assets

It measures the percentage of return on the overall total assets employed for every activities of the company. It gives the profit given efficient of the company in relation to total assets. The return on assets employed of BN ltd. is presented below in table 20 during the period of study.

Table - 4.24

Return on Total Assets

(Rs., 000)

Year	Net profit After Tax	Current Assets	Ratio
2061/62	37669	626091	6.02
2062/63	58982	733762	8.04
2063/64	62191	812765	7.65
2064/65	55912	842642	6.03
2065/66	35883	951868	3.77
Total	250637	3967128	31.51
Average	50127.4	793425.6	6.302

The above table shows that the return on total assets in the F/Y 2061/62 is 6.02% where the company has employed Rs. 626091 thousand of Total assets. Almost, return of assets ration has seem low return due to the low net profit after tax, the ration is fluctuating trend during the study period. The ratio are 6.02, 8.04, 7.65and 3.77 times in F/Y 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 respectively with an average 6.302 times in a year. Hence the overall return on employed assets is not satisfactory. That means the company has not been able to fully utilize the total asset.

4.6.1 Operating Ratio

The operating ratio establishes the relationship in between total operating expenses and sales volume. It is an important ratio that explains the change in the net profit margin ration. It also measures the efficiency of the company as regards to minimizing costs. Operational efficiency, the table presented below shows to operating ratio of BN Ltd. during the study period.

Table - 4.25

Operating Ratio

(Rs., 000)

Year	Cost goods sold + Operating expenses	Current Assets	Ratio
2061/62	166284	231746	71.74
2062/63	201142	293820	68.46
2063/64	260111	368623	70.56
2064/65	266170	372783	71.40
2065/66	319567	414577	77.08
Total	1213274		
Average			

The above table shows that the operating ratio of BN Ltd. in the fiscal year 2061/62 is 71.74 and next year found to be decreased in 68.46% in the F/Y 2062/63 which is the lowest ratio of the company during the study period. In F/Y 2063/64 it is found 70.56% and is in increased trend form 2063/64 after the fiscal year. In F/Y 2064/65 it is 71.40% and in F/Y 2065/66 it is 77.08% which is the highest ratio during the study period. High ratio indicate the inefficiency of management and unable to manage the working capital of the company. From the F/Y 2062/63 proportionally increasing trend of operating expenses of the study period, the company has increased the operating expenses. In an average the company has 71.85% of operating ratio during the study period.

4.6.2 Return on Net Worth

Return on net worth the percentage return on the owner's capital invested. The conclusions drawn on the basis of preceding ration may not give true result because they give profit in sales and total assets i.e. net worth is needful to study. Table presented below shows the ratio of return on owner's capital employed during the period of study in BN Ltd.

Table - 4.26
Return on Net Worth

(Rs., 000)

Year	Net profit After Tax	Current Assets	Ratio
2061/62	37669	488005	7.72
2062/63	58982	542837	10.86
2063/64	62192	601188	10.34
2064/65	55912	650416	8.60
2065/66	35883	669810	5.36
Total	250637	2952356	42.88
Average	50127.4	590471.2	8.576

The above table shows that the ratio of return on net worth in the F/Y 2061/62 is 7.72%. In F/Y 2062/63 it is increased by 3.14% which is the highest ratio on net worth during the study period. Further in the three fiscal year 2063/064, 2064/065 and 2065/066 the return on net worth is decreasing in trend which is 10.34%, 8.04% and 5.38% respectively. The return on net worth is not satisfactory of the company during the study period.

4.6.3 Return on Working Capital

This is the rate of return on current assets or working capital employed by the company. It measures the profit with respect to its total current assets. It gives the utilization of current assets effectiveness. The table presented below shows the relationship between net profit after tax and current assets of B.N. Ltd. during the study period.

Table - 4.27
Return on Working Capital

(Rs., 000)

Year	Net profit After Tax	Current Assets	Ratio
2061/62	37669	240194	15.68
2062/63	58982	288615	20.44
2063/64	62191	353658	17.59
2064/65	55912	369405	15.14
2065/66	35883	393845	9.11
Total	250637	1645720	77.96
Average	50127.4	329144	15.59

The above table shows that the percentage return on gross working capital employed. In the F/Y 2061/62 the return on working capital has found to be 15.68% where as it is increased by 4.76% in F/Y 2062/63 due to the increase in net profit, though working capital also increased. It is found to be 20.44% which is the highest ratio of return on working capital during the study period. Though the working capital is increasing in trend, from 2063/64 the ratio is decreasing in trend and found 14.76%, 14.16% and 9.11% respectively in F/Y 2063/64, 2064/65, and 2065/66 due to the decreasing the net profit. In an average of this study period the B.N Ltd. has earned 15.59% return on its current assets. The ratio shows the company has unable to utilize and inefficiency of management of working capital.

4.7 Statistical Analysis

Correlation and test of hypothesis t-test has been adequate to analysis the relationship and the significance of variable. This analysis has been used to support the financial analysis. Output revised from the statistical analysis has been presented below.

Proportion of Current Assets to Total Assets

Using the statistical tools to test the relationship between current asset and total assets during the study period, Karl Pearson's correlation coefficient (r) is calculated in appendix 7 and the result is as under.

r = 0.974

PEr = 0.015

The figure shows that the correlation coefficient is between CA and TA is positive and r is more than 0.5 and more the 6 times of P.Er, the relationship is considered to be significance.

Significance tasting from hypothesis of an observed correlation coefficient by students t-test we set up the hypothesis that there in no correlation is the population. The calculated value of t in appendix -1 and the result as under.

t = 7.45

$t_{0.05}$ = 2.353

The calculated t value being much higher than the tabulated value to 0.05 as 5% level of significance for 3 d.f., the hypothesis is reject that means the correlation is significance.

Proportion of cash and Bank Balance to Total assets

By applying the Karl Pearson's correlation, tasting the relationship between cash and Bank balance to total assets during the study period. In the appendix 4 the calculated correlation coefficient and P.E. value is as under.

r = 0.493

PEr = 0.228

The value of correlation coefficient shows the relationship between cash and Bank balance to total assets is negative relationship. Sine the value of r is less then the 6 times the probable error the coefficient of correlation is not practically certain i.e the value of r is inconclusive.

Proportion of Inventory to Total Assets

By applying the Karl's Pearson's correlation coefficient, the relationship between inventory and total asset is calculated in appendix 5 and result is as under.

r = 0.908

P.E. = 0.0529

The figure shows the positive correlation in between inventory to total assets during the study period. Since the calculated value or r is greater than 6 times probable error it is considered to be closely correlated and significance.

We have test the significance of the observed correlation coefficient by applying the t-test. I set up the hypothesis that there is no correlation in the population. The calculated t value in appendix 3 and the result is as under.

t = 3.754

t0.05= 2.353

The calculated t value is grater then the tabulated value in 5% level of significance for 3 d.f. The hypothesis is rejecting. Hence the correlation coefficient is significance. That means there is significance correlation between five year period and all of the other F/Y correlation between investment in inventory and total assets.

Receivable to Total Assets

By applying the Karl Pearson's correlation tasting the relationship between receivable to total assets during the study period. In the appendix 6 the calculated correlation coefficient (r) and probable error value is as under.

r = 0.725

P.E = 0.1431

The value of correlation coefficient shows the relationship between receivable to total assets in conspicuous positive correlation. since the value of r is less then the 6 times the probable error the coefficient of correlation is not practically certain i.e. the value of r is inconclusive.

Testing the significance of an observed correlation coefficient from the student's t-distribution. Let us take the hypothesis that these are no significance difference in the study period correlation and correlation in the population. In appendix-4 the calculated t value is as under:

t = 0.98 or /t/ = 0.98

$t_{0.05}$ = 2.353

The calculated value of t is less then the tabulated value of $t_{0.05}$ at 5% level of significance for 3 d.f. the hypothesis is accept. The calculated r value is not significance.

Proportion of Cash and Bank Balance Current Assets

In order to test the relationship between cash and bank balance and current assets during the study period in BN Ltd. Karl Pearson's correlation coefficient (r) is calculated in appendix 4 and the result is as under:

r = -0.45 or /r/ = 0.45

P.E = 0.2406

The value of correlation coefficient shows the relationship between cash and bank balance and current assets is negative correlation since the value of r is less then the six times the probable error the coefficient of correlation is not practically certain i.e. the value of r is inconclusive.

Tasting the significance of an observed correlation coefficient from the students t-distribution. Let us take the hypothesis that there is no significance difference in the study period correlation and correlation in the population. The calculated t- value is under.

t = 0.873

$t_{0.05}$ = 2.353

The calculated value of t is less then the tabulated value of $t_{0.05}$ at 5% level of significance for 3 d.f. The hypothesis is accept. The calculated r value is in significance.

Proportion of Receivables to Current Asserts

By applying Karl Pearson's correlation coefficient, tasting the relationship between receivable to current assets during the study period appendix 8 the calculated correlation is as under.

r = 0.57

P.E. 0.2036

The value of correlation coefficient shows the relationship is conspicuous positive between receivable and current assets, since the value of r is less than 6 times the probable error it cannot be regarded as inconclusive.

Tasting the significance of an observed correlation coefficient from the students t-distribution, I set up the hypothesis that there is no significance difference

the study period correlation and correlation in the population in the appendix-6, The calculated t value is as under.

t = 1.20

$t_{0.05}$=2.353

The calculated value of t is less then tabulated value the $t_{0.05}$ at 5% level of significance for 3 d.f. The hypothesis is accepted. The correlation r-value is not significance.

Proportion of Inventory to Current Assets:

In order to test the relationship between inventory and current assets in BN Ltd. during the study period, Karl Pearson's correlation coefficient (r) is calculated in appendix -9 and the result is as under:

r = 0.946

PE = 0.032

The value of correlation coefficient shows the perfectly positive correlation between inventory and current assets. The value of r is greater than 6 times the probable error the coefficient of correlation is practically certain i.e. the value of r is significant.

Tasting the significance of an observed correlation coefficient from the students t-test. I set up the hypothesis that there is no correlation in the population. In the appendix-7, The calculated t value is as under.

t = 5.055

$t_{0.05}$=2.353

The calculated value of t is less then tabulated value the $t_{0.05}$ at 5% level of significance for 3 d.f. The hypothesis is accepted. The correlation r-value is not significance.

Current assets Turnover

Tasting the relationship between sales and current assets by statically method of Karl Pearson's correlation coefficient (r) is calculated in appendix-10 and the result is as under.

r = 0.996

PEr = 0.0024

Tough there is positive correlation between sales and current assets, the relationship is high degree (near to one) or perfectly correlation since the probable error is 6 time less then the value or r it indicate that there is close correlation between sales and current asset and the correlation is significant.

Tasting the significance of an observed correlation coefficient from the student's t-test. I set up the hypothesis that there is no correlation in the population. In the appendix-8 calculated t- value is as under.

r = 19.3068

PE = 2.353

The calculated value of t is less then tabulated value the $t_{0.05}$ at 5% level of significance for 3 d.f. The hypothesis is rejected. The correlation r-value is not significance.

Net Working Capital Turnover

By applying Karl Pearson's correlation coefficient, tasting the relationship between sales and net working capital during the study period. In appendix the calculated correlation coefficient is as under.

r = 0.573

PE = 0.203

The value of correlation coefficient shows the relationship is conspicuous positive between sales and net working capital. Since the value of r is less then 6 times the probable error it can be regarded as inconclusive.

Tasting the significance of an observed correlation coefficient from the students t-test. Let us take the hypothesis that there is no significant difference in the study period correlation and correlation in the population. In appendix-9 calculated t-value is as under.

t = 1.202

$t_{0.05}$=2.353

The calculated value of t is less then tabulated value the $t_{0.05}$ at 5% level of significance for 3 d.f. The hypothesis is accepted. The correlation r-value is not significance.

Cash Turnover

By applying Karl Pearson's correlation coefficient. The relationship between sales and cash and Bank balance is calculated in appendix 12 result is as under.

/r/=0.508

P.E. 0.224

The calculated value of r shows the there is negative correlation between sales and cash and bank balance. Since the calculated value of r is not six times grater then its P.E. thus negative relationship between them is inconclusive significance. Testing the significance of an observed correlation coefficient from the t-test. Let us take the hypothesis that there is not significant difference in the study period correlation and correlation in the population. In the appendix 10 calculated t- value is as under.

/t/ =1.022

$t_{0.05}$=2.353

The calculated value of t is less then tabulated value the $t_{0.05}$ at 5% level of significance for 3 d.f. The hypothesis is accepted. The correlation r-value is not significance.

Receivable Turnover

By applying Karl Pearson's correlation coefficient testing the relationship between sales and sundry debtors, in appendix 13 the calculated correlation coefficient is as under.

r = 0.599

P.E = 0.1934

The value of correlation coefficient shows that relationship is conspicuous position between sales and sundry debtors. Since the r is less then 6 times the probable error it is regarded as inconclusive.

Testing the significance of an observed correlation coefficient from the t-test. Let us take the hypothesis that there is no significance different in the study period correlation and correlation in the population. In the appendix 11 the calculated t-value is as under.

t =1.296

$t_{0.05}$=2.353

The calculated value of t is less then tabulated value the $t_{0.05}$ at 5% level of significance for 3 d.f. The hypothesis is accepted. The correlation r-value is not significance.

Inventory Turnover

By applying the Karl Pearson's correlation coefficient, testing the relationship between sales and inventory during the study period. In appendix 14 the calculated correlated coefficient is as under.

r = 0.9556

P.E. =0.0262

The value of correlation coefficient shows the relationship is perfectly positive correlation (value of r is near to one) between sales and inventory. Since the value of r is more then six times the probable error the coefficient of correlation is practically certain i.e the value of r is significance of an observed correlation coefficient from the t-test let us take the hypothesis that there no correlation in the population. In appendix 11 the calculated t-value is as under.

$t = 5.617$

$t_{0.05} = 2.353$

The calculated value of t is less then tabulated value the $t_{0.05}$ at 5% level of significance for 3 d.f. The hypothesis is accepted. The correlation r-value is not significance.

Net Profit Margin

Tasting the relationship between net profit and sales, by statistical method of Karl Pearso's correlation coefficient (r) is calculated in appendix 16 and the result is as under.

$r = 0.303$

$P.Er = 0.274$

The value of correlation coefficient shows the relationship is negative correlation between net profit after tax and sales. Since the value of r is less them 6 times the probable error. It cannot be regarded as significant.

I have to test the significance of the observed correlation by applying the student's t-test. We set up the hypothesis that there is no correlation in the population. In appendix 12 the calculated t value is as under.

$t= 0.551$

$t_{0.05} = 2.353$

The calculated value of t is less then tabulated value the $t_{0.05}$ at 5% level of significance for 3 d.f. The hypothesis is accepted. The correlation r-value is not significance.

Gross Profit Margin

In order to test the relationship between gross profit and sales of BN Ltd. during the study period, Karl Pearson's correlation coefficient (r) is calculated in appendix 15 and the result is as under.

r = 0.7882

P.Er = 01143

The value of correlation coefficient shows the relationship in conspicuous positive correlation between gross profit and sales. Since the value of r is more then six times the probable error the coefficient of correlation is practically certain, i.e. the value of r is significance.

Tasting the significance of an observed correlation coefficient from the t-test. Let us take the hypothesis that there is no significant difference in the study period correlation and correlation in the calculated t-value an under:

t = 2.218

$t_{0.05}$ =.352

The calculated value of t is less then tabulated value the $t_{0.05}$ at 5% level of significance for 3 d.f. The hypothesis is accepted. The correlation r-value is not significance.

Operating Ratio

By applying the Karl Pearson's correlation coefficient, tasting the relationship between operating expenses and sales. In appendix 17 the calculated correlation coefficient result is as under.

r = 0.985

P.Er = 0.009

The value of correlation coefficient shows the relationship is perfectly positive correlation between operating expenses and sales. Since the value of r is more then six times the probable error the coefficient of correlation is practically certain i.e. the value of r is significance.

Return of Net Worth

By applying the Karl Pearson's correlation coefficient, the relationship between net profit after tax and net worth is calculated in appendix 18 the result is as under.

r = 0.054

P.Er = 0.301

The value of correlation coefficient shows the relationship is positive between net profit after tax and net worth and since the value of r is less then the probable error there is no evidence of correlation, i.e. the value of r is not at all significance.

Return on Working Capital

By applying the Karl Person's correlation coefficient, tasting the relationship between net profit after tax and current assets. In appendix 19 the calculated correlation coefficient result is as under.

r = 0.114

P.E. =0.298

The value of correlation coefficient shows the relationship is positive between net profit after tax and current assets. Since the value of r is less then the probable error there is no evidence of correlation, i.e. the value of r is not at all significance.

Current Asset and Current Liability

By applying Karl Pearson's correlation coefficient testing the relationship between current assets and current liability is calculated in appendix 1 and result is an under .

r = 0.8152

P.E. = 0.1012

The calculate value of r shows that there is positive correlation between current assets and current liabilities. Since the calculated value of r is grater then the 6 times the probable error, it can be regarded as significance.

Testing the significance of an observed correlation coefficient from the students t-test. Let us take the hypothesis that there is no significant difference in the study period correlation and correlation in the population. In appendix 1 the calculated t value is as under.

t = 2.4379

$t_{0.05}$ =2.353

The calculated value of t is grater than the tabulated or 3 d.f. the hypothesis is rejecting. The calculated r-value is significant. Quick assets and current liability.

By applying Karl Pearson's correlation coefficient, tasting the relationship between quick assets and current liability during the study period. In appendix 2 the calculated correlation coefficient result is as under.

r = 0.768

P.E. = 0.124

The value or correlation coefficient shows the conceptions positive relationship between the quick assets and current liability. Since the value of r is grater then 6 times the probable error, it can be regarded as.

Testing the significance of an observed correlation coefficient from the student's t-test. Let us take the hypothesis that there is no significant different in the study period correlation and correlation in the population in appendix 2 the calculated t-value is as under.

t = 2.0 77

t= 2.353

The calculated value of t is less then tabulated value the $t_{0.05}$ at 5% level of significance for 3 d.f. The hypothesis is accepted. The correlation r-value is not significance.

Current Assets and Sales:

By applying Karl Pearson's correlation coefficient, tasting the relationship between sales and current assets during the study period. In appendix 10 the calculated value is as under.

r = 0.996

P.E. = 0.0024

The value of correlation coefficient shows the conspicuous positive high degree relationship between sales and current assets. Since the value of 6 times probable error is very low, it can be regarded as significant.

Testing the significant of an observed correlation coefficient form the student's t-test. Let us take the hypothesis that there is no significance difference in the study period correlation and correlation in the population in appendix 10 the calculated value is as under.

t = 19.307

$t_{0.05}$ = 2.353

The calculated value of t is very high then the tabulated value of t0.05 at 5% level or significance for 3 d.f. The hypothesis is rejecting. The calculated r-value is significant.

Return on Net Working Capital Dependent Variable

(i.) Profitability and Turnover of Total Assets

Testing the relationship between RONWC dependent value with sales and profitability. The calculated R-value is as under which is calculated appendix 20 (i)

R = .992

There is positive correlation between them.

Testing the significance between them, let us take the hypothesis that there is no correlation in the population. In appendix 20 (i) the calculated t value is as under:

Turnover of total assets, t = -3.005

Profitability, t = 10.069

The calculated t value of turnover of total assets is less then the tabulated value at 5% level of significant. The correlation is not significance and calculated value of profitability t is grater then the tabulated value at 5% level of significance. The correlation is not significance.

ii. Total Assets and Turnover

Testing the relation between RONWC dependent variable with sales and turnover. In appendix 20 (ii) the calculated R-value is as under.

R =0.458

The correlation between them is positive.

Testing significance between them, let us take the hypothesis that there is no correlation in the population in appendix 20 (ii) the calculated t value is as under.

Turnover, t = .354

Turnover of total assets, t = .729

The calculated value of t is less then the tabulated value at 5% level of significance. The hypothesis is accepted the correlation value is not significant.

Liquidity and Turnover

Testing the relationship between RONWC dependent variable with turnover and liquidity. The calculated value is as under in appendix 20 (iii).

R = .447

Correlation Between the Variable is Positive

Testing the significance between the RONWC, liquidity and turnover. Let us take the hypothesis the there is no correlation in the population in appendix 20 (iii) the calculated value is as under.

Liquidity, t =-706

Turnover, t = -.336

The calculated value of t is less then the tabulated value of t 0.05 at 5% level of significance. So the correlation coefficient is not significant.

iii. Turnover of Total Assets and Liquidity

Testing the relationship between RNWC dependent variable with turnover of total assets and liquidity in appendix 20 (iv) the calculated value.

R = .90

The Relationship is Positive

Testing significance of an observed correlation coefficient, let us take the hypothesis there is no correlation. In appendix 20 (iv) the calculated is as under.

Turnover of total assets, t = 2.634

Liquidity, t = -2.662

The calculated value of t is less then tabulated value of t0.05 at 5% level of significance the correlation is not significance.

4.7.1 Major Finding

Major finding of financial tools and working capital policy

A. Policy

The major components of current assets in BN Ltd are sundry debtors, inventory, misc. current assets, cash and bank balance. During the study period, the proportion of cash bank balance, sundry debtors, inventories and misc. current assets to current assets on an average are 8.54%, 4.266%, 34.03%, 53.164% Misc. current assets holds the largest portion of the current assets. Inventory is the second largest portion holds of current assets followed by BN Ltd.

B. Findings of liquidity

i. The liquidity position of company is analyzed with current ratio, quick ratio and cash conversion cycle. The current ration of the company is ranging between 1.47:1 to 2.08:1 in fluctuating trend. The company has able to maintain its current ration of 1.742:1 in an average of the study period. The current ratio of 2:1 is generally considered satisfactory for a manufacturing company, but the ratio is less then the 2:1 so the overall current ratio of the company has not satisfactory. The quick ratio of the company is also ranging between 0.94%:1 to 1.40:1 in fluctuating trend. The company has able to maintain its quick ratio of 1.15:1 in an average of the study period. The overall quick ratio position of the company has found favorable.

ii. Inventory Conversion Cycle

Involve the three major components, which is inventory conversion period, receivable collection period and payable deferral period. The inventory conversion period is ranging between 190 days to 239 days in fluctuating trend. The average period is 217 days. The inventory conversion period of the company is very high. It indicates the

inventory is the low degree of liquid current asset. Receivable collection period of the BN Ltd. is not trustable but it is highly increase in the 2065/66 which is 70 days. In the four years the receivable collection period moving around 1 or 2 but in last year is highly increased. So the company followed hard collection policy only 2065/66 it impeaches to think the company changes the collection policy. The payable deferral period of the company is fluctuating trend which range is between 33 to 93 days with an average 61 days. The payment duration period of the company is not confirmed.

iii. Cash conversion cycle of the BN Ltd

During the study period is ranging 120 to 205 days with an average 176 days, which is the 2.10 times in a year. Cash conversion cycle also fluctuating due to the fluctuation of inventory conversion cycle and payable deferral period. The cash conversion cycle times in years range is between 1.77 to 3 times in the five year study period.

C. Structure of working capital

i. The overall proportion of current assets on total assets are increasing year after year during the study period, it increased from 38.36% to 43.84% with an average of 0.604% every year. Similarly the cash and bank balance to total assets are fluctuating trend and ranging from 0.46% each year. This type of variation in cash and bank balance is due to the company's policy towards the investment of cash in Bottlers Nepal (Terai) Ltd and Troika Traders (Pvt.) Ltd. subsidiary company and letter of credit margins.

ii. Of the current assets, the inventories to total assets position in BN Ltd. are in a fluctuating trend and ranging from 11.77% to 16.83%. The average increase in ratio is 2.515% each year. The average inventory occupied 14.09% in an average of total assets during the study period. The fluctuations of the investment in inventories are due to the fluctuating sales volume.

The receivables position with respect to total assets in BN Ltd. in the five years of the study period are found in increase, decrease, decrease and increase phenomenon year after year the position of receivable to total assets ranging from 0.009% to 8.455% and occupied 1.7634% in an average of the total assets.

iii. Of the current assets, cash and bank balance hold the third (or second last) smallest portion in BN Ltd. and has decreasing in the first three years of the study period then found to be increase in the next year and in last year again decrease. It is decrease, decrease increase and decrease phenomenon during the study period. The ratio of cash and bank balance to current assets are ranging in 0.86% to 14.14% with a decreasing average of 2.628%. The average cash and bank balance in the company with respect to current assets in 8.54%. These types of variations in cash and bank balance in due to the company's policy towards the investment of cash in subsidiary company and letter of credit margins. Similarly the receivables position with respect to current assets in BN Ltd. in the five years of the study period are found in fluctuating trend then increase, decrease, decrease, decrease, increase phenomenon till the end of the study period. The portion of receivables to current assets ranging from 0.02 to 20.434 and occupied 4.265% in an average of the current assets. The lowest ratio is 0.02% due the proportionally high provision for bad debt then the other four years period.

iv. In the current assets, the inventory holds the second largest portion of BN Ltd. The inventories to current assets position in BN Ltd. are fluctuating trend and ranging from 29.92% to 38.67% and occupied 34.04% in an average of the current assets. The inventory is decease and increase phenomenon year by year during the study period.

v. The turnover position of the BN Ltd. are in fluctuate trend. The gross working capital in slightly fluctuate trend which is ranging from 0.965 find to 1.053 times with an average of 1.017. The net working capital turnover in ranging from 1.943 to 3.296 times in fluctuating trend with an average 2.494 times. The cash turnover position in ranging 6.822 to 121.618 times with an average fluctuation 49.772 times cash year. It indicated that the sales and cash balance of the company are not matching to each other. The receivable turnover position of the company is highly fluctuating trend and rending from 5.15 to 5106.62 times with an average 1257.772 times. It seems the receivable turnover position of company is very low and collection policy is hard. The highest turnover 5106.62 times reached in that position due to the proportionally high provision for bad debts then the other fiscal years

provision. In 2058/059 the turnover position is highly decrease and absorbed 5.15 times it seems the company's credit policy is changed but the looking one year period data. It is hardly to say that company is changed the credit policy. The inventory turnover position of BN Ltd. is also fluctuating trend which ranges from 2.695 to 3.403 times. The average inventory turnover position of the company is found 3.01 times. It indicated that the inventory of BN Ltd. is not highly fluctuating and the product is reasonable so the low turnover inventory turnover position of the company. Inventory management system is satisfactory but turnover is not satisfactory.

vi. Profitability is the measure of efficiency. The profitability position of BN Ltd. has been analyzed from various angles. The gross profit margin and net profit margin of BN Ltd. are in decreasing trend in the second year of the study period and found in second year is increasing then the first year during the study period. The range of gross profit margin fluctuation is from 21.04% to 28.85% where as net profit margin is from 8.66% to 20.07%. In an average the gross profit margin is found 26.374% and net profit margin is found 14.462%. The operating ratio is found increasing trend in the second year of the study period. The range of the operating ratio fluctuating is from 68.46% to 77.08% with an average 71.848%. The wide difference between gross profit margin for the corresponding year also the high level of operating ratio indicates the operating inefficiency in the BN Ltd.

vii. The return on the total assets employed of BN Ltd. is in fluctuating trend which ranges from 3.77% to 8.04%. In an average the company has got return 6.302% on its total assets employed. The return on the net worth is also in fluctuating trend, which ranges from 5.36% to 10.86%. In an average the company has got return of 8.576% on net worth. Both return on total assets and net worth are not favorable. The return or net worth and total assets are less then the government bond yield percentage, which an average is 8.75% in those five years. So the return on net worth and total assets are not favorable. The return on the working capital of BN Ltd. is also fluctuating trend. It ranges from 9.11% to 20.44%. In an average 15.59% on its working capital employed. It is not satisfactory return of the company.

The inventory conversion period: The inventory conversion period is average length of time required to convert materials into finished goods and then to sell these goods; it is the amount of time the product remains in inventory in various stage or completion. It indicates the liquidity degree of inventory. How many times the inventory converts to sell these goods?

CHAPTER - V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The concept of working capital and its role and importance of manufacturing company like BN Ltd. are also included. The statement of the problem of this study is also included by focusing the BN Ltd. Further the main objectives of this study and the decimation within which the study is circled are also included. Lastly the scheme of the chapter is prepared according to the chapters that are planned. The second chapter i.e. reviews of literatures gives the concept of working capital; where different views of different book writers are reviewed. Then the journals and articles published by different management experts who are available also reviewed in order to fulfill the basic need of the study. Further the available deserting in the context if management of working capital from various researchers is reviewed where the main findings and conclusions, tools used for analysis and recommendations made are accordingly included. From this review the gap is tried to find out and this study is further freedom to fulfill this gap of some extent.

The basic objective of this study is to examine the management of working capital in BN Ltd. To fulfill this objective and other specific objectives are described in chapter on which is appropriate research methodology it has developed the ratio analysis as a financial tolls, correlations coefficient and hypothesis as a static tool. The major ration analysis consists of the composition of working capital position, turnover position, liquidity position and profitability position. Under the main ratios various ratios position are studied in the chapter four. In order to test the relationship between the various components of working capital, Karl Pearson's correlation coefficient (r) and testing the significance of an observed correlation coefficient by student's t-test is calculated in appendixes and the result are analyzed in chapter four.

The necessary data are derived from the balance sheet and profit and loss account of BN Ltd. for the period of five year from F/Y 2061/62 to F/Y 2065/066 with the help of methodology described in chapter three. These data are presented and analysis in chapter four. Now in this chapter an attempt has been made to present summary of findings, conclusion and some suggestions for BN Ltd. as recommendations.

5.2 Conclusion

The conclusion, here are drawn from the above major finding in BN Ltd.

Average of 41.28% current assets is invested in total assets. In US Manufacturing company current assets investment for about 40% of total assets which has been followed by BN Ltd., (Balaju) as it is also under US management. Current assets and investment that they could be early turned into cash. Therefore it can be said that the company has followed the current assets investment policy.

23.98% of the current assets are financed by short term sources since there is 41.28% current assets based on followed by long term sources. So the company has following conservative asset financing policy.

Management of investment is one of the important parts of the manufacturing company. The excess inventory causes unnecessary working capital blockage and short investment results irregular manufacturing process. Here, the inventory should be kept optimum, so that neither is excess nor short. The inventory conversion cycle is also increasing. So, the inventory conversion period can be maintained optimum level. Inventory conversion period of BN Ltd. is highly fluctuating in the range of 190 to 239 it indicates the management of inventory of BN Ltd is not satisfactory during the study period.

Receivable collection period of the company is very low where most of the sales are in cash. So the receivable period of the company is satisfactory, but the effect of collection policy may be decreased in the sales. The company followed the hard credit policy.

Payable deferral period of the company is very fluctuating. It affects the companies' credit which is decreased due to the late payment of sundry creditors. So it is properly managed the payable deferral period.

Cash conversion cycle of the company is also fluctuating. The high conversion period directly effects in the profitability and cash conversion cycle are increase and decrease vice versa. It also seems in the BN Ltd. during the study period so the company idle investment in current assets. It required decreasing cash conversion cycle by the effective management of working capital. Cash conversion cycle is not satisfactory. Because the conversion days are very fluctuating is it required to maintain that effect the cash conversion cycle is decrease and increase in profit of BN Ltd.

1. From the study of data taken into consideration, average of 41.28 percent of total assets is financed in current assets which imply overall investment in current assets and total assets are highly correlated, and are significant. But investment in cash is low and fluctuating year by year. Correlation of cash with assets is negative and not significant. Investment in inventory covers average of 14.09 percent of total assets is near about perfect correlation. Hence investment pattern in inventory is significant. Investment in receivables is very low which indicates that either the receivables collection policy of the company is hard or most of the sales of company are in cash. Correlation coefficient of receivables to total assets is above 0.5. Hence the relationship between the variables is conspicuous but is not significant.

2. Company is holding average of 8.54 percent of cash in relation to current asset. Correlation between cash and current assets is negative and not significant due to cash holding is fluctuating. There is lacking of concept at which level the cash is to be hold. It shows that company has not adopted appropriate cash management techniques. Inventory covers average of 34.03 percent of current assets, Inventory and current assets are closely correlated and significant too. It implies that company has satisfactory inventory management form the analysis, though technique adopted by company is not known.

3. Investment in miscellaneous current assets covers major portion above the fifty percent of current assets. Among the investment in miscellaneous current assets, investment in its subsidiary companies (BN Terai Ltd. & Troika Traders Pvt. Ltd.) and loan to the staff seems to generate interest. This covers lower percent of miscellaneous current assets. Investment in other miscellaneous current assets covers large portion and it does not generate interest in investment. Large investment in miscellaneous current assets may be its internal policy of managerial attitude. Advance in income tax shows large portion of misc. current asset.

4. Sales to total current assets ratio is slightly above to 1. Correlation between sales and current assets is found to be perfect. Calculated t-value is 19.31 which show that the relation is significant. Current assets turnover is thus satisfactory.

5. Turnover position of net working capital is 2.50 times. Correlation between sales and net working capital is conspicuous not significant. Net working capital is financed by long-term sources, which is costly but less risky. In the Nepalese context, long-term interest rate is greater than short-term interest rate. If the net working capital was financed by short-term sources, it should have costly than long-term financing but it cost least if used for short-term period, such as peak season of sales. Cash fluctuation over the period taken into the study shows that there is lack of certain limit of cash holding. In the first couple of years cash turnover was low which increased unexpectedly high, then went below near the first couple of fiscal years. Again in last year it went high. Therefore, correlation between sales and cash & bank balance is negative and not significant. Average ratio of cash turnover is satisfactory (49.72). Cash holding position does not match with respect to sales. Due to unavailability of credit sales data, receivable turnover does not represent actual turnover position of receivable. Assuming the sales is nit credit; receivable turnover position is very high. Average collection period is very short even 3 times a day, which is impossible. Inventory turnover position of the company is 3 times a year, which is satisfactory. Relation of inventory with sales is closely correlated and significant.

6. Liquidity position of the company actually reveals the working capital management. From the analysis current ratio was found average of 1.74:1. Theoretically, current ratio is assumed to be good at 2:1, CR calculated near to this and correlation between current assets and current liabilities is positive and significant.

7. QR is found to be average of 1.15:1, which is above to theoretical value 1:1. Due to the investment in miscellaneous current assets, proportion is high. Thus it can be said that liquidity position is not worst.

8. Net profit is not consistent with sales though there is return on sales is average of 14 percent. Net profit margin in average seems to be reliable. Due to the inconsistency of NPM to sales, correlation between them is negative and not significant.

Investment in total assets is gradually increasing while EBIT after tax is fluctuating, though the average return on total assets is 20.8 percent. EBIT after tax ranges 8.94 percent to 48.90 percent, therefore it could not be said to be reliable. Correlation between them is positive but not significant.

Gross profit margin is consistent to sales with average of 27.01 percent. Relationship between them is closely correlated and significant. Gross profit margin of company is reliable.

Higher operating ratio indicates lower efficiency, i.e., cost of production and administrative and other expenses are very high in the company. Operating ratio of the BN Ltd (Balaju) is satisfactory while is average of 71 percent. Ratio in the fiscal year 2065/66 is increased which has lessened the profit. Correlation is found to be close which is significant.

Return on net worth is found to be fluctuating during the study period, which indicates that wealth maximization of shareholders has not given an emphasis. Sales and gross profit are increasing proportionately with the investment on net worth, but return on net worth has decreasing trends from the fiscal year 2063/64. Correlation between return provided to shareholders and net worth is neat about zero, i.e., there is no relationship and is not significant.

Return on current assets in average is satisfactory. But net profit after tax seems to be fluctuating with the increase in investment in current asset. Relationship between current assets and net profit after tax is near zero, i.e., they are not correlated and significant.

1. From the study of data taken into consideration, average of 41.28 percent of total assets is financed in current assets which imply overall investment in current assets and total assets are highly correlated, and are significant. But investment in cash is low and fluctuating year by year. Correlation of cash with assets is negative and not significant. Investment in inventory covers average of 14.09 percent of total assets is near about perfect correlation. Hence investment pattern in inventory is significant. Investment in receivables is very low which indicates that either the receivables collection policy of the company is hard or most of the sales of company are in cash. Correlation

coefficient of receivables to total assets is above 0.5. Hence the relationship between the variables is conspicuous but is not significant.

2. Company is holding average of 8.54 percent of cash in relation to current asset. Correlation between cash and current assets is negative and not significant due to cash holding is fluctuating. There lack of concept at which level the cash to be hold. It shows that company has not adopted appropriate cash management techniques. Inventory covers average of 34.03 percent of current assets; inventory and current assets are closely correlated and is significant too. It implies that company has satisfactory inventory management from the analysis, though technique adopted by company is not known. S
3. Investment in miscellaneous current assets covers major portion above the fifty percent of current assets. Among the investment in miscellaneous current assets, investment in its subsidiary companies (BN Terai Ltd & Troika Traders Pvt. Ltd.) and loan to the staff seems to generate interest. This covers lower percent of miscellaneous current assets. Investment in other miscellaneous current assets covers large portion and it does not generate interest in investment. Large investment in miscellaneous current assets may be its internal policy of managerial attitude. Advance in income tax shows large portion of miscellaneous current assets.
4. Sales to total current assets ratio is slightly above to 1. Correlation between sales and current assets is found to be perfect. Calculated t-value is 19.31 which show that the relation is significant. Current assets turnover position is thus satisfactory. Turnover position of net working capital is 2.50 times. Correlation between sales and net working capital is conspicuous but not significant. Net working capital is financed by long-term sources, which is costly but less risky. In the Nepalese context, long-term interest rate is greater than short-term sources, it would have costly than long-term financing but it would cost least if used for short-term period, such as peal season of sales. Cash fluctuation over the period taken into the study shows that there is lack of certain limit of cash holding. In the first couple of years cash turnover was low which increased unexpectedly high, then went below near the first couple of fiscal years. Again in last year it went high. Therefore, correlation between sales and cash & bank balance is negative and not significant. Average ratio of

cash turnover is satisfactory (49.72). Cash holding position does not match with respect to sales. Due to unavailability of credit sales data, receivable turnover does not represent actual turnover position of receivable. Assuming the sales is on credit, receivable turnover position is very high. Average collection period is very short even 3 times a day, which is impossible. Inventory turnover position inventory with sales is closely correlated and significant.

5. Liquidity position of the company actually reveals the working capital management. From the analysis current ratio was found average of 1.74:1. Theoretically, current ratio is assumed to be good at 2:1, CR calculated near to this and correlation between current assets and current liabilities is positive and significant. QR is found to be average of 1.15:1, which is above to theoretical value 1:1. Due to the investment in miscellaneous' current assets, proportion is high. Thus it can be said that liquidity position is not worst.
6. Net profit is not consistent with sales though there is return on sale is average of 14 percent. Net profit margin in average seems to be reliable. Due to the inconsistency of NPM to sales, correlation between them is negative and not significant.

Investment in total assets is gradually increasing while EBIT after tax is fluctuating, though the average return on total assets is 20.8 percent. EBIT after tax ranges 8.94 percent to 48.90 percent, therefore it could not be said to be reliable. Correlation between them is positive but not significant.

Gross profit margin is consistent to sales with average of 27.01 percent. Relationship between them is closely correlated and significant. Gross profit margin of company is reliable.

Higher operating ratio indicates lower efficiency, i.e., cost of production and administrative and other expenses are very high in the company. Operating ratio of the BN Ltd (Balaju) is satisfactory while is average of 71 percent. Ratio in the fiscal year 2065/066 is increased which has lessened the profit. Correlation is found to be close which is significant.

Return on net worth is found to be fluctuating during the study period, which indicates that wealth maximization of shareholders has not given an emphasis. Sales

and gross profit are increasing proportionately with the investment on net worth; but return on net worth has decreasing trends from the fiscal year 2065/66. Correlation between return provides to shareholders and net worth is near about zero, i.e., there is no relationship and is not significant.

Return on current assets in average is satisfactory. But net profit after tax seems to be fluctuated with the increase in investment in current asset. Relationship between current assets and net profit after tax is near zero, i.e. they are not correlated and significant.

5.3 Recommendation

1. Inventory conversion period is large which fluctuation ranging form is highly 120 to 205 days. Thus, the company has to pay serious attentions to avoid the idle investment in inventory by reducing the conversion period.

2. Sundry debtors are very low in comparison with sales it shows that the company has strict credit sales policy. Low investment in receivable may decrease sales which is affected profitability those the company has to review its credit policy.

3. Cash and hand proportion of the company is not satisfactory because it's highly fluctuating. There is absence of limit at which the cash balance to be maintained. Therefore the company has to adopt proper management policy because holding of cash more than requirement plays not return.

4. The working capital should be arranged in such way that it should generate maximum turnover. The working capital and networking capital are not fully utilized. The company should try to utilize its working capital to maintain sound turnover position.

5. Investment in miscellaneous current assets seems to be high i.e. it covers major person of current assets so it should be manage properly.

6. Instead of conservation policy by adopting matching financial policy, the company can improve in its profitability in the short-run as well as long-run.

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APPENDIX - I

Bottlers Nepal Limited

Balaju Kathmandu

Comparative Balance Sheet

(Rs.000)

As at Balance Sheet	2061/62	2062/63	2063/64	2064/65	2065/66
Total Assets	626091	733762	812765	842642	951868
A. Current Assets	240196	288615	353658	369405	393848
1.Cash & Bank Balance	33971	39693	3031	47828	3940
2. Sundry Debtors	431	1261	907	73	80480
3. Inventory	78136	86354	136775	121106	142734
4. Misc. Current Assets	127658	161307	212945	200398	166694
B. Fixed Assets (Net)	61283	329624	346395	360609	349114
5.Gross Bock	100956	384756	432670	483848	514995
i. Plant & Machinery	16643	223427	228099	231620	234357
ii. Others	84313	161329	204571	252228	276638
6. Less: Depreciation	39676	55132	86275	123239	165881
C. 7 Investment in shares	105526	112017	112628	112628	112628
D. 8. Misc. Assets	219086	3506	84		96278
E. Current Liabilities	132473	184041	198497	177526	268073
7. Loans & Advance	0.00	1291	259	1701	1351
8. Sundry Creditors	18137	38051	37998	19105	41375
9. Prof. fir Taxation	62386	76705	85531	84037	93673
10. Deferred Liabilities	51950	67994	74369	72683	131674
11. Miscellaneous	5612	6784	9180	11107	14323
Current Liabilities	0.00	0.00	0.00	0.00	0.00
12. Long-term loans	5612	6784	9180	11107	14323
13. Miscellaneous Det. Liabilities	0.00	0.00	0.00	0.00	0.00
Net Worth	488005	542937	601188	650716	669472
G. Share Capital	194889	194889	194889	194889	194889
14. Ordinary Share	194889	194889	194889	194889	194889
15. Bonus Share	0.00	0.00	0.00	0.00	0.00
16. Preference Share	293116	348048	406299	455527	471921
H. Share Holders' Reserve	-	-	-	-	-
18. General Reserve	167087	167087	167087	167087	167087
19. Capital Reserve	0.00	0.00	3940	3593	2662
20. Housing Reserve	0.00	0.00	0.00	0.00	0.00
21. Other Reserve	126029	180961	239212	288440	304834
(Loss) Profit & Loss A/C					

Appendix – II

Examine the Relationship between current Assets and Current Liabilities

(In Million)

Year	Current Assets(X)	dx (x – 353.65)	dx^2	Current Liabilities(Y)	dy (y – 198.46)	dy^2	dx . dy
2054\55	240.19	-113.46	12873.17	132.48	-65.98	4353.36	7480.1
2055\56	288.60	-65.06	4231.50	184.05	-14.41	207.65	937.37
2056\57	353.65	0	0	198.46	0	0	0
2057\58	369.41	15.76	248.38	177.53	-20.93	438.06	-329.86
2058\59	398.84	40.19	1615.24	268.08	69.62	4846.96	2798.03
Total	1645.69	-122.56	18968.29	960.60	-31.7	9846.02	10891.4

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \,\mathrm{Z} \quad dx.dy}{\sqrt{N \quad dx\,\mathrm{Z}(\quad dx)^2}\sqrt{N \quad dy^2\,\mathrm{Z}(\quad dy)^2}}$$

$$= \frac{5 \mid 10891.64\,\mathrm{Z}(\mathrm{Z}122.56).(\mathrm{Z}31.7)}{\sqrt{5 \mid 18968.29\,\mathrm{Z}(\mathrm{Z}122.56)^2}\ \sqrt{5 \mid 9846.02}}$$

$$r = 0.8152$$

Then, Probable Error (PE) $= \frac{0.6745(1\,\mathrm{Z}\,r^2)}{\sqrt{N}}\,\mathrm{X}\,\frac{0.6745[1\,\mathrm{Z}(\mathrm{Z}0{,}81)^2}{\sqrt{5}}\,\mathrm{X}0.1012$

Testing the signification of an observed correlation $t = \frac{r}{1\,\mathrm{Z}\,r^2} \mid \sqrt{n\,\mathrm{Z}2}$

$$= \frac{0.8152}{\sqrt{1\,\mathrm{Z}(0.8152)^2}}$$

$$= 2.4379$$

Appendix – III

Examine Relationship between quick assets and current liabilities

(In Million)

Year	Current Assets(X)	dx (x – 216.88)	dx^2	Current Liabilities(Y)	dy (y – 198.46)	dy^2	dx . dy
2061/062	162.06	-54.82	3005.23	132.48	-65.98	4353.36	3617.02
2062/063	202.26	-14.62	312.75	184.05	-14.41	207.65	210.67
2063/064	216.88	0	0	198.46	0	0	0
2064/065	248.30	31.42	987.22	177.53	-20.93	438.06	-657.62
2065/066	251.12	34.24	1172.38	268.08	69.72	4846.95	2383.79
Total	1080.62	-378	5378.58	960.75	-31.7	9846.02	5553.86

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \,Z \quad dx.dy}{\sqrt{N \quad dx \,Z(\quad dx)^2}\sqrt{N \quad dy^2 \,Z(\quad dy)^2}}$$

$$= \frac{5 \mid 555386.86 \,Z(Z3.78).(Z31.7)}{\sqrt{5 \mid 5378.58 \,Z(Z3.78)^2}\ \sqrt{5 \mid 9846.02 \,Z(Z31.7)^2}}$$

$$r = 0.768$$

Then, Probable Error (PE) $= \frac{0.6745(1 \,Z\, r^2)}{\sqrt{N}} \,X\, \frac{0.6745[1 \,Z\,(Z0.768)^2]}{\sqrt{5}} \,X\, 0.124$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \,Z\, 2}$$

$$= \frac{0.768}{\sqrt{1 \,Z\,(0.768)^2}} \mid \sqrt{5 \,Z\, 2}$$

$$= 2.077$$

Appendix – IV

Examine relationship between Current assets total Assets

(In Million)

Year	Current Assets(X)	dx (x – 353.65)	dx^2	Total Assets(Y)	dy (y – 812.75)	dy^2	dx . dy
2061/062	240.19	-113.46	12873.17	626.10	-186.65	34838.22	21177.31
2062/063	288.60	-65.05	4231.50	733.76	-78.99	6239.42	5138.30
2063/064	353.65	0	0	812.75	0	0	0
2064/065	369.41	15.76	248.38	842.65	29.9	894.01	471.22
2065/066	393.84	40.19	16153.24	951.86	139.11	19351.60	5590.83
Total	1645.69	-122.56	18968.29	3967.63	-96.63	61323.23	32377.66

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \, Z \quad dx.dy}{\sqrt{N \quad dx \, Z(\quad dx)^2}\sqrt{N \quad dy^2 \, Z(\quad dy)^2}}$$

$$r \quad = \quad 0.974$$

$$= \frac{5 \mid 32377.66 \, Z(Z122.56).(Z96.63)}{\sqrt{5 \mid 18968.39 \, Z(Z122.56)^2}\sqrt{5 \mid 61323.23 \, Z(Z96.63)^2}}$$

Then, Probable Error (PE) $= \frac{0.6745(1 \, Z r^2)}{\sqrt{N}} \, X \frac{0.6745[1 \, Z(Z0.768)^2]}{\sqrt{5}} \, X 0.124$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \, Z 2}$$

$$= \frac{0.768}{\sqrt{1 \, Z(0.768)^2}} \mid \sqrt{5 \, Z 2}$$

Appendix – V

Examine the relationship between Cash \Bank and total Assets

(In Million)

Year	Cash\Bank (X)	dx	dx^2	Total Assets (Y)	dy	dy^2	dx . dy
2061/062	33.97	8.28	68.56	626.10	-167		-1385.41
2062/063	39.69	14.00	196	733.76	-59.66		-835.24
2063/064	3.03	22.66	513.48	812.75	19.33		-438.24
2064/065	47.83	22.14	490.18	842.65	49.23		1089.95
2065/066	3.94	21.75	473.06	9313.86	158.23		-3446.07
Total		0.01	1741.28				-5014.76

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \; Z \frac{dx.dy}{N}}{\sqrt{N \quad dx \; Z(\quad dx)^2}\sqrt{N \quad dy^2 \; Z(\quad dy)^2}}$$

$$= \frac{Z5014.79 \; Z \frac{0.01 \mid 0.02}{5}}{\sqrt{1741.28 \; Z(0.01)^2}\sqrt{59455.77 \; Z(0.02)^2}}$$

$$r = 0.493$$

$$(PE) = \frac{0.6745(1 \; Z \; r^2)}{\sqrt{N}} \; X \frac{0.6745[1 \; Z \; (Z0.493)^2]}{\sqrt{5}} \; X0.228$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \; Z2}$$

$$= \frac{Z0.493}{\sqrt{1 \; Z(Z0.493)^2}} \mid \sqrt{5 \; Z2}$$

Appendix – IV

Examine the relationship between Inventories and total Assets

(In Million)

Year	Inventory(X)	dx (x – 121.11)	dx^2	Total Assets(Y)	dy (y – 812.75)	dy^2	dx . dy
2061/062	78.14	-42.97	1846.42	626.10	-186.65	23838.22	8020.35
2062/063	86.35	-34.76	1208.26	733.76	-78.99	6239.42	2745.70
2063/064	136.77	15.66	245.24	812.75	0	0	0
2064/065	121.11	0	0	842.65	29.9	894.01	0
2065/066	142.73	21.62	467.42	951.86	139.11	19351.60	3007.56
Total	565.1	-40.45	3767.34	3967.12	-96.63	61323.25	13773.61

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \,\mathrm{Z} \quad dx.dy}{\sqrt{N \quad dx\,\mathrm{Z}(\quad dx)^2}\sqrt{N \quad dy^2\,\mathrm{Z}(\quad dy)^2}}$$

$$= \frac{5 \mid 13773.61\,\mathrm{Z}(\mathrm{Z}96.63)}{\sqrt{5 \mid 3767.34\,\mathrm{Z}(40.45)^2}\ \sqrt{5 \mid 61323.25\,\mathrm{Z}(\mathrm{Z}96.63)^2}}$$

$$r = 0.908$$

$$(PE) = \frac{0.6745(1\,\mathrm{Z}\,r^2)}{\sqrt{N}}\,\mathrm{X}\,\frac{0.6745[1\,\mathrm{Z}(0.908)^2]}{\sqrt{5}}\,\mathrm{X}0.053$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n\,\mathrm{Z}2}$$

$$= \frac{0.908}{\sqrt{1\,\mathrm{Z}(0.908)^2}} \mid \sqrt{5\,\mathrm{Z}2}$$

Appendix – VII

Examine the relationship between Receivable and total Assets

(In Million)

Year	Receivable (X)	dx(x – 0.091)	dx^2	Total Assets (Y)	dy (y – 812.75)	dy^2	dx . dy
2061/062	0.43	-0.48	0.2304	626.10	-186.65	34838.22	89.592
2062/063	1.26	0.35	0.1225	733.76	-78.99	6239.42	27.6465
2063/064	0.91	0	0	812.75	0	0	0
2064/065	0.07	-0.84	0.7056	842.65	29.9	894.01	-25.116
2065/066	80.48	79.57	6331.3849	951.86	139.11	19351.60	11068.9827
Total	83.15	78.6	6332.4434	3967.12	-96.63	61323.25	11161.1052

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \,\mathrm{Z} \quad dx.dy}{\sqrt{N \quad dx\,\mathrm{Z}(\quad dx)^2}\sqrt{N \quad dy^2\,\mathrm{Z}(\quad dy)^2}}$$

$$= \frac{5 \mid 11161.1052\,\mathrm{Z}(\mathrm{Z}96.63)}{\sqrt{5 \mid 6332.4434\,\mathrm{Z}(\mathrm{Z}78.6)^2}\ \sqrt{5 \mid 61323.25\,\mathrm{Z}(\mathrm{Z}96.63)^2}}$$

$$r = 0.725$$

$$(PE) = \frac{0.6745(1\,\mathrm{Z}\,r^2)}{\sqrt{N}}\,\mathrm{X}\,\frac{0.6745[1\,\mathrm{Z}(0.725)^2]}{\sqrt{5}}\,\mathrm{X}0.1431$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n\,\mathrm{Z}2}$$

$$= \frac{0.725}{\sqrt{1\,\mathrm{Z}(0.725)^2}} \mid \sqrt{5\,\mathrm{Z}2}$$

$$= 1.823$$

Appendix – VIII

Calculation the correlation coefficient between sales and total net working capital

(In Million)

Year	Sales (X)	dx (x – 336)	dx^2	Net working capital y	dy (y – 137)	dy^2	dx . dy
2061/062	231.75	-104.25	10868.06	107.71	-29.29	857.70	3053.48
2062/063	293.82	-42.18	1779.15	104.55	-32.45	1053.00	1368.74
2063/064	368.62	32.62	1064.06	155.19	18.19	330.88	593.36
2064/065	372.78	36.78	1352.77	191.88	54.88	3011.81	2018.49
2065/066	414.58	78.58	6174.82	125.76	-11.24	126.34	-883.24
Total		1.55	21238.86		0.09	5379.73	

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \; Z \quad dx.dy}{\sqrt{N \quad dx \, Z(\quad dx)^2}\sqrt{N \quad dy^2 \, Z(\quad dy)^2}}$$

$$= \frac{5 \mid 615.83 \, Z(Z1.55) \mid 0.09}{\sqrt{5 \mid 2138.86 \, Z(Z1.55)^2}\sqrt{5 \mid 5379.73 \, Z(0.09)^2}}$$

$$r = 0.5754$$

$$(PE) = \frac{0.6745(1 \, Z \, r^2)}{\sqrt{N}} \, X \frac{0.6745[1 \, Z(0.5754)^2]}{\sqrt{5}} \, X 0.2081$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \, Z \, 2}$$

$$= \frac{0.5754}{\sqrt{1 \, Z(0.5754)^2}} \mid \sqrt{5 \, Z \, 2}$$

Appendix – IX

Examine the relationship between receivable and current Assets

(In Million)

Year	Receivable (X)	dx (x – 0.91)	dx^2	Current Assets (Y)	dy (y – 353.65)	dy^2	dx . dy
2061/062	0.43	-0.48	0.234	240.19	-113.46	12873.17	54.46
2062/063	1.26	0.35	0.1225	288.60	-65.05	4231.50	-22.76
2063/064	0.91	0	0	353.65	0	0	0
2064/065	0.07	-0.84	0.7056	369.41	15.76	248.38	-13.24
2065/066	80.48	79.57	6331.3849	393.84	40.19	1615.24	3197.92
Total	73.15	78.6	63332.4434	1645.69	-122.56	18968.29	3216.38

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \, Z \quad dx.dy}{\sqrt{N \quad dx \, Z(\quad dx)^2}\sqrt{N \quad dy^2 \, Z(\quad dy)^2}}$$

$$= \frac{5 \mid 3216.38 \, Z(78.6) \mid (Z122.56)}{\sqrt{5 \mid 6332.4434 \, Z(Z78.6)^2}\sqrt{5 \mid 18968.29 \, Z(Z1222.56)^2}}$$

$$r = 0.57$$

$$(PE) = \frac{0.6745(1 \, Z \, r^2)}{\sqrt{N}} \, X \frac{0.6745[1 \, Z(0.57)^2]}{\sqrt{5}} \, X 0.2036$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \, Z 2}$$

$$= \frac{0.57}{\sqrt{1 \, Z(0.57)^2}} \mid \sqrt{5 \, Z 2}$$

Appendix – X

Examine the relationship between Inventory and Current Assets

(In Million)

Year	Inventory (X)	dx ($x-\bar{x}$)	dx^2	Current Assets (Y)	dy	dy^2	dx . dy
2061/062	78.14	-34.86	1215.22	240.19	-88.95	7912.10	3100.80
2062/063	86.35	-26.65	710.22	288.60	-40.54	1643.49	1080.39
2063/064	136.77	23.77	565.01	353.65	24.51	600.74	582.60
2064/065	121.11	8.11	65.77	369.41	40.27	1621.67	326.59
2065/066	142.73	29.73	883.87	353.84	64.70	4186.09	1923.53
Total		0.10	34440.09		-0.01	15964.10	7013.91

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \; Z \frac{dx.dy}{N}}{\sqrt{N \quad dx \; Z \frac{(dx)^2}{N} \; | \quad dy \; Z \frac{(dy)^2}{N}}}$$

$$= \frac{7013.91 \; Z \frac{0.10 \; | \; (Z0.01)}{5}}{\sqrt{3440.09 \; Z \frac{(0.10)^2}{5} \; | 15964.10 \; Z \frac{(Z0.10)^2}{5}}}$$

$$r = 0.946$$

$$(PE) = \frac{0.6745(1 \; Z \; r^2)}{\sqrt{N}} \; X \frac{0.6745[1 \; Z \; (0.946)^2]}{\sqrt{5}} \; X 0.032$$

Appendix – XI

Examine the relationship between current Assets and Sales

(In Million)

Year	Sales (X)	dx (x – 386.62)	dx^2	Current Assets (Y)	dy (y – 353.65)	dy^2	dx . dy
2061/062	231.75	-136.87	18733.40	240.19	-113.46	12873.17	54.46
2062/063	923.82	-74.8	5595.04	288.60	-65.05	4231.50	4865.74
2063/064	368.62	0	0	353.65	0	0	0
2064/065	372.78	4.16	17.31	369.65	15.76	248.38	65.57
2065/066	414.58	45.96	2115.32	393.84	40.19	1615.24	1847.13
Total	1681.55	-161.55	26458.07	1645.69	-122.56	18968.29	22307.7

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \; Z \quad dx.dy}{\sqrt{N \quad dx \, Z(\quad dx)^2}\sqrt{N \quad dy^2 \; Z(\quad dy)^2}}$$

$$= \frac{5 \mid 22307.7 \; Z(Z161.55) \mid (Z122.56)}{\sqrt{5 \mid 26458.07 \; Z(Z161.55)^2}\sqrt{5 \mid 18968.29 \; Z(Z122.56)^2}}$$

$$r = 0.996$$

$$(PE) = \frac{0.6745(1 \; Z r^2)}{\sqrt{N}} X \frac{0.6745[1 \; Z(0.996)^2]}{\sqrt{5}} X 0.0024$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \; Z 2}$$

$$= \frac{0.996}{\sqrt{1 \; Z(0.996)^2}} \mid \sqrt{5 \; Z 2}$$

Appendix – XII

Examine the relationship between Cash and Bank balance and Current Assets

(In Million)

Year	Cash (X)	dx	dx^2	Current Assets (Y)	dy	dy^2	dx . dy
2061/062	33.97	8.28	68.56	240.19	-88.95	7912.10	-736.51
2062/063	39.69	14	196	288.60	-40.54	1643.49	-576.56
2063/064	3.03	-22.66	513.48	353.65	24.51	1600.74	-555.40
2064/065	47.83	22.14	490.18	369.41	40.27	1621.67	891.58
2065/066	3.94	-21.75	473.06	393.84	64.70	4186.09	-1407.23
Total		0.01	1741.28		0.01	5964.09	-2375.17

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy - \frac{dx.dy}{N}}{\sqrt{N \quad dx - \frac{(dx)^2}{N} \mid \quad dy - \frac{(dy)^2}{N}}}$$

$$= \frac{-2375.11 - \frac{0.10 \mid 0.01}{5}}{\sqrt{1741.28 - \frac{(0.10)^2}{5} \mid 15964.10 - \frac{(0.10)^2}{5}}}$$

$$r = 0.56$$

$$(PE) = \frac{0.6745(1 - r^2)}{\sqrt{N}} X \frac{0.6745[1 - (0.56)^2]}{\sqrt{5}} X 0.241$$

Appendix – XIII

Examine the relationship between Sales and cash and Bank balance

(In Million)

Year	Sales (X)	dx (x – 386.62)	dx^2	Cash and bank balance (Y)	dy (y – 33.65)	dy^2	dx . dy
2061/062	231.75	-136.87	18733.40	33.97	0	0	0
2062/063	293.82	-74.8	5595.04	39.69	5.72	32.72	-427.860
2063/064	368.62	0	0	3.03	-30.94	957.58	0
2064/065	372.78	4.16	17.31	47.83	13.86	192.10	57.66
2065/066	414.58	45.96	2115.32	3.94	-30.03	901.81	-1380.18
Total	1681.55	-161.55	26458.07	128.46	-41.39	2083.71	-1780.38

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \; Z \quad dx.dy}{\sqrt{N \quad dx \, Z(\quad dx)^2}\sqrt{N \quad dy^2 \; Z(\quad dy)^2}}$$

$$= \frac{5(Z1750.38) \; Z(Z161.55) \mid (Z41.39)}{\sqrt{5 \mid 26458.07 \; Z(Z161.55)^2}\sqrt{5 \mid 2083.91 \; Z(Z41.39)^2}}$$

$$r = -0.508$$

$$(PE) = \frac{0.6745(1 \; Z \; r^2)}{\sqrt{N}} \; X \frac{0.6745[1 \; Z(Z0.508)^2]}{\sqrt{5}} \; X 0.2238$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \; Z2}$$

$$= \frac{0.508}{\sqrt{1 \; Z(0.508)^2}} \mid \sqrt{5 \; Z2}$$

$$= 1.022$$

Appendix – XIV

Examine the relationship between current Sundry debtors and Sales

(In Million)

Year	Sales (X)	dx (x – 386.62)	dx^2	Sundry debtors (Y)	dy (y – 0.91)	dy^2	dx . dy
2061/062	231.75	-136.87	18733.40	0.42	-0.47	0.2304	-65.70
2062/063	923.82	-74.8	5595.04	1.26	0.35	0.1225	-26.18
2063/064	368.62	0	0	0.91	0	0	0
2064/065	372.78	4.16	17.31	0.07	-0.84	0.7056	3.50
2065/066	414.58	45.96	2115.32	80.48	79.57	6331.3849	3657.04
Total	1681.55	-161.55	26458.07	83.15	78.6	6332.4434	3561.66

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \; Z \quad dx.dy}{\sqrt{N \quad dx \; Z(\quad dx)^2}\sqrt{N \quad dy^2 \; Z(\quad dy)^2}}$$

$$r \quad = \quad 0.586$$

$$= \frac{5 \mid 3561.66 \; Z(Z161.55) \mid (78.6)}{\sqrt{5 \mid 26458.07 \; Z(Z161.55)^2}\sqrt{5 \mid 6332.4434 \; Z(Z78.6)^2}}$$

$$(PE) \quad = \quad \frac{0.6745(1 \; Z \; r^2)}{\sqrt{N}} \; X \frac{0.6745[1 \; Z(0.586)^2]}{\sqrt{5}} \; X 0.1981$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \; Z \; 2}$$

$$= \quad \frac{0.586}{\sqrt{1 \; Z(0.586)^2}} \mid \sqrt{5 \; Z \; 2}$$

$$= \quad 1.235$$

Appendix – XV

Examine the relationship between Inventory and Sales.

(In Million)

Year	Sales (X)	dx (x – 386)	dx^2	Inventor (Y)	dy	dy^2	dx . dy
2061/062	231.75	-104.25	10868.06	78.14	-42.97	1846.42	4479.62
2062/063	923.82	-42.82	2779.15	86.35	-34.76	1208.26	1466.18
2063/064	368.62	32.18	1064.06	136.77	15.66	245.24	510.83
2064/065	372.78	36.78	1352.77	121.11	0	0	0
2065/066	414.58	78.58	6174.82	142.73	21.62	467.42	1698.90
Total		1.55	21238.86		-40.45	3767.34	8155.53

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \,\mathrm{Z} \quad dx.dy}{\sqrt{N \quad dx \,\mathrm{Z}(\quad dx)^2}\sqrt{N \quad dy^2 \,\mathrm{Z}(\quad dy)^2}}$$

$$= \frac{5 \mid 8155.53 \,\mathrm{Z} 1.55 \mid (\mathrm{Z} 40.45)}{\sqrt{5 \mid 26458.07 \,\mathrm{Z}(1.55)^2}\sqrt{5 \mid 3767.34 \,\mathrm{Z}(\mathrm{Z} 40.45)^2}}$$

$$r = 0.956$$

$$(PE) = \frac{0.6745(1 \,\mathrm{Z} r^2)}{\sqrt{N}} \,\mathrm{X} \frac{0.6745[1 \,\mathrm{Z}(0.956)^2]}{\sqrt{5}} \,\mathrm{X} 0.026$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \,\mathrm{Z} 2}$$

$$= \frac{0.956}{\sqrt{1 \,\mathrm{Z}(0.956)^2}} \mid \sqrt{5 \,\mathrm{Z} 2}$$

$$= 5.644$$

Appendix – XVI

Examine the relationship between Gross profit and Sales

(In Million)

Year	Gross profit (X)	dx (x – 87)	dx^2	Sales (Y)	dy (y – 368.62)	dy^2	dx . dy
2061/062	64.71	-22.29	496.84	231.75	-136.80	18733.397	3050.83
2062/063	84.78	-2.22	4.93	293.82	-74.80	5595.04	166.056
2063/064	100.81	13.81	190.72	368.62	0	0	0
2064/065	99.58	12.58	158.26	372.78	4.15	17.306	52.33
2065/066	87.24	0.24	0.058	414.58	45.96	2112.32	11.03
Total		2.12	850.81	336.31	161.55	26440.76	3280.252

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \; Z \quad dx.dy}{\sqrt{N \quad dx \; Z(\quad dx)^2}\sqrt{N \quad dy^2 \; Z(\quad dy)^2}}$$

$$= \frac{5 \mid 3280.25 \; Z 2.12 \mid 161.55}{\sqrt{5 \mid 850.81 \; Z(2.12)^2}\sqrt{5 \mid 264.76 \; Z(161.55)^2}}$$

$$r = 0.7882$$

$$(PE) = \frac{0.6745(1 \; Z r^2)}{\sqrt{N}} X \frac{0.6745[1 \; Z(0.7882)^2]}{\sqrt{5}} X 0.187$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \; Z 2}$$

$$= \frac{0.7882}{\sqrt{1 \; Z(0.7882)^2}} \mid \sqrt{5 \; Z 2}$$

$$= 2.218$$

Appendix – XVII

Examine the relationship between Net profit and Sales

(In Million)

Year	Net profit after tax(X)	dx (x – 50)	dx^2	Sales (Y)	dy (y – 336)	dy^2	dx . dy
2054\55	37.68	-12.32	151.78	231.75	-104.25	10868.06	1284.36
2055\56	58.97	8.97	80.46	293.82	-41.18	1779.15	-378.35
2056\57	62.18	12.18	148.35	368.62	32.62	1064.06	397.31
2057\58	55.91	5.91	34.96	372.78	36.76	1352.77	217.25
2058\59	35.89	-14.11	199.09	414.58	78.58	6174.82	-1108.76
Total		0.63	614.61		1.55	21328.86	411.81

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \,\mathrm{Z} \quad dx.dy}{\sqrt{N \quad dx\,\mathrm{Z}(\quad dx)^2}\sqrt{N \quad dy^2\,\mathrm{Z}(\quad dy)^2}}$$

$$= \frac{5 \mid 411.81\,\mathrm{Z}0.63 \mid 1.55}{\sqrt{5 \mid 614.61\,\mathrm{Z}(0.63)^2}\ \sqrt{5 \mid 21238.86\,\mathrm{Z}(1.55)^2}}$$

$$r = 0.114$$

$$(PE) = \frac{0.6745(1\,\mathrm{Z}r^2)}{\sqrt{N}}\,\mathrm{X}\frac{0.6745[1\,\mathrm{Z}(0.114)^2]}{\sqrt{5}}\,\mathrm{X}0.298$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n\,\mathrm{Z}2}$$

$$= \frac{0.114}{\sqrt{1\,\mathrm{Z}(0.114)^2}} \mid \sqrt{5\,\mathrm{Z}2}$$

$$= 0.199$$

Appendix – XVII

Examine the correlation coefficient between Operating exp. and Sales

(In Million)

Year	Operating expenses (X)	dx x	dx^2	Sales (Y)	dy (y – 368.62)	dy^2	dx . dy
2061/062	166.28	-99.89	9978.75	231.75		18733.397	13671.94
2062/063	201.14	-65.03	5228.90	293.82	-74.80	5595.04	4864.24
2063/064	260.11	-0,06	36.72	368.62	0	0	0
2064/065	266.17	0	0	372.78	4.16	17.306	0
2065/066	319.57	53.40	2851.56	414.58	45.96	2112.32	2454.26
Total		-117.58	1795.20		-161.55	26458.064	20990.45

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \; Z \quad dx.dy}{\sqrt{N \quad dx \; Z(\quad dx)^2}\sqrt{N \quad dy^2 \; Z(\quad dy)^2}}$$

$$= \frac{5 \mid 20990.45 \; Z(Z117.58) \mid (Z161.55)}{\sqrt{5 \mid 17095.20 \; Z(Z117.58)^2}\sqrt{5 \mid 226458.064 \; Z(Z161.55)^2}}$$

$$r = 0.985$$

$$(PE) = \frac{0.6745(1 \; Z r^2)}{\sqrt{N}} X \frac{0.6745[1 \; Z(0.985)^2]}{\sqrt{5}} X 0.009$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \; Z2}$$

$$= \frac{0.985}{\sqrt{1 \; Z(0.985)^2}} \mid \sqrt{5 \; Z2}$$

$$= 9.887$$

Appendix – XVIII

Examine the correlation coefficient between current Net profits after tax

(In Million)

Year	Net profit after tax (X)	dx (x – 50)	dx^2	Net worth (Y) (y – 353.65)	Dy	dy^2	dx . dy
2061/062	37.68	-12.32	151.78	488.01	101.99	10401.96	1256.52
2062/063	58.97	8.97	80.46	522.94	-47.06	221.64	-422.13
2063/064	62.18	12.18	148.35	601.19	11.19	125.22	136.29
2064/065	55.91	5.91	34.93	650.42	60.42	3650.58	357.08
2065/066	35.89	-14.11	199.09	669.81	97.81	6369.64	-1126.12
Total		0.63	614.61		2.37	2263.82	201.64

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \; Z \quad dx.dy}{\sqrt{N \quad dx \; Z(\quad dx)^2}\sqrt{N \quad dy^2 \; Z(\quad dy)^2}}$$

$$= \frac{5 \mid 201.64 \; Z 0.63 \mid 2.35}{\sqrt{5 \mid 614.61 \; Z(0.63)^2}\sqrt{5 \mid 22636.82 \; Z(2.37)^2}}$$

$$r = 0.054$$

$$(PE) = \frac{0.6745(1 \; Z r^2)}{\sqrt{N}} \; X \frac{0.6745[1 \; Z(0.054)^2]}{\sqrt{5}} \; X 0.301$$

Appendix – XIX

Examine the correlation coefficient between Net profit and Assets

(In Million)

Year	Net profit (X)	dx x - 50	dx^2	Current Assets (Y)	dy (y – 329)	dy^2	dx . dy
2061/062	37.68	-12.32	151.78	240.19	-88.81	7887.22	1094.14
2062/063	58.97	8.97	80.46	288.60	-40.4	1632.16	362.39
2063/064	62.18	12.18	148.35	353.65	24.65	607.62	300.24
2064/065	55.91	5.91	34.93	369.41	4.41	1632.97	238.81
2065/066	35.89	-14.11	199.09	939.84	64.84	4204.25	914.89
Total		0.63	614.61		0.69	159654.2	355.92

Now,
Correlation Coefficient (r)

$$= \frac{N \quad dx.dy \; Z \quad dx.dy}{\sqrt{N \quad dx \, Z(\quad dx)^2}\sqrt{N \quad dy^2 \; Z(\quad dy)^2}}$$

$$= \frac{5 \mid 355.92 \; Z 0.63 \mid 0.69}{\sqrt{5 \mid 614.61 \, Z(0.63)^2}\sqrt{5 \mid 15964.2 \, Z(0.69)^2}}$$

$$r = 0.114$$

$$(PE) = \frac{0.6745(1 \, Z r^2)}{\sqrt{N}} X \frac{0.6745[1 \, Z(0.114)^2]}{\sqrt{5}} X 0.298$$

Testing the signification of an observed correlation

$$t = \frac{r}{\sqrt{r^2}} \mid \sqrt{n \, Z 2}$$

$$= \frac{0.114}{\sqrt{1 \, Z(0.114)^2}} \mid \sqrt{5 \, Z 2}$$

$$= 1.199$$

Appendix - XX
Bottlers Nepal Limited
Balaju, Kathmandu

Dependent variable	**Independent Variable**			
Return NWC NPAT\NWC	Liquidity CA\CL	Turnover CA Sales\WC	Profitability NPAT\TA	Turnover of total Assets Sales\TA
0.3498	1.8132	0.9648	0.0602	0.4004
0.9465	1.5682	1.018	0.1329	0.4535
0.4007	1.7820	1.0423	0.0765	0.4424
0.2914	2.0809	1.0091	0.0664	0.4355
0.2853	1.4592	1.0526	0.0377	0.337

SPSS Computer Calculation

Dependent Variable: Return on net working Capital

Independent Variable: Liquidity (CA\CL) turnover of Ca (S\CA)

Profitability (NPAT\TA), Turnover of TA (S\TA)

Appendix – XXI (i)
Model Summary

Model	R	R Square	Adjusted R Square	Std Error of the Estimate
1	4470[a]	200	-601	352882

a. Predictors: (Constant) , turnover, liquidity.

Coefficients

Model	Unsteadied coefficients		Standardized Coefficients	T	sign
	B	Std. Error	Beta		
1(constant)	3.481	6.744		-516	0.657
liquidity	-593	0.840	-506	-706	0.553
Turnover	-1.959	5.830	-241	-336	0.769

a. Dependent Variable return on nwc

Appendix – XXI (ii)

Model	Variable Entered	Variables Removed	Method
1	Turnover, Sales[a]		enter

a. All requested variable entered.
b. Dependent variable: return on nwc..

Model Summary

Model	R	R Square	Adjusted R Square	Std Error of the Estimate
1	458[a]	210	-580	350619

a. Predictors:(constant), turnover, sales.

Coefficients

Model	Unsteadied coefficients		Standardized Coefficients	T	sign
	B	Std. Error	Beta		
1(constant)	-1.952	6.189		-315	0.782
sales	0.817	1.121	0.526	0.729	542
Turnover	2.082	5.880	256	354	757

a. Dependent Variable return on nwc

Appendix – XX (iii)

Model Summary

Model	R	R Square	Adjusted R Square	Std Error of the Estimate
1	900[a]	811	622	171582

a. Predictors: (Constant) , liquidity, sales.

Coefficients

Model	Unsteadied coefficients		Standardized Coefficients	T	sign
	B	Std. Error	Beta		
1(constant)	1.978	6.90		2.867	.103
sales	1.590	0.604	1.024	2.634	.119
Turnover	-1.196	456		-2.622	120

a. Dependent Variable return on nwc.