CHAPTER: ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The difference between current assets and current liabilities is called working capital. Current assets are these assets, which are converted into cash or liquid within one year. In other side, current liabilities are these types of liabilities, which are to be paid within a year. Thus, working capital means circulating capital in current assets and current liabilities to operate the business transaction within a year. Working capital is lifeblood for day-to-day operation of a business enterprise. So it is very sensitive activities. There are so many factors, which affect the business activities. Among them working capital is also a major factor. The success and failure of any enterprises depends upon the management of working capital.

Working capital plays a vital role in the success or failure of the companies either it is manufacturing or non- manufacturing. Working capital management is an important aspect of manufacturing companies. Every business organization needs various types of assets to carry out their operation. Some assets are required to meet daily expenses and to pay the current liabilities, which are termed as current. Working capital is related to the management of current assets. Among available options, proper management of working capital is the best possible options to improve their operational viability. Working capital is crucial aspect, if financial management practices in manufacturing enterprises. Thus, the working capital is the lifeblood and controlling nerve-center of the business to success or failure of any business. Business organization is heavily depends upon efficiency on its working capital management.

There are two concepts of working capital: gross and net concepts. The gross concept of working capital refers to the total current assets and the net concept refers to current assets less current liabilities. Hence, gross working capital and total current assets are synonymous. They include short-term assets like cash, receivables, and inventories. The need for the net concept of working capital arises because the gross concept fails to consider current liabilities. The gross concept emphasizes that excessive investment in current assets affects profitability, as idle investment yields

nothing. Similarly, inadequate investment current assets make it difficult of carryout the day-to-day operations of the business smoothly.

The concept of net working capital is also important due to the facts that short-term creditors want an enterprise to maintain current assets at a higher level as compared to current liabilities. Therefore, the choice of a particular policy depends upon the view of an enterprise as well its nature.

Working capital management is not only concerned with the management of total current assets and the excess of current assets over current liabilities but it is concerned with all kinds of problems that arise in attempting to manage the current assets, current liabilities and the interrelationships that exists between them. Especially in small firms, working capital management may be the factor that decides success or failure; in larger firms, efficient working capital management can significantly affect the firm's risk, return, and share price. Hence, the need for effective working capital management has become greater in recent years. Working capital management which is concerned with the short term financial decisions appears to have been relatively neglected in the literature of finance .In Nepal many public as well as private organizations are involved in manufacturing as well as in non-manufacturing sector but they do not provide scope for their study about working capital management. Only few studies have been conducted in this sector but from a long period, no such kinds of studies are undertaken under it. Therefore, it is hoping that this study may be very useful and rewarding in this subject.

1.2 Statements of problems

Working capital management plays the vital role for making long run analysis and decision-making. One cannot estimate the accurate requirement of working capital in any organizations. The short-term liquidity that reduces the risk but holding of higher level of current assets involves higher opportunity cost, which minimizes the return. Inversely, the risk increases and accordingly the return also increase. Therefore, if a firm once to maintain sound financial position, it should maintain optimal level of working capital. It is not shown easily to maintain daily current assets and current liabilities. So, the task of working capital management should be done seriously. Negligence may create big problem in daily operations of the organization.

Most of the chief financial officer's (CFO) time and efforts are devoted to working capital management. Still a large number of business failures have been attributed to inability of financial managers to plan and control properly the current assets and

Current liabilities of their respective firms. (Smith, 1973). Therefore, there is a need to develop sustainable working capital management practices. A firm is required to maintain liquidity in its day-to-day operations to ensure smooth running of the operations and to meet its short-term obligations. But this is not a simple and straight forward task, as it has to operate its business efficiently and profitability. In this process, the asset-liability mismatch may occur and it may increase firm's profitability in the short run but at a risk of its bankruptcy. Higher liquidity gives the comfort of meeting short-term liabilities but at the cost of profitability and on the other hand too little of it may increase the profitability but at a greater risk of not meeting the short run obligations.

The issues involved in managing working capital of firms are concerned with the management of the firm's inventory, cash, marketable securities, receivables and payable in order to achieve a proper balance between risk and return. A well-designed and implemented working capital management must contribute positively to the creation of a firm's value. Too much investment in inventory and receivables reduces profitability. Too little investment in them or aggressive working capital financing strategy (negative cash conversion cycle or negative days of working capital) increases the risk of not being able to met the commitments as and when they become due.

Segan (1955) examined about the need to build up a theory of working capital and he pointed out that the level of operational cash needs depends primarily upon the scope and types of business organization. He also realized about the need for management of the working capital that will affect the health of the company. Belt and Smith (1991) conducted a research study about comparison of working capital management practices in Australia and the United States. The study focused upon the working capital policy, managing working capital overall, managing marketable securities, managing account receivables, managing inventory, managing account payables, managing short term bankruptcy. The conclusion of this study was that there appear to be both commonalities and differences in the working capital management practices in Australia and United states. Australian firms seem to large behind United States firms in inventory, credit/collection and marketable securities management .The policy setting and daily management of working capital accounts of Australian firms are more centralized than are United States firms. Larger United States firms seem more able to finance short-term needs without having to use collateral. Australian firms use more short-term bank borrowing than do United States firms. Overall, managers in both countries face similar problems and seem to respond in relatively comparable way.

Kim, Rowland and Kim (1992) evaluated about working capital practices by Japanese manufacturers in the United States. In this study, they took 94 companies that was their 29 percent response rate and they were taking questionnaires for only Japanese manufactures in the United States. The findings of this study was that the most important objective of working capital management by Japanese investors was to provide various current assets and short term credit necessary to support anticipated sales. No other objective rated close to this one and they found most of their short-term funds from Japanese sources.

Shin and Soenen (1998, page No. 27) also examined about the Efficiency of Working Capital Management and Corporate Profitability. In this study, they investigated the relation between the firm's net trade cycle and its profitability. This relationship is examined using correlation and regression analysis, by industry and working capital intensity. Using a composted sample of 58,985 firm years covering the period 1975-1994, they found, in all cases, a strong negative relation between the length of the firm's net-trade cycle and its profitability. In addition, shorter net-trade cycles are associated with higher risk –adjusted stock returns.

In Nepal, a study on demand for inventory was conducted by Pradhan (1992, page No. 33) with the help of pooled cross section data of nine manufacturing public enterprises for 12 years from 1973 to 1984. The major findings in his study were (1)the elasticity of sales with respect to inventory is less than unity which showed the evidence of economies of scale with respect to the demand for inventories by manufacturing public enterprises in Nepal (2)The interest rate coefficient was statistically significant with a theoretically correct sign. It means the fluctuation in inventory level depends in a statistically significant manner on fluctuations in financial carrying cost of inventories. Likewise, he also conducted another study about the demand for cash by corporation (1986) at which also nine selected firms were used and the study was from 1973 to 1982.The conclusion of this study was that a lot of controversies exist with respect to the presence of economies of scale in cash holding and the effect of capital costs on the demand for cash. Another finding of this study was that the interest rate coefficient is statistically significant with a theoretically correct sign and the capacity utilization as a significant variable affecting the demand or cash is doubtful

Through, most of the manufacturing companies in Nepal have well recognized the importance of proper working capita management. Administrative negligence in day-to-day operations creates serious liquidity problems. Such as Lower turnover of assets

negative rate of return, inappropriate financing policy, higher production and operating expenses. Poor collection and payable are the major problems of Nepalese manufacturing companies. Moreover, various factors have been identified for the low economic performance. Financing function in Nepalese manufacturing companies means only procuring and rising of funds. It is also seen in practice that there is lack of appropriate assets mixed policy in Nepalese manufacturing companies.

Hence, practice of such empirical study and analysis about the practice of working capital management on manufacturing companies of Nepal is rarely carried out. It has been very essential for the study in the field of finance about this aspect. Hence in this study attempt would be made that what type of working capital policy are following by the Nepalese industries and what is their practice in the different areas like cash, inventory, receivables, accounts payables and short term loans.

Some issues raised in this study are as under.

- What type of working capital policy has been followed by the selected Nepalese manufacturing companies?
- What is the main objective of working capital Management in Nepalese manufacturing companies?
- What type of customer payment behaviors is in practices in Nepalese industries?
- What types of inventory management techniques are adopted by Nepalese industries?
- What is the relationship between working capital management and profitability of manufacturing firms in Nepal?
- What working Capital measures are more responsible behind the profitability of the firms?

1.3 OBJECTIVES OF THE STUDIES

The general level objective of this study is to access the practice of working capital management on Nepalese manufacturing companies. The Specific level objective could be listed as below.

1. To find out the practice of working capital management in Nepalese manufacturing companies.
2. To determine the objectives of working capital management in Nepalese context.
3. To evaluate the relationship between Profitability and working capital management In Nepalese manufacturing companies.
4. To provide relevant suggestion and recommendation to concerned authority.

Significance Of the study

This study will give proper information about the practice of working capital management in manufacturing companies of Nepalese.

1. This study will helpful to analyze the relationship between profitability and working capital management in Nepalese manufacturing companies.
2. The study will helpful to expose a number of opportunities for further examination pertaining to organizational element that influence the success of implementing working capital management as a whole.
3. This study provides some knowledge about the importance of the effective working capital management to managers and practitioners.
4. It will be helpful to future researcher.

1.5 Limitation of the study

Each and Every researcher is bounded by certain limitation of time, resources, study materials, data etc. So, this study is also not free from its limitation. The main limitations are

- This study is only for the partial fulfillment of degree programmed.
- The study depends on Primary and secondary data.
- This study period covers 5 years data only from 2001/002-2005/006
- Resource and time period will also limit the study.
- The study is based on 5 Nepalese Manufacturing Companies they are as follows:
  - Shree Arun Vanaspati Uduog Ltd
  - Nepal Aoushadhi Ltd.
  - Khadya Udyog Ltd.
  - Udayapur Cement Factory
  - Dairy Development Corporation

1.6 ORGANIZATION OF THE STUDY

This study has been organized into five chapters, each devoted to some aspects of the practice of working capital management on Nepalese companies. The chapters one-to-five convey the following titles:

Chapter -1 Introduction

Chapter-2 Review of literature

Chapter-3	Research Methodology
Chapter-4	Presentation and Analysis of Data
Chapter-5	Summary, conclusion and recommendation

- The first chapter contains the introductory part of the study. This chapter describes the major issues to be investigated along with the statement of the problems, objectives and organization of the study.
- The second chapter is for literature review and it contains brief review of related and pertinent literature available.
- The third chapter describes the research methodology applied in the study and it deals with the model of analysis, nature and sources of data collection, sampling techniques etc.
- It deals with presentation and interpretation of relevant data and and information through definite courses of research methodology.
- It states summary, conclusion and recommendation of the study. This chapter describes main finding, issues, gaps and suggestive framework of study.

CHAPTER -2

REVIEW OF LITERATURE

This chapter relates the conceptual frameworks of this study and it is devoted to discuss briefly about risk and return on common stock investment. Some academic course books, journals, magazines, some master degree thesis etc. related to the field of the study has been reviewed.

2.1 Conceptual Framework

In simple words, working capital refers to that part of the firm's capital, which is required for financial short-term fund. The firm's assets normally classified as long-term debt and current liabilities. Current assets include the cash, bank balance, marketable securities, receivables, inventory, debtors, pre-paid expenses and other assets that are expected to be converts into cash with in one year. Current liabilities include short-term debt, payable, accrued, creditors and other liabilities that come due in one years or less. The working capital management focuses on the coordinated control of the firm's current assets and current liabilities It is invested in current assets keep revolving fast and is being constantly converted into cash and these cash outflows again in exchange for other current assets. Hence, it is also known as revolving of circulating capital or short-term capital.

The term working capital organized with the old Yankee peddler, who would load his wagon with goods and then go off on his route of peddle his wares. The merchandise was called working capital because it was what he actually sold or "turned over" to produce his profit. The wagon and horse were his fixed assets. He generally owned horse and wagon, so they were financed with equity capital, but the borrowed the fund to buy the merchandise. These borrowing were called working capital loans and they had to be re-paid after each trip to demonstrate to the bank that the credit was sound (Bringham and houstaon, 2003, page no 35)

There are two concept of working capital. They are gross and net concept. Gross working capital refers to the firm's investment in current capital because actual operations of the business are measured in term of utilization current assets rather

then current liabilities. Another school of thought (as supported Doris, Lincoln, Steves, and Sailer etc.) Consider working capital in term of net working capital in term of net working capital refers to the different between current liabilities. Net working capital can be positive or negative. A positive net working capital will arise when current assets exceeds current liabilities.

The two concept of working capital management gross and net are not exclusive rather they have equal significance from the management viewpoint. The gross working capital concept focuses attention on two aspects management. (A) How to optimize investment in current assets? (B) How should current assets be financed? Pandey (2004). The investment in working capital in a business organization should be just adequate, niter more or less, to the need of business organization. The management should be prompt to initiate an action and correct imbalance. Net working capital is a quantities concept and it indicates the liability position of the firm and suggests the extent to which working capital needs may be financed by permanence sources of funds. A weak liability position poses a threat to the solvency of the company and makes it unsafe and unsound. Excessive liabilities are also bad. Therefore timely and prompt action should be taken by management to improve and correct the imbalance in the liquidity position of the firm.

In conclusion, It may be said that both gross and net concept of working capital are important aspect of the working capital management. The net concept of working capital may be suitable only for proprietary from of organizations such as sole trading and partnership firm but the gross concept is very suitable to the company form of organization where there arise a diverse between ownership, management and control. But there is no precise way to determine the exact amount of gross or net working capital for any firm.

There are also third school called Natural approach developed by park and Glokstone (1963) that consider working capital to imply the residual pool of the liquid assets and liabilities and in their view working capital involves movement of funds accounts receivable and then so cash again.

2.1.1 Working capital policy

The main objectives of working capital management are to minimize the cost of maintaining necessary current assets depend on the size of such assets held. The objectives of managing working capital management is the same as the basic objectives the firm, that is, to maximize the value of the firm (Pradhan, 2000, Page no 33) A firm can adopt three different financing policies.

- Long term financing :-

  The sources of long-term financing include ordinary share capital preference share capital, debenture and Long-term borrowing from financing institution.

- Short term financing :-

  Short-term financing is obtained for a period of less then one year. It is arranged in advance from bank and other suppliers of short term financing in the money market.

- Spontaneous financing :-

  Spontaneous financing refers to the automatic sources of short-term fund arising in the normal course of a business. Trade credit and outstanding expenses are the examples of spontaneous financing.

2.1.2 Approaches of working capital management

Deciding how much current assets of be maintained and how to finance them are credit issue of working capital management because the level of current assets and current liabilities direct impact on the firm's profitability, liquidity and risk (Poudel 2005)

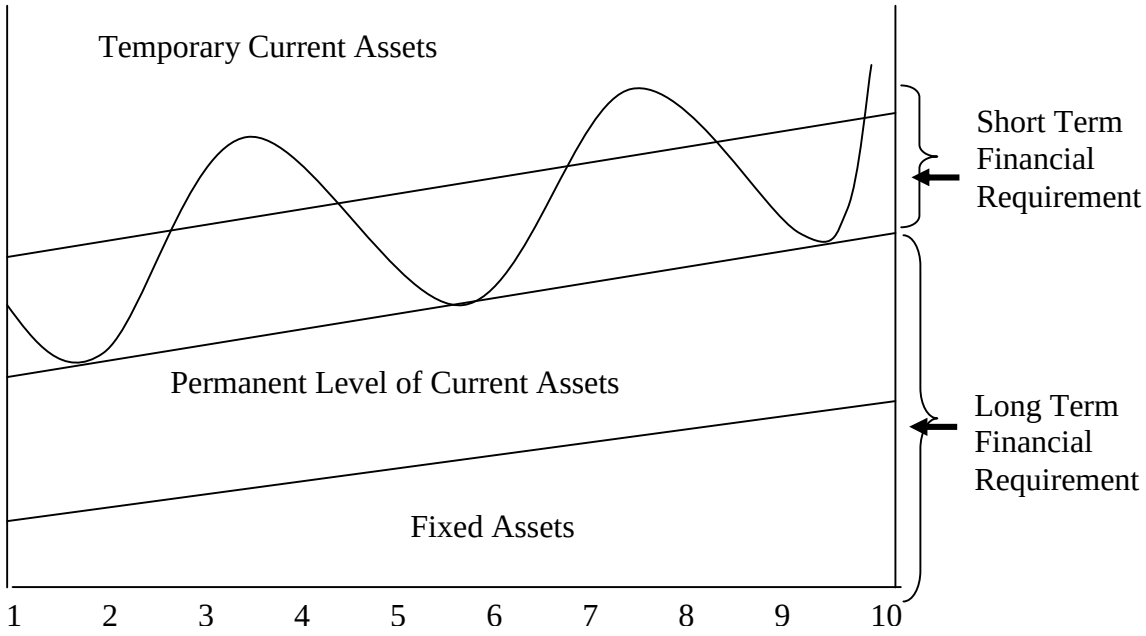
The working capital approaches can be classified into three parts on the basic of the mix of short term and long-term financing.

Conservative Approach:-

When a firm depend more on long-term fund for financing needs, it is called conservative approach. Under this plan, the firms financing it's permanent assets and also part of temporary assets with long term financing.

The conservative plan relies heavily on long-term financing and therefore, the firm has less risk of financing the problem of shortage of funds and the cost of financing is relatively more as interest has to be even on seasonal requirement for the entire period.

Figure 1

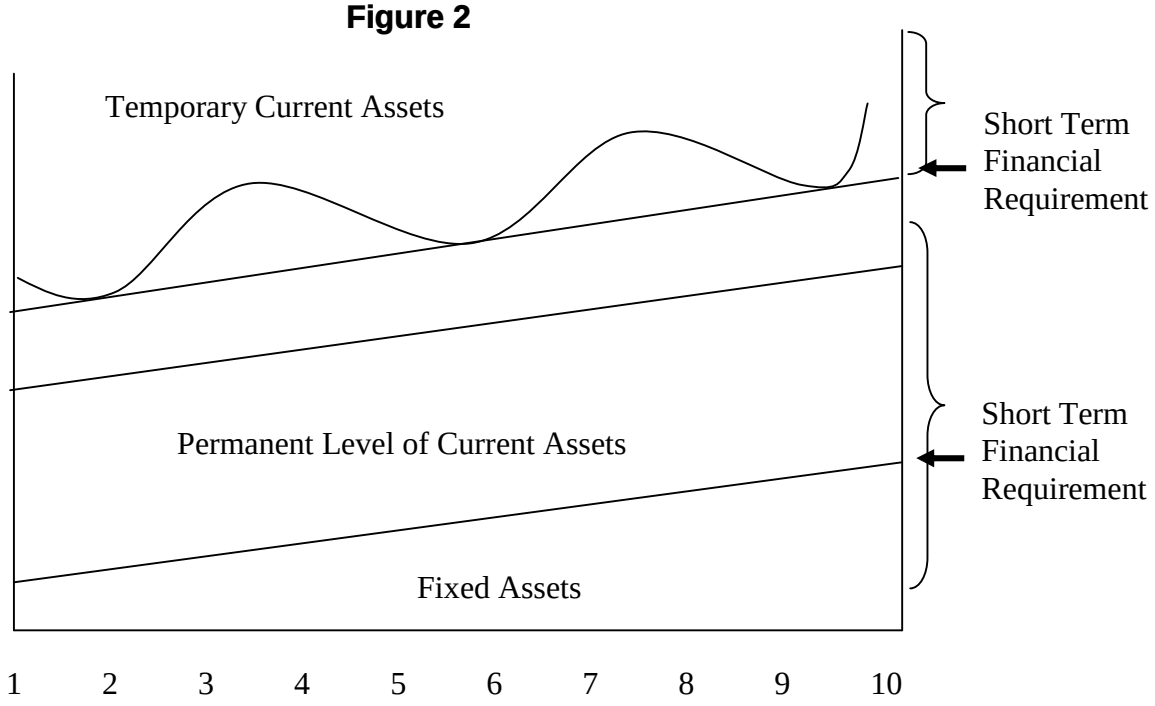


Adopted from: Weston, Besley and Brigham, Essential of managerial finance, p 347

Aggressive Approach:-

An aggressive policy is said to be followed by the firm when it uses more short-term financing or the entire estimated requirements of current assets should be financed from short-term sources and even a part of fixed assets investments be financed from short term sources. Hence, this approach makes the finance mix more risky, less costly and more profitable.

Figure 2

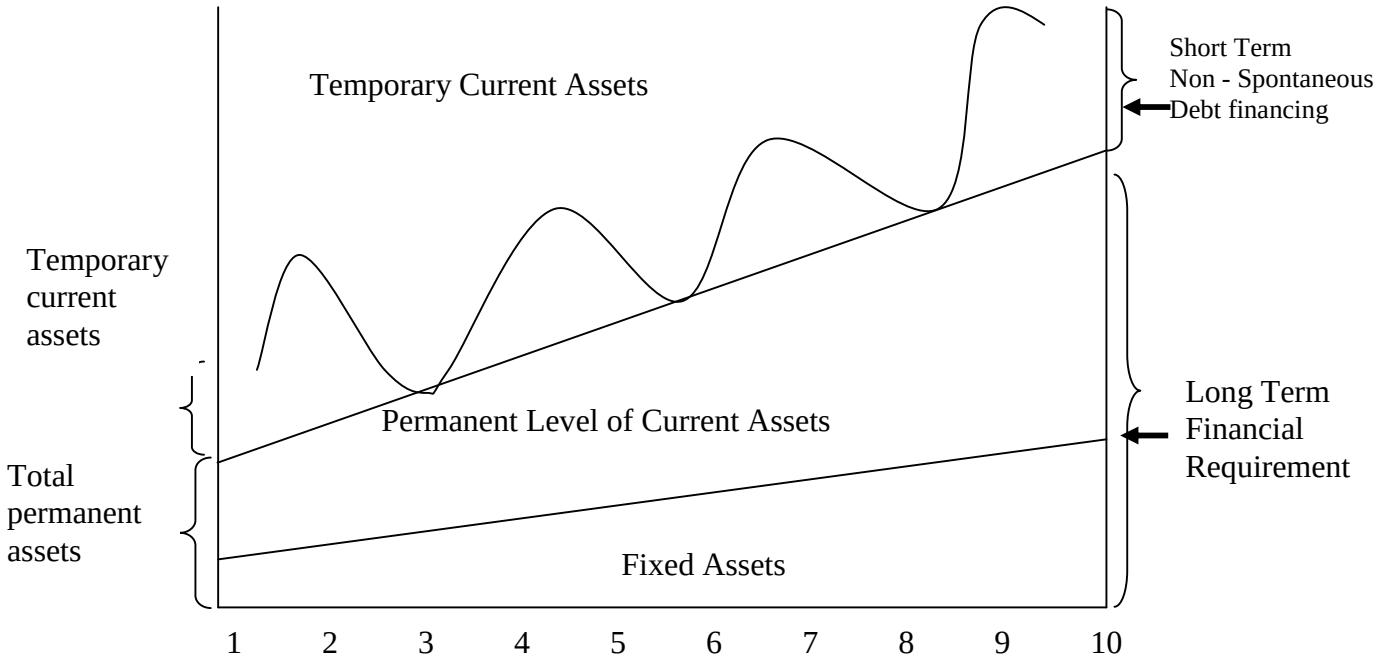


Adopted from: Weston, Besley and Brigham, Essential of managerial finance, p 347

Matching approach / Hedging approach:-

The term hedging usually refers to two off-selling transactions of a simultaneous but opposite nature which counterbalance the effect of each other. With reference to financing mix the term hedging refers to a process of matching maturities of debt with the maturities of financial needs. According to this approach, the maturity of source of funds should match the nature of assets to be financed. This approach is therefore also known a matching approach. So when a firm follows this approach long term financing will be used to finance fixed assets and permanent current assets and short term financing to finance temporary or variable current assets.

Figure 3



Adopted from: Weston, Besley and Brigham, Essential of managerial finance, p 34

2.1.3 Determinations of working capital:

The factor that influences the working capital requirement may be internal or external. Internal factor are those, which are within the control and completeness of management, and external factors are those beyond the control of management. Internal factor include turnover of receivable and inventories tem of purchase and sales and credit rating. External factor consist of nature of business volume of production and sales and business conditions. Internal policies and environment changes also affect the working

capital. Generally, the following factors determine the working capital requirement of the firm.

- Volume of sales
- Manufacturing process
- Nature of business
- Size of business
- Term of purchase and sales
- Business fluctuation
- Change in technology
- Turnover of circulating capital
- Inventory turnover
- Growth and expansion of business
- Profit margin and profit appropriation
- Cash requirement
- Other factors.

Jon J Hompton has suggested that a firm's working capital requirement are affected by some factors which are as follows

Sources of changes in working capital needs:

Table 1

Source of Changes	Working Capital Affected	Reasons
Sales Volume	Permanent	Different level of cash receivable and inventory need at new sales level
Seasonal and Cycle factor	Variable	Receivable and inventory must be available on temporary basis
Technology	Permanent	Level of inventory must be support the new production capabilities
Policies of firm	Permanent & Variable	Some policies tie up working capital other free it

2.1.4 Aim of working capital management:

Firms intended two important aims of working capital management are: profitability and solving solvency is used to in the technical sense, refers to another words the livability profitability of the firm may sacrifice solvency and maintain relatively low level of asserts. When the firm does so, it's profitability will improve as fewer funds are tied up in idle current asserts, but it's solvency would be threatened and would be exposed to greater rises or cash shortage and stock out.

2.1.5 Short term Vs long term financing

A firm should decide whether or not it should use short term financing. This decision of the firm will be guided by the risk return trade-off. Short term financing may be preferred over a long term financing but it is more risky then long term financing (Western, Basely and Brigham 1996)

Cost:

Short term financing should generally be less costly term financing. The field curve normally is upward sloping indicating that interest rates generally are lower on short term debt. Thus under normal conditions, interest costs at the time the funds are obtained will be lower if the firm borrows on a short term rather then on long term basis.

Flexibility:

It is relatively easy to refund short term fund diminishes long term funds such as debenture loan or preference capital cannot be refunded before time. Thus, If a firm anticipates that it is required mints for funds will diminish in nearly future, It would choose short term funds.

Risk:

Even through short debt often is less expensive then long term debt, short term credit subjects the firm.

Speed:

A short term loan can be obtained much faster than long credit lenders will insists on a more through financial examination before extending long term credit and the loan agreement will have to be spelled out in considerable detail because a lot can happen during the life of 10 to 20 years loan. Therefore it funds are needed in hurry the firm should look to short term sources.

Risk returns trade – off:

There is a conflict between long and short term financing short term financing is less expensive than long term financing but at the same time short form financing involves

greater risk than long term financing. The choice between long term and short financing involves a trade off between risk and return.

2.1.6 Managing the component of working capital

Basically Working capital has four main components such as cash, marketable securities, inventories and accounts receivables (Brigham & Ehrhardt, 2004). For each type of asset, firms face a fundamental trade off. Current assets (that is working capital) are necessary to conduct business and the greater the holdings of current assets, the smaller the danger of running out, hence the lower the firm's operating risk. So there is pressure to hold the amount of working capital to the minimum consistent with running the business without interruption.

The Nepalese enterprises has invested sizable amount of money in the form of current assets. The average ratio of current assets to total assets was 50 percent as against 50.5 percent in 1999/00 and 49.96 percent in 1998/99.Thus about half of total assets have been invested in the form of current Assets (Pradhan, 2004, Page No. 33).

2.1.7 The Cash Conversion Cycle

A firm has to invest its total capital into current assets and fixed assets. A firm requires many years to recover the initial investment in fixed assets such as plant and machinery or land and buildings. On the contrary, investments in current assets are turned over many times in a year. Investment in current assets such as inventories and debtors is realized during the firm's operating cycle which is usually less than a year. Hence operating cycle is the time duration required to convert sales, after the conversion of resources into inventories, into cash. It includes three phases:

- Acquisition of resources such as raw materials, labor, power and fuel.
- Manufacture of the product which includes conversion of raw material into work in progress into finish goods.
- Sale of the product: either for cash or on credit. It creates account receivable for collection.

The firm required to invest in current assets for a smooth, uninterrupted functioning. It needs to maintain liquidity to purchase raw materials and pay expenses and taxes as there is hardly a matching between cash inflows and outflows. Cash is also held to meet any future contingencies. Stock of raw materials and work in process are kept to

ensure smooth production and to guard against on availability of raw materials and other components. The firm holds stock of finished goods to meet the demands of customers on continuous basis and sudden demand from some customers. Debtors are also created because goods are sold on credit for marketing and competitive reasons. Thus a firm makes adequate investment in inventories, debtors, for smooth, uninterrupted production and sale. The length of operating cycle of a manufacturing firm is the sum of (I) inventory conversion period (ICP) (ii) debtors conversion period (DCP). The inventory conversion period is the total time needed for producing and selling the product. Typically it includes (a) Raw material conversion period (RMCP) (b) Work in process conversion period (WIPCP) (c) Finished goods conversion period (FGCP). The total of inventory conversion period and debtors' conversion period is referred to as gross operating cycle (GOC).

The payable deferral period (PDP) is the length of time the firm is able to defer payment on various resource purchases. The difference between operating cycle and payable deferral period is net operating cycle (NOC).If depreciation is excluded from expenses in the computation of operating cycle, the net operating cycle also represents the cash conversion cycle.

Hence,

Gross Operating Cycle = Inventory conversion period + Debtors Conversion Period

Inventory Conversion Period = Raw Material Conversion Period + Work in Process Conversion Period + Finished goods Conversion Period

Net Operating Cycle = Gross Operating Cycle - Payables Deferral Period

2.1.8 Cash Management

Cash is the important current asset for the operation of the business. Cash is the money which a firm can disburse immediately without any restriction. Cash management is concerned with the managing of (I) cash flows into and out of the firm, (ii) cash flow within the firm, and (iii) cash balances held by the firm at a point of time by financing deficit or investing surplus cash (Pandey, 2004).

Cash and marketable securities are taking together because marketable securities can be quickly converted into cash with only small transactions costs and hence can be regarded as a form of back–up cash. When we refer to cash it, we are using cash in the broad sense of demand deposits and money market accounts as well as currency holdings. Since investment in cash and marketable securities represent assets with less risk than

product or project investment, they may be expected to have returns less than the weighted average returns on all of the assets of a firm. We would expect investments in marketable securities to cover their proportionate cost of capital in relation to the liquidity function that they perform for the firm .In general, given the highly competitive and efficient nature of the financial markets; we would not expect that investments in marketable securities would be positive NPV investments. It is the investments in projects that hopefully will earn positive NPVs and there by increase the value of the firm (Weston & Copland, 1992).

Cash Management Model

In a business organization there should be optimum level of cash balance because both rising and falling costs are associated with the maintaining various levels of stocks or balances. In cash management, the basic stock is the minimum cash balance, which may be determined, in part, by bank compensating balance requirements. Several types of mathematical models have been developed to help to determine optimal cash balance. An early model developed by William Baumol (1952) essentially applies a basic inventory model to cash management. In this model the assumption is that the firm on average is growing and is a net user of cash. Ordering costs are represented by the clerical and transactions costs of making transfer between the investment portfolio and the cash account. The holding cost is the interest foregone on cash balance held.

According to model the optimal size of cash transfer is formulated as follows:

$C^* = \sqrt{(2bT/i)}$

Where C^*=the optimal size of cash transfer

T=the total cash usage for the period of time involved

b=the cost of the transaction in the purchase or sale of marketable securities

I=the applicable interest rate on marketable securities.

Hence, total cost (TC) =b (T/C) +I(C/2)

MILLER-ORR model

Miller and Orr (1966) expanded the Baumol model by incorporating a stochastic generating process for periodic changes in cash balances. So that the cash balance changes over a given period are random in both size and direction and that they form a normal distributions the number of periods observed increases. Miller and Orr assume that net cash flows behave as if they were generated by a "Stationary Random Walk". The

model allows for a priori knowledge; however that changes at a certain time have a greater probability of being either positive or negative.

The solution as derived by Miller and Orr becomes,

$Z^* = (3b/4i)\ 1/3$

Hence this model has a valuable element of flexibility. Expectations that cash balances are more likely to either increase or decrease over a given period can be incorporated into the calculation of the optimal values for the decision variables. Thus, if a business is subject to seasonal trends, the optimal control limits can be adjusted for each season by using different values for p and q, the respective probabilities that cash increase and decrease.

2.1.9 Receivable Management

Credit management involves the following decision areas: (i)Analyzing credit risk (ii)Setting standards for accepting or rejecting the credit risk (iii) Specifying credit terms (iv)Deciding how to finance accounts receivable - the credit extended (v) Determining who bears the credit risk (vi) Establishing credit collection policies and practices and (vii)Avoiding sub optimization by individual departments (Weston &Copland, 1992).

A firm's investment in accounts receivable depends upon the volume of credit sales and the collection period. For example, if a firm's credit sales are Rs.30 lakh per day and customer's, on an average, take 45 days to make payment then the firm's average investment in accounts receivables is:

Daily credit sales X Average Collection Period

Rs 30 Lakh X 45 = Rs.1, 350 Lakh.

Optimum Credit Policy: A Cost Benefit Analysis

The goal of the firm's credit policy is to maximize the value of the firm. (Myres, 2003) To achieve this goal, the evaluation in investment in accounts receivable should involve the following four steps.

- Estimation of incremental operating profit.
- Estimation of incremental investment in accounts receivable.
- Estimation of incremental rate of return of investment.
- Comparison of the incremental rate of return with the required rate of return.

Collection Policy

The success or failure of a business depends primarily on the demand for its products-as a rule higher its sales, the larger its profits and the higher its stock price. Sales in turn, depend on a number of factors, some exogenous but others under the firm's control. The major controllable determinants of demand are sales prices, product quality, advertising, and the firm's credit policy (Brigham & Ehrhardt, 2004). A sound collection policy is needed because all customers do not pay the firm's bill in time. Some customers are sloe-payers while some are non payers. The collection efforts should therefore aim at accelerating collections from slow payers and reducing based debt losses. A collection policy should ensure prompt and regular collection. Prompt collection is needed for fast turnover of working capital, keeping collection costs, and bad debts within limits and maintaining collection efficiency (Pandey, 2004).

Hence, the firm should decide about offering cash discount for prompt payment. Cash discount is a cost to the firm for ensuring faster recovery of cash. For effective management of credit, the firm should lay down clear cut guidelines and procedures for granting credit to the individuals' customers and collecting individuals' accounts.

2.1.10. Inventory Management

Inventory, which may be classified as (1) Supplies, (2) Raw Materials, (3) Work in Progress and (4)Finished Goods are an essential part of virtually all business operations. A financial manger has a responsibility both for raising the capital needed to carry inventory and for the firm's overall profitability .The twin goals of inventory management are (1) to ensure that the inventories needed to sustain operations are available, but (2) to hold the costs of ordering and carrying inventories to the lowest possible level (Brigham & Ehrhardt,2004).

In managing inventories, the firm's objective should be in consonance with the shareholders, wealth maximization principle (Ross, 2003). To achieve this, the firm should determine the optimum level of inventory. To manage inventories efficiency, answers should be sought to the following two questions.

- How much should be ordered?
- When should it be ordered?

The first question, how much to order, relates to the problem of determining Economic Order Quantity (EOQ), and the second question, when to order, arises because of uncertainty and is a problem of determining their order point.

Economic Order Quantity

The optimum inventory size is commonly referred to as economic order quantity. It is that order size at which annual total costs of ordering and holding are the minimum.

Economic order quantity (EOQ) = √ (2OT/C*)

Where,

O=Fixed costs of placing and receiving an order

T=Annual sales in units

C*=Annual carrying costs expressed as a percentage of average inventory value

Inventory cost=total ordering cost +total carrying cost

Where,

Total ordering cost=TOC=O*N=O*T/Q

Total carrying cost=TCC=c*pp*A=C*pp*(Q/2)

Total inventory costs=TIC=TCC+TOC

=(C*PP*A) + (O*N)

=(C*PP) (Q/2) +O (T/Q)

Reorder Point

The Reorder Point is that inventory level at which an order should be placed to replenish the inventory. To determine the reorder point under certainty, we should know, lead time, average usage and economic order quantity.

Re-order Point=Lead time X Average usage

The demand for material may fluctuate from day to day or from week to week. The actual delivery time may be different from the normal lead time. If the actual usage increase or the delivery of inventory is delayed, the firm can face a problem of stock out which can prove to be costly for the firm. Therefore, in order to guard against the stock out, the firm may maintain a safety stock-some minimum or buffer inventory as cushion against expected increased usage and or delay in delivery time.

Hence, Re-order Point = Lead time X Average usage +Safety Stock

2.1.11 Analysis of Investment in inventory

The goal of the inventory policy should be maximization of the firm's value. The inventory policy will maximize the firm's value at a point at which marginal return from the investment in inventory equals the marginal cost of funds used to finance the investment in inventory (Gitman,2003). Like the investment in receivable, the investment in inventory should be analyzed involving the following four steps;

- Estimation of operating profit
- Estimation of investment in inventory
- Estimation of the rate of return on investment in inventory
- Comparison of the rate of return ion investment with the cost of funds.

The incremental analysis should be used to compute the values of operating profit, investment in inventory, and rate of return and cost of funds. A change in the inventory policy is desirable if the incremental rate of return exceeds the required rate of return.

Hence, Change in OP = Change CONT-Chg Cost

Where,

OP=operating profit, CONT=contribution, Cost=carrying cost

2.2 Reviews from Related Studies:

Smith conducted two studies in 1974 about working capital management and profitability-liquidity tradeoff. Those studies are reviewed as first and second studies. In the first study Smith described about the dual goals of profitability and liquidity of working capital management and he also suggested that the job of financial managers is to achieve a tradeoff between the two. He also gave a guideline to analyze the working capital position and one of the means of analyzing working capital management is financial simulation. His study indicated simulating future financial statements of a firm based on a set of simultaneous equations .He presented their model in which current assets (Eaj) and current liabilities (Elj) are directly related to firm sales(S').In other words, two out of a total system of 20 simultaneous equations that were used to forecast future balance sheets of the firm had been stated as follows:

Eaj=f1(S')

Elj=f2(S')

The above equation shows that the individual working capital accounts can be treated separately in a larger simulation system.

In the second study off Smith examined about the profitability versus liquidity tradeoffs in working capital management. His study suggested that parallel monthly forecasts of liquidity and profitability can be useful in evaluating tradeoff between these two goals. This study discussed individual and collective effects of accounts .This study highlighted individual and collective effects of accounts receivable, inventories, accounts payable, and other accruals on profitability and liquidity. The main findings of this study are as under:

1. A tightened inventory policy reduces necessary borrowings to a lower level than does faster collection of receivables or slower payments of current liabilities.

2. Profitability increases only slightly, a result only of lower interest expenses from lower levels of needed borrowing.

3. The necessary borrowing can be reduced if receivables, payables, and inventory policies are tightened.

The study of Kim, Rowland &Kim (1992) relates to working capital practices by Japanese Manufacturers in the US. The basic objectives behind this study were to find out objectives of working capital management by Japanese manufacturers in the US and to identify major options of short term funds. The authors mailed questionnaires to financial managers of 326 Japanese manufacturers in the United States, out of which only 94 (29%) companies completed the questionnaire.

The result of the analysis revealed that Japanese investors rated the most important objective of working capital management to be providing various current assets and short term credit necessary in support of anticipated sales. The respondents reported that the second most important objective of working capital management was to evaluate changes in current asset s as an investment decision and to minimize the cost of short term credit. Ranking third was providing a financial buffer to minimize the effect of wide fluctuation s in sales and production. The least important objective was to minimize investment in current assets.

In case of short term financing more than 70 percent of the time, Japanese investors use "outside financing" as major sources of short term financing. The respondents strongly preferred Japanese banks in the United States as a major source of short term financing.

The author concluded that the most important objective of working capital management by Japanese investors was to provide various current assets and short term credit necessary to support anticipated sales. No other objective rated close to this one.

Shin and Soenen (1998), studied about efficiency of working capital management and corporate profitability. The basic aim of this study was to investigate the relationship

between the firm's efficiency of working capital management and profitability. The sample firms were collected from the company's annual industrial and full coverage files with research files for the period 1975-1995.Financial and utilities companies have been deleted from the sample so was any firm year with missing values and /or redundant firm years, leaving initially with a total of 58,985 firm-year records.

This article highlighted about the weighted cash conversion cycle and the net trade cycle. The cash conversion cycle is an additive measure of the number of days funds are committed to inventories and receivables less the number of days payments are deferred to suppliers. The weights are calculated by dividing the amount of cash tied up in each component by the final value of thee component. Therefore it includes both the number of days and the amount of funds that is tied up at each stage of the cash cycle. The length of Net Trade Cycle (NTC) is used as a measure of working capital management efficiency. The NTC is also closely related to the issue of firm valuation and creation of shareholder value. The shorter the NTC, the higher the present value of the net cash flow generated by the assets and thus, the higher the value of the firm for its shareholders. Likewise, the shorter the NTC, the more efficient the firm is managing its working capital, the lower the need for external financing and higher its financial performance. So their anticipation was an inverses relationship between the firm's NTC and its profitability. To measure this relationship the researcher has used Correlation analysis between NTC, profitability, and risk adjusted returns. They were used Spearman rank correlation coefficient, Pearson correlation coefficient for this purpose. They were also considered regression of profitability on net trade cycle to examine whether a change in the firm's profitability is affected by changes in other variables.

In the conclusion of this study the author concluded that working capital management is only, part, but for many firms very important components of financial management. The NTC offers an easy and useful way to check the efficiency of managing the firm's working capital. It has been shown, using a large composted sample of 58985 firm years covering the period 1975-1994, had a strong negative association exists the firm's NTC and its profitability. Individual firm's stock returns are also significantly negatively correlated with the length of the firm's net trade cycle. Considering the negative relationship between debt and market value, the true benefits from constricting the NTC come from education in assets rather than by increases in payables. Reducing the firm's net trade cycle to a reasonable minimum is one way to create shareholder value and should be a major concern for financial executives.

One of the important study in the field of working capital management is conducted by Marc Deloof (2003) based on 1637 large Belgian firms about the effect of working capital management in their profitability. In this study Used descriptive, correlation and regression analysis model to test the relationship between the measures of profitability like no. of inventory conversion days. no. of receivable days, no. of days accounts payable and cash conversion cycle. At the conclusion in his analysis he got the result according to his priori hypothesis that a significant negative relation between gross operating income and the number of days accounts receivables, inventories and accounts payables of Belgian firms. So it suggests that managers can create value for their shareholders by reducing the number of days accounts receivable and inventories to a reasonable minimum and negative relation between accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills.

Ananda & Gupta (2001) also threw some light on the state of Working capital performance of corporate India. It was an empirical survey for the year 2000-2001.This study has been design to estimate three quantitative working capital benchmarks in order to help corporate India to manage its working capital more efficiently and thus create firm value. These three are-Days Operating Cycle, Days Working Capital and Cash Conversion. Hence the study is based on working capital performance of S&P500 companies of corporate India. The data has taken from the PROWESS database of the CMIE. The study included the 427 manufacturing companies in respect of whom the data for all three years,1998-99 to 2000-2001 was available.

For the performance ranking criteria they experimented with a number of parameter and different weights in the overall score to have better picture of working capital management performance of corporate India. Finally they selected CCE, DOC and DWC. Further to develop an overall score for ranking of working capital management performance ,it was found that the absolute value of DWC is more appropriate as an indicator of performance .The reason is that either-a very high negative DWC or a very high positive DWC are undesirable and does not indicate good performance of a firm.

The overall ranking has combined CCE, DOC and absolute value of DWC.CCE has been assigned a weight of 0.5. A weight of 0.25 each has been assigned to days of operating cycle and days of working capital measures. The weights assigned are according to the relative importance based on value judgments.

To convert CCE, DOC and DWC into one meaningful additive score, the author is normalized as thus:

Normalized CCE = [(Highest overall CCE-company CCE) / (Highest

Overall CCE-Lowest overall CCE)]

A company with a zero normalized CCE would be considered as a best performer.

Normalized DWC = [(Lowest Overall Absolute DWC-Company Absolute DWC) / (Lowest overall absolute DWC-Highest overall Absolute DWC)]

A company with a lower normalized DWC would be considered a better performer in this regard.

Normalized DOC= [(Lowest overall DOC-company DOC) / (Lowest overall DOC-Highest overall DOC)]

Lower normalized DOC represents better performance on this account.

Thus the overall rank for working capital performance is:

[(Highest overall CCE-company CCE) / (Highest overall CCE-Lowest overall CCE)] X 0.50+ [(Lowest overall DOC-Company DOC) / (Lowest overall DOC-Highest overall DOC)] X 0.25 + [(Lowest overall absolute DWC-Company absolute DWC) / (Lowest Overall Absolute DWC - Highest Overall Absolute DWC)] X 0.25.

If a company gets the Lowest Overall Score, then it would be ranked one for its overall working capital management performance. The researcher used two kinds of analysis in this study: Firm analysis and Industry analysis.

(I) Firm Analysis

Cash conversion efficiency; the average CCE ratio of overall corporate India for the period 2000-2001 is 14.39% as against three years(1998-99 to 2000-2001)average of 15.08%.

Days operating cycle: The corporate India maintained the operating cycle on an average for 244 days for the period 2000-2001 as against three year ((1998-99 to 2000-2001) average of 259 days.

Day's working capital: The working capital for the corporate India is found to be on an average of 174 days for the period 2000-2001as against three year ((1998-99 to 2000-2001) average of 188 days.

Overall ranking; the overall ranking has captured the dynamics of tradeoff between risk and return made by the CFOs of corporate India. The author found that Oswal Agro Mills Limited is in first rank and it is followed by Hindustan oil Exploration Co.Ltd, Reliance Industrial Infrastructure Limited (construction), Mahanagar Telephone Nigam Limited, and Ganesh Benzoplast Limited respectively.

(II) Industrial Analysis

The researcher found that the CCE ratio for the period is highest (62.01%) in case of coal and Lignite industry .The lowest CCE ratio for this period is 54.94%of readymade garments Industry. Looking at the Days Operating Cycle the highest DOC is of Computer hardware Industry (2541 days) and the lowest DO''C for the period is 45 days of Liquor Industry. The Days Working capital is highest in Computer hardware industry (2481 days) while it is lowest in Tourism industry (234 days).

In the conclusion of this study the author described that these estimate will be of immense benchmarking and performance evaluation of working capital management of companies. Further it is expected that this exercise would help the CFOs to manage their working capital better and thus, add to the firm's value.

2.2.1 Studies in Nepalese Context

There are very limited studies have been conducted in this area in the context of Nepal. The studies which are more effective and valuable in the view point of their findings and methodologies are reviewed under this section.

A study was conduct by Dr. K. Acharya, which is based on the finding conclusions of Ph. D. thesis. In the study he has focused his on the working capital management of tea development corporation (NTDC) for the eight year from 1975/76 to 1982/83 A.D. He has also made comparison of the findings with the other five selected PEs. In the study he found that the net working capital of NTDC was negative due to increase in current liabilities of the firm. Inventory held the largest portion and it was accumulating in the corporation. It had inventories up to 26 months sales. The size of aggregate receivable of NTDC has also been increasing and it exceeded by 16 times during the study period. Cash balance held by the corporation was insufficient to meet the routine work of the corpo9tation. At the same time, the liquidity position of NTDC was very poor since current assets were less then current liabilities. While comparing to other selected PEs, he found that the turnover of inventory, receivable and current assets in NTDC were below the average , there by reflecting high investment in each of them irrespective of he sales achieved. The break-even analysis revealed that the NTDC has been selling mostly below the break even and had incurred variable cost sometimes even higher than sales price. The suggestion he made on this article are proper planning of proper planning of production and sales, low credit policy, action against delinquent dealers, issue of shares and debenture and obtaining loans from individual and financial institutions.

Dr. K. Acharya wrote about the major problem like operational problem and organizational problems regarding the working capital management in the Nepalese PEs. The operational problems he found are listed below in the first part, which are increase of current liabilities then current assets, not allowing the current ratio 2:1 and slow turnover inventory. Similarly change in working capital in relation of fixed capital had very low impact over the profit abilities, thin transmutation of capital employed to sales, absent of apathetic management information system; break even analysis and ratio analysis funds flow analysis were either undone or ineffective for performance evaluation. Finally monitoring of the proper functioning of working capital management had never been considered a managerial job.

In the second part of he has listed the organizational problems in the PEs. In most of the PEs there is lack of regular internal and external audit systems as well as of financial result; similarly very few PEs have been able to present their capital requirement, functioning of financial department is not satisfactory and some PEs are even facing the under utilization of capacity.

Maximization the risk for loss to attain profit maximization objective depend on the effective utilization of funds, he has some advice in this purposes. The PEs should avoid the system of crisis decision which prevailed frequently in their operating, avoid fictitious holding of assets, the finance staff should be acquainted with the modern scientific tools used for the presentation and analysis of data and lastly, he has suggested optimizing it's level of investment in working capital is desired by the management of an enterprises because both of these situation will erode the efficiency of the concern.

Prof. Dr. R. S. Pradhan (1986) conducted a research about Management of working capital in Nepal. This is the first and pioneer study in this topic in Nepal.

The objectives in this study are:

- To conduct risk return analysis of working capital position
- To assess the financial liquidity position of the enterprises
- To determine the structure and utilization of working capital
- To estimate transactions demand functions of working capital and its various components.

The researcher has taken 9 public enterprises established before 1973 as samples and they were representative of large and small enterprises. Out of which 80% of the firms were under Rs. 10 million or more amount of net capital employed and rest 63% less than Rs.10 million. This percentage rate is on the basis of n/N. In this study total population

number taken by the researcher is 13 and the sample size was 9.The necessary data on working capital and other related variables were collected for the period 1973-1982.

The researcher employed ratio analysis, discriminate analysis, and econometrics models for the study. Ratio analysis included liquidity ratios, ratios used in assessing the structure of working capital, and ratios used in assessing working capital utilization. Discriminate analysis was also used to assess the combined effects of two or more ratios and to examine the short term liquidity position. Under this analysis, the researcher has taken two variables X1 and X2 to discriminate between two groups-good and poor risks. The two variables used are current ratio(X1) and Quick ratio(X2).

Hence, the equation in this analysis is: $Z = a X 1 + b X 2$

In this study, econometric models are used to describe the demand for working capital and its various components by Nepalese manufacturing companies.

The findings of this study were as under:

1. Most of the selected enterprises have been achieving a tradeoff between risk and return, thereby following neither an aggressive nor a conservative approach.
2. Almost all the selected enterprises have a positive net working capital and the negative working capital has been observed in a few cases
3. When quick assets are compared with current liabilities, it is revealed that the current assets are insufficient to cover current liabilities on many occasions. But if standard current ratio is to be taken as 2:1, most of the selected enterprises have current ratios of greater than two.
4. The Nepalese manufacturing public enterprises have, on an average, half of their total assets in the form of current assets.
5. On the basis of the study of turnover ratios there has been an improvement in utilization of current assets by the majority of manufacturing public enterprise of Nepal but this is not the case with net working capital utilization.
6. The pooled regression result of this study contradict unitary or more than unitary sales elasticity hypothesis of Friedman, Meltzeretc. with respect to the demand for cash by Nepalese enterprises. The presence of economies of scale in cash holdings is, to some extent consistent with the conclusion of Baumol, Tobin, Frazer, Nadiri, and Coates. The demand for inventory equations also showed economies of sale in inventory holdings thereby supporting the findings of Akhtar and Irvine. The economies of scale have been highest for inventories followed by cash and gross working capital, receivables, and net working capital.

7. The levels of working capital and its components an enterprise desires to hold depend not only on sales but on holding costs also.
8. The adjustment speed of actual to desired balances has been observed as highest for cash followed by inventories, net working capital, receivables, and gross working capital. However the speed of adjustment is much slower in these cases.
9. The inclusion of capacity utilization in the models does not seem to have contributed much too there demand functions of working capital and its various components.

Another study on demand for inventory was also carried out by Pradhan (1992) with the help of pooled cross section data of nine manufacturing public enterprises for 12 years from 1973 to 1984.The objectives behind this study was to investigate whether the transactions inventory balances vary proportionately or less in proportion to changes in the volume of sales. The another objective in this study was to investigate effect of capital costs on inventory holdings of the corporations and to present some empirical evidence showing the economics of scale in inventory holdings, significant effect of capital cost on inventory demand ,and the slow speed of adjustment between actual and desired levels of inventories.

The major findings in his study were the elasticity of sales with respect to inventory is less than unity which showed the evidence of economies of scale with respect to the demand for inventories by manufacturing public enterprises in Nepal. The interest rate coefficient was statistically significant with a theoretically correct sign. It means the fluctuation in inventory level depends in a statistically significant manner on fluctuations in financial carrying cost of inventories. The results of this study suggest strongly that the demand for inventories by corporations is a function of both sales as well as their holding costs. The important finding is that the adjustment speed of actual to desired levels of inventories has been observed to be much slower and the inclusion of capacity utilization variable in the model seems to have not contributed much to the demand function of inventories. Thus the author came to the conclusion that capacity utilization as significant variable affecting the demand for inventories is doubtful.

Pradhan (1986) also attempted to analyze about the demand for cash by corporation at which also nine selected firms were used and the study was from 1973 to 1982.The objectives in this study was also to investigate the effect of capital costs on the demand for cash and to present the effect of capacity utilization on the demand for cash and the speed with which actual level of cash is adjusted to the desired level.

The conclusion of this study was that a lot of controversies exist with respect to the presence of economies of scale in cash holding and the effect of capital costs on the

demand for cash. The author came to the conclusion on the basis of pooled regression that the presence of economies of scale with respect to the demand for cash. Another finding of this study was that the interest rate coefficient is statistically significant with a theoretically correct sign and the capacity utilization as a significant variable affecting the demand or cash is doubtful. The average elasticity of sales with respect to cash can be regarded as less than unity while the average elasticity of interest cost is more than unity.

Another study on cash management in public enterprises conducted by Dr. Manohar Krishna Shrestha concludes that cash turnover has been a neglected factor. In most of the public enterprises it is evident that lack of positive approach often put PEs to pely heavily on government support for meeting additional funds without making best utilization of existing cash balance. 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.

An empirical observation of twelve selected PEs have been conducted by Dr. Manohar Krishna Shrestha. In this article he has described the connectional ingredients concerning the working capital, such as connectional setting source of conceptional setting source of working capital. From the analysis he found that the liquidity position of selected PEs differ widely in view of differences us their nature of business. There were also above normal acid test ratio, while analyzing the turnover of those selected PEs showed wide deviation. Based on the sales value four out of the seven PEs had normal inventory, the other three had not been satisfactorily maintained and in some of them inventory had exceeded sales. The collection period relating to the selected PEs exhibited marked difference ranging from. During the analysis he observed some problems like of far sighted liquidity adjustment strategy in most of the PEs no guiding criteria to ascertain the satisfactory maintenance of acid test ratio and working capital needs. Large blocking of capital in inventory and low capacity utilization. All these were due to inefficient management of working capital in those capitals PEs.

Similarly study by prof. Manohar Krishna Shrestha on receivable management in selected PEs has found that the receivable turnover calculated varied from high test level of 25.7 times to the lowest .09 times and was less then favorable in selected companies and those revealing favorable turnover have still faced the problem of managing oaccount receivables. He indicated that they did not record a certain credit policy to improve collection that would have helped a lot in raising the receivable turnover. The average collection period recorded a variation from a minimum of 14 days to the maximum of 4027

days. In the same way, the schedule of PEs has uniform patterns and the outstanding receivable in the many instances were very old even exceeding 12 years of so forth. It was grouped under above three years old receivables. In the selected enterprises the ratio of receivable CA's varied from a maximum of 0.15 times of 1. he also found that most of the PEs have larger shares of receivable to CA's. in most of them extension of additional relaxed credit was a usual phenomenon and they did not have larger amount of receivables outstanding . They had not taken seriously the task to speed up the collection of long outstanding receivables by devising suitable credit monitoring policy. The study thus was concluded that determining the desired investment in account receivable was least considered in most of the PEs, which was supported by the account of receivable management in such PEs.

2.2.3 Review from Thesis

There is few number of studies have been made by students of MBS/MBS relating to working capital management in different Public and private enterprises in Nepal. This section, hence will review some of those dissertations.

Mr. Suroj Tandan, "**A study on working capital management of selected manufacturing companies listed in NEPSE**" Master Degree unpublished Thesis, TU 2005

Suraj Tandan has carried out a study on working capital management of selected manufacturing companies listed in NEPSE. He has taken five sample companies. He had taken five years data (2000-2004) for analysis. His main objectives of the study is to find out the working capital financing policy adopting by listed Nepalese manufacturing company. He had analyses the effect of working capital on profitability.

He conducted through basically secondary data. He had used ratio analysis and correlation analysis to analysis of secondary data. He has calculated several ratios that are related to different variables. 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 the study are as follows.

- Due to lack of target for assets holding in the long run and absent of sources of financing, most of the manufacturing companies financing situation is deteriorating.
- Most of the Nepalese manufacturing companies have deficit cash balance.

- Most of the Nepalese manufacturing companies have liquidity crises. So the manager of manufacturing company should take the following steps to deal with liquidity problem.
- Current assets turnover of some Nepalese manufacturing companies is very low and net working capital is negative which indicates the utilization of working capital and total assets during the study period is very low.
- Some of the Nepalese manufacturing companies are incurring losses due to the high operating cost of production.

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.

Dhurba Nath Yogi, "A **study on working capital management of Nepal Lever Ltd**" Master Degree Unpublished thesis (2000)

Dhurba Nath Yogi has carried out another study related in working capital management. He focused to analyze the liquidity position of working capital assets and utilization and profitability of Nepal lever.

Main objectives of this study were as follows:-

- To analyze the current assets policy of Nepal lever.
- To examine the relationship between liquidity and profitability of Nepal lever.

Major finding of this study were all components of current assets of Nepal lever are highly fluctuating during the study period (2051/2052-2055/2056). He used the ratio analysis and correlation and probable error as tools. Different companies of current liabilities are not related to each other. It means that Nepal Lever has not taken seriously about the sources of financing. Its current liabilities are greater then current assets in fiscal year 2051/2052, 2053/2054 and 2054/2055.It has used the long term financing policy. Nepal lever has negative net working capital in the first three years period. Current ratio of NL is less than 1 times than other. Finding of this study is NL takes high risk. But Co-efficient co-relation between various liquidity ratio and net profit margin in general is not significant. This implies that there is not trade off between liquidity and profitability. The major findings are:

- The liquidity position of the company is fluctuating year by year.
- The proportion of current assets is affected by the sales. In other words, the sales affected the management of current assets.

- ❖ The components of current assets and current liabilities are fluctuating in nature.
- ❖ The insignificant relationship between liquidity and profit margin implies that there is not trade of between liquidity and profitability.

Mr. Yogi also recommended that NL should fix the financing policy and the volume of sales should be increased and the proportion of CAs should be maintained according to its sales volume. The huge amount of inventory and receivable kept by NL should be reduced or the optimum level should be adjusted according to the sales and production. Therefore, management should be improving its marketing policy and should be integrated with credit policy.

CHAPTER THREE

RESEARCH METHODOLOGY

Research methodology is the systematic way of solving research problems. It facilitates the research work provides reliability and validity. It refers to the various sequential steps to be adopted by a researcher in the study problem with certain objects in view. It would be appropriate to mention that research projects are not susceptible to any one complete, inflexible sequence of step and the types of problem to be studied, which determines the particular steps to be taken.

This chapter has been divided into five sections. First section gives the brief account of research design, while second section describes population and selection of sample of the study. The nature and sources of data has been provided in section three and section four explains the method of analysis employed in interpretation of data. Section fifth deals with definition of the variables. Finally sixth section deals with the limitations of the study.

3.1 Research Design

Research design is the plan, structure, and strategy of investigation conceived so as to obtain answers to research questions and to control variance. The plan is the overall scheme or program of the research. It includes an outline of what the investigator will do from writing the hypothesis and their operational implications to the final analysis of data. The structure of the research is more specific. It is the outline, the scheme, the paradigm of the operation of the variables (Kerlinger: 986).

The research design asks, what approach to the problem should be taken?; what methods will be used?; What strategies will be more effective?; In this study Descriptive research design is used which includes the systematic collection and presentation of data to give a clear picture of a particular situation and it attempts to obtain a complete and accurate description of situation

3.2 Population and Sample Size

According to recent report from ministry of finance there are 38 manufacturing companies in the existence of the country. For this study all (38) manufacturing companies are considered as population and 6 Manufacturing Companies are selected for sampling using convenience sampling technique. Because of the specific nature of their activities, firms relating with service sectors and others like banking and finance, insurance etc are excluded in this study. The samples of company included in the study are listed below.

1. Shree Arun Vanaspati Udyog Ltd
2. Nepal Aoushadi Ltd.
3. Khadya Udyog Ltd.
4. Udayapur Cement Factory
5. Dairy Development Corporation

3.3 Nature and Sources of Data

The primary research question of this research is: What are the working capital practices of Nepalese manufacturing companies? To try to answer this question the survey instruments were used and for this purpose different types of questionnaires prepared and they distributed to the different persons into different organization who are holding different position. Total 55 Questionnaires has been distributed to the different persons into different organizations to collect response from them about the working capital management practices into their concern organizations. The respondents were from different enterprises considered for the purpose of this study. The objective behind primary questionnaire is to examine the views of Nepalese financial executives relating to working capital management practice in a firm. Therefore the respondents are from other than manufacturing sector also.

Secondary data are also used for the detail analysis of their practices and the effect of working capital management in the profitability of enterprises. The secondary data were collected from the office of the Auditor general, HMG/N (Annual Reports), Nepal Stock Exchange Centre (Financial Statements of Listed Companies), Ministry of Finance (Performance report of government corporations and Economic Survey)

3.4 Method of Analysis

The Belt and Smith (1991) organized this type of survey instruments into three parts (I) working capital policy (II) managing overall working capital and (III) managing individual components of working capital. In this study also same kind of practices are followed for the presentation and analysis of primary questionnaire's responses. The following analyses are made in this study.

3.4.1 Descriptive Analysis

Under the primary data analysis the percentage, mean, standard deviation, maximum and minimum results in each variable are described into clear way for the detail analysis of result about its significant.

3.4.2 Empirical Analysis

In this study two kinds of empirical analysis were make to reach at conclusion.

Correlation Analysis:

In this part Pearson Correlation Coefficient for all variables are considered. In this analysis researcher tries to find out the relationship between operating incomes on the one hand and the measures of working capital management (Number of days accounts receivable, inventories and accounts payable and cash conversion cycle, Sales, growth, debt and current ratio) on the other hand. The priori hypothesis in this analysis is that there is relationship between operating income on the one hand and the measures of WCM in Nepalese manufacturing enterprises.

Regression Analysis

The word regression means stepping back or returning to the average value. If the regression curve is a straight line, we say that there is linear regression between the variables .In case of linear regression the values of the dependent variable increases by a constant absolute amount for a unit change in the value of the independent variable. (Gupta, 1992).In this part researcher will use Ordinary Least Square (OLS) regression analysis to investigate the impact of WCM on corporate profitability. For this analysis dependent variables are Corporate operating income and independent variables are: sales,

growth, debt, No. of day's accounts receivable, No. of day's inventories, No. of day's accounts payables and Cash Conversion Cycle.

In this analysis regression are estimated into Different steps. In first step of regression it is based on the model used by Marc Deloof in Belgian firms (2003) at which regression (1) will be estimated with fixed variables including sales, growth, debt and No. of Days AR, No. of Days inventories, No. of days Accounts payable and Cash conversion cycle.

Hence $Y= a+\beta1X1+ \beta2X2+ \beta3X3+ \beta4X4+ \beta5 X5+ \beta6 X7 + Ei$

Where, Y=Gross Operating Income

X=ln (Sales) X2=Sales Growth X3=Debt Ratio

X4=No. of days AR X5=No. Of days BP X6=No. Of days Inventories

X7=CCC

In second step or in regression (2) it includes Current ratio, Debt, growth and cash conversion cycle to determine or measure the effect or relationship between working capital measures and profitability based on that prior hypothesis which is Based on the model which is already tested by Han & Soenen (1998) in large American firms. Hence including all variables the regression model is as under.

$Y=a+\beta1X1+ \beta2X2+ \beta3X3+ \beta4X4+ + e$

Where, Y=Net Operating Income

X1=CCC X2= current ratio X3=Debt Ratio

X4= Growth Ei=Error Term.

To reach at the conclusion by testing the priori hypothesis that working capital management affects in the profitability in the Nepalese firms different variables has been added or dropped out as per necessity in this model and final conclusion has been drawn.

Definitions of Variables Used Under Study

Profit is the dependent variable and sales, growth, debt, Current ratio, no. of days accounts receivables, no. of day's inventory, no. of days accounts payables and cash conversion cycle are independent variables For measuring relationship between profitability and working capital management. The variables can be discussed in brief as follows:

Profit

The major variable in this study is profit that is the dependent variable. Deloof (2003)conducted this type of research in Belgian firms and he used profit in terms of gross operating income, which is defined as sales minus cash cost of goods sold, and is divided by total assets minus financial assets. Shin and Soenen (1998, page No 33) also conducted such type of study about the efficiency of working capital management and corporate profitability using profit into two ways .one is operating income plus depreciation divided by total assets and in another ways operating income plus depreciation divided sales. In this study profitability will be measured in terms of operating income divided by assets i.e. return on assets.

Net income=sales-Total expenditures of the firm

Return on assets (ROA) =Operating Profit/total assets X 100

The basic assumption in this study is that the profitability of an organization depends upon working capital management.

Sales

Sales mean total income from the sale of the product from the companies. Sales are expressed in amount or rupees. In this research log will be used to determine the coefficient of this variable in regression analysis. The relationship between a firm's profit and its sales is always positive.

Debt Ratio

It indicates the relationship between total debt and total assets. The priori hypothesis in this variable is that the leverage will increase the profitability of the firm.Debt ratio=Total Debt/Total Assets × 100

Sales Growth

Sales growth is (this year's sales-previous year's sales)/previous year's sales. Higher the sales growth, higher would be the profitability of firm.

Current Ratio

The ratio which depicts the short term liquidity position of the enterprise is known as current ratio. Current ratio is simply the relationship between current assets and current liabilities. The current ratio of 2:1 is generally considered an acceptable standard though it is a rule of thumb only.

Hence, CR=CA/CL

The assumption is that there is negative relationship between liquidity and profitability of the firm. In other words liquidity and profitability are inversely related.

No. of Day's Accounts Receivable

One of the important components of working capital management is no. of day's accounts s receivables.

No. of Days Accounts Receivable=Accounts Receivable X 365/Sales

The priori hypothesis in this variable is that there is negative relationship between profitability and no. of days accounts receivables.

No. of Days Inventories:

It is the average time required to convert materials into finished goods and then to sale those goods. It is calculated by inventories*365/cost of sales. The assumption of this variable is that there is negative relationship between operating income and no. of day's inventories.

Number of Days Accounts Payable

Another component of working capital is accounts payable. Delaying payments to suppliers allows a firm to assess the quality of the products bought, and it can be an inexpensive and flexible source of financing for the firm. On the other hand, late payment of invoices can be very costly if the firm is offered a discount for early payment. It is the average length of time between the purchase of materials and labor and the payment of cash for them. In simple sense higher the No. of day's accounts payable will increase in the profitability of the firm. It is based on the assumption that less profitable firms wait longer to pay their bills. But incase of discount offered by suppliers there would be negative relationship between profit and the no. of days accounts payable. It can be computed as

No. of days accounts payable=Accounts Payable×365/Purchases.

Cash Conversion Cycle

A popular measure of WCM is the cash conversion cycle, i.e. the time lag between the expenditure for the purchase of raw materials and the collection of sales of finished goods. Cash conversion cycle equals the length of time between the firm's actual cash expenditures and its own cash receipts. Thus it equals the average length of time for which amount is tied upon current assets. The longer the time lags, the larger the investment in

working capital and a longer cash conversion cycle might increase profitability because it leads to higher sales. However; corporate profitability might also decrease with the cash conversion cycle, if the costs of higher investment in working capital rise faster than benefits of holding more inventories and/or granting more trade credit to customers. Cash conversion cycle can be computed as:

CCC=No. of days accounts receivables + No. of days inventories - No. of days account payables.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

This chapter includes presentation and analysis of collected data properly to fulfill the objectives of the study, which have been earlier mentioned in the first chapter. The chapter has been divided into three sections. First section is concerned with analyzing the Primary data and results of primary data analysis have been presented in section two. Section three gives the concluding remarks on overall data analysis results.

4.1 Analysis of Primary Data

The primary research question in this study is related with the practice of working capital management in Nepalese firms. To try and answer this question, total 25 questions were asked to the 55 respondents into different public as well as private organizations .The question is organized into three parts.

A. Working capital policy

B. Managing overall working capital

C. Managing individual components of working capital

Some of the questions were asked respondents to select one answer among several possibilities, while other questions asked to rank alternatives in terms of their relative importance to their firm. For many questions, respondents were given opportunities to specify other alternatives in the space provided. Respondents were also encouraged to write other relevant comments in the margin of the survey instrument. This section is also divided into different sub sections.

Profile of Respondents

The survey produced total 43 usable responses, a 78.18% response rate. As may be seen in exhibit 7, the majority of the respondent's were chief financial officer and it was followed by manager, assistant manager and chief accountant respectively.

Table No. 4.1

SN	Respondent title	Number of Respondents	Percentage
1	Chief financial officer/MD	22	51
2	Manager	8	19
3	Assistant manager/Finance officer	6	14
4.	Chief Accountant	7	16

Source: Field Survey

Industry Representation

Total 55 questionnaires were distributed to the financial executives into different public as well as private organizations and they are under different business line. table 4.8 represents the industry lines they are from manufacturing, trading, others and finance industries.

Table No.4.2

SN	Industry	No. of Respondents	Percent
1	Trading	16	37
2	Manufacturing	14	33
3	Others	8	19
4	Finance	5	11

Source: Field Survey

Out of total respondents 14 were from public corporations and rest from private organizations. In this table it shows that majority of the respondents from trading sector and it is followed by manufacturing. In finance sector total 11 questions was distributed but response from only 5 organizations.

Working Capital Policy

The fist question relating with this study was about the working capital policy adopted by the organization. For this question formal, informal and no policy options were given. Table 4.3 reflects that the majority of proportion of Nepalese respondents indicating their firms had formal working capital policy

Table No.4.3

Policy	Total Respondents	No.	Percent
Formal	43	24	56
informal	43	12	28
No Policy	43	7	16

Source: Field Survey

Types of Working Capital Management

Table 4.4

Type	No.	Percentage	Rank
Risk avoiding	8	19	2
Risk Accepting	4	9	4
Situational	25	58	1
Changes Over Time	6	14	3

Source: Field Survey

The respondents were classified into four parts with respect to working capital policy. They were risk avoiding, Risk accepting, Situational and changes over time. Table 4.4 reflects that majority of the firms are adopting situational working capital policy which is 58 percent .The other (19 percent)respondents considered that the major policy is risk avoiding while 14 percent accept the changes over time criteria and only 9 were found as risk accepting working capital policy.

Objectives of Working Capital Management

While asking respondents to indicate the degree of importance to each of four objectives, the data revealed that most important objective of working capital management to be providing various current assets and short term credit necessary in support of anticipated sales. The respondents reported that the second most important objective of working capital management is to minimize the cost of short term credit. Ranking third was provided to minimize investment in current assets. Hence the least priority is given for to provide a financing buffer.

Table No.4.5

Rank	Objectives	Mean rating	Ranking
1	To support anticipated sales	3.59	1
2	To minimize the cost of short term credit	3.0	2
3	To minimize investment in current Assets	2.31	3
4	To Provide a financing Buffer	2.09	4

Source: Field Survey

Importance of Working Capital Management Actions

The importance of various working capital actions is ranked in table 4.6.The most important actions for firms is speeding collections of receivables(49%) followed by minimizing

investment in inventories (26%).The least priority has been given for minimizing bank balance and slowing payment of payables got third ranking.

Table No. 4.6

Working capital actions	No. of responses	percent
Speeding collections of receivables	21	49
Minimizing investment in inventory	11	26
Slowing payments of payables	6	14
Minimizing bank balance	5	11

Source: Field Survey

Credit Customers' Behaviors

To determine the measures relating with the monitoring of the behaviors of credit customers a question was given to the respondents with ranking into different four options. Table 4.7 reveals that the most important measure for the measure of credit customers behavior is collection period and the least emphasize was given for others.

Table No.4.7

Measures	No. responses	1	2	3	4	Mean	Rank
Collection period	39	56%	18%	15%	11%	1.79	1
Accounts receivable turnover	16	44	25	19	12	2.0	2
Aging schedule	15	27	13	33	27	2.44	3
Others	4	-	-	-	100	4.0	4

Source: Field Survey

Reducing the Negative Float on Payments.

In this study some questions were related with cash management. One question was asked to the respondents about the techniques used to reduce negative float incase of cash management. Table 4.7 denotes that verbal or oral request is most popular practice in this aspect and it is followed by cash discount in some organizations. There is limited use of penalty system incase of delay in cash collections.

Table No.4.8

Measures	No. Responses	1	2	3	4	Mean
Verbal/Written request	37	22	8	4	3	1.68
Cash Discount	29	12	8	4	5	2.06
Penalties	16	2	7	5	3	2.69
Others	9	1	2	3	3	2.89

Source: Field Survey

Practice of Payments.

Looking at the side of cash payment practice in Nepal it is to be found that in table 4.15, 26 out of 40 respondents most of the payments of Nepalese firms by cheque (65%) and after that cash payment practice are also in significant level.

Table No.4.9

Measures	No.	Percent
Cheque	26	65%
Cash	11	28%
Others	3	7%

Source: Field Survey

Cash Forecasting Practices

To determine about the cash forecasting practice in Nepalese firm five alternatives were given to the respondents; monthly, quarterly, semi annually, annually and if any. In this question total 34 responses were received and they were ranked monthly practice in first and it was followed by quarterly practice .The third ranking was given to the annually practice and very limited were ranked to the semi annually and weekly also.

Table No.4.10

Periods	No. of Respondents	Percent
Monthly	14	41
Quarterly	9	26
Annually	5	15
Semi Annually	3	9
Weekly	2	6
Daily	1	3

Source: Field Survey

Position of cash balance

In case of cash balance holding system in Nepalese firms table 4.17 deals that out of total 39 respondents 41%maintained surplus cash balance while 38% are under deficit cash balance and only 21 percent maintained balance under it.

Table No.4.11

Position	No. of Responses	Percent
Surplus	16	41
Deficit	15	38
Balance	8	21

Source: Field Survey

Criteria used in Changing Inventory Policy

In inventory management, it is found that the most important criteria used in the changes in inventory management policies was effect on inventory cost .The second most important criteria used by the firms are effect on return on investment and it was followed by effect on profit. The least priority is given for effect on level of inventory.

Table No.4.12

Criteria	No. of Responses	1	2	3	4	Average Ranking
Effect on inventory cost	27	9	8	9	1	2.07
effect on return on investment	27	9	5	7	6	2.37
Effect on profit	22	3	9	5	5	2.54
Effect on level of inventory	24	5	5	3	11	2.83

Source: Field Survey

Use of Bank Accounts

One question was also given to the respondents about the use of banking services from one, two or more than two banks. The response rate was very high in more than two banks and it was followed by two banks while use of only one bank has least priority.

Table No.4.13

Numbers	38	Percent
More than two	20	53
Two	11	29
One	7	18

Source: Field Survey

Review of Overall Working Capital Policy

About the review of working capital policy in Nepalese firms, it is reflected in table 2o that 37% firms practice is to review quarterly and 28% on yearly basis. Monthly review of working capital policy found to be 24 percent of firms and least for monthly basis.

Table No.4.14

Period	Percentage	Ranking
Monthly	24	3
Quarterly	37	1
Monthly	11	4
Yearly	28	2

Source: Field Survey

Economic Order Quantity

In the aspect of inventory management techniques used by the companies most of them found that their purchasing and ordering system is adhoc and no EOQ is in practice. Only four firms dealt that they have certain technique like EOQ but that is not exactly with EOQ.

Lead Time

About lead time also one question was asked to the respondents. Only 13 respondents were given their response under it. Out of them seven respondents opined that their general lead time is 90 days. Two opined for seven days and other have their separate opinions.

Days Sales Outstanding

With respect to days sales outstanding in the firm no systematic and uniformity found. only nine respondents told that they have that system ,out of which two mentioned that their DSO is 90 days and another two responses that for one month. There is variation in the DSO after that like 45 days, six months, eight days etc. So it is difficult to point out a particular DSO in Nepalese organizations.

4.2 Analysis of Secondary Data

Most firms have a large amount of cash invested in working capital, as well as substantial amounts of short term payables as a source of financing. Efficient working capital management is an integral component of the overall corporate strategy to create shareholders value. Working capital is the result of the time lag between the expenditures for the purchase of raw materials and the collection for the sale of the finished product. The continuing flow of cash from suppliers to inventory to accounts receivable and back into

cash is usually referred to as the cash conversion cycle. It can be expected that the way in which working capital is managed will have a significant impact on the profitability of firms. Accordingly, for many firms working capital management is a very important component of their financial management.

Firms may have an optimal level of working capital that maximizes their value. On one hand, large inventory and a generous trade credit policy may lead to higher sales. Larger inventory reduces the risk of a stock out. Trade credit may stimulate sales because it allows customers to assess product quality before paying .Because suppliers may have significant cost advantages over financial institutions providing credit to their customers, it can also be an inexpensive source of credit for customers. The flip side of granting trade credit and keeping inventories is that money is locked up in working capital.

Another important component of working capital is accounts payable. Delaying payments to suppliers allows a firm to assess the quality of the products bought, and can be an inexpensive and flexible source of financing for the firm. On the other hand .late payment of invoices can be very costly if the firm is offered a discount for early payment.

A popular measure of WCM is the cash conversion cycle, i.e. the time lag between the expenditure for the purchase of raw materials and the collection of sales of finished goods. The longer the time lags the larger the investment of working capital. A longer cash conversion cycle might increase profitability because it leads to higher sales. However, corporate profitability might also decrease with the cash conversion cycle, if the costs of higher investment in working capital rise faster than benefits of holdings more inventories and or granting more trade credit to the customers.

This study empirically investigates the relation between WCM and corporate profitability for sample of 5 manufacturing public enterprises in Nepal for the 2002 to 2006.Number of days accounts receivable, inventories and accounts payable are used as measures of trade credit and inventory policies. The cash conversion cycle is used as a comprehensive measure of WCM.

Profitability is measured by gross operating income, which is defined as sales minus cost of goods sold, and it is divided by sales to determine gross margin. In most of the firm net profit is in negative form due to more indirect expenditures in Nepalese firms which can not provide significant results from the study. So, gross margin is used to measure the profitability of the firms.

Number of days accounts receivable is calculated as [accounts receivable*365]/sales. Number of days inventory is [inventories X 365]/cost of goods sold. Number of days accounts payable is [accounts payable X 365]/ Purchases.

The cash conversion cycle is used as a comprehensive measure of WCM. The cash conversion cycle is simply [No. of day's accounts receivable + No. of day's inventory – No. of day's accounts payable]. In addition sales (the natural logarithm of sales), sales growth [(this years sales - previous years sales)/previous years sales], the debt ratio (total debt/total assets) are included as control variable in the regression.

4.2.1 Correlation Analysis of selected manufacturing company

At first, we can analysis the Karl Pearson correlation coefficient considering all variables of selected manufacturing companies. It tells us about the relation between different variable separately. So we can analysis the relationship between profitability and other components which measure the performance of working capital management of the company. We can show the results as follows.

1. Correlation Coefficient Analysis of Shree Arun Vanaspati Uduog Ltd.

Table No. 4.15

	Gross Margin	Current Ratio	Debt Ratio	No. Of Day's AR	No. Of Day's BP	No. Of Day's Inventory	CCC	Growth
Gross Margin	1	0.3867	-0.4324	-0.9611	-0.9613	-0.6881	-0.8263	-0.0856
Current Ratio	0.3867	1	-0.114	-0.486	-0.446	-0.386	-0.455	-0.192
Debt Ratio	-0.4324	-0.114	1	0.629	0.433	-0.291	-0.068	-0.572
No. Of Day's AR	-0.9611	-0.486	0.629	1	0.9472	0.5108	0.6910	-0.1312
No. Of Day's BP	-0.9613	-0.446	0.433	0.9472	1	0.576	0.720	-0.156
No. Of Day's Inventory	-0.6881	-0.386	-0.291	0.5108	0.576	1	0.974	0.768
CCC	-0.8263	-0.455	-0.068	0.6910	0.720	0.974	1	0.657
Growth	-0.0856	-0.192	-0.572	-0.1312	-0.156	0.768	0.657	1

The above table shows the Karl Person Correlation Coefficient for all variables consider of Shree Arun Vanaspati Udyog Ltd. In the above table shows that Several Variables are negatively correlated with gross margin. The relationship between profitability and liquidity (current ratio) is positive. It means we maintain high current ratio to make high profit. We found profit is negatively associated with debt ratio. It shows that it is in the opposite of our

prior hypothesis that leverage will increase the profitability of firms. There is negative relation between gross margin and the measures of working Capital management (Number of days Account receivable and No. of days Account receivable and No of days inventory), which is opposite to our prior hypothesis. The relationship between profitability and No of days Bills parable is also negative. It suggests that the Company increase corporate profitability by reducing the number of day's bills payable. A popular measure of Working capital management is the cash Conversion Cycle. According our Prior hypothesis is, a longer Cash Conversion Cycle might increase profitability because it leads to higher sales. But In above result we found significant negative relation between these two components, which is opposite according to our priori hypothesis. The relation between profit and sales growth rate is negative. It is opposite to our priori hypothesis. It shows that if the cost of higher investment in working capital rise faster than benefits of holdings of holdings more inventories and or granting more trade credit to the customer. The relationship between profit and sales growth rate is negatively correlated.

2. Correlation Coefficient Analysis of Nepal Aoushadi Ltd.

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Table No. 4.16

	Gross Margin	Current Ratio	Debt Ratio	No. Of Day's AR	No. Of Day's BP	No. Of Day's Inventory	CCC	Groth
Gross Margin	1							
Current Ratio	0.124	1						
Debt Ratio	-0.533	-0.5708	1					
No. Of Day's AR	-0.330	-0.8477	0.905	1				
No. Of Day's BP	-0.625	-0.5584	0.990	0.8920	1			
No. Of Day's Inventory	0.318	-0.8313	0.466	0.7638	0.4130	1		
CCC	0.737	0.4109	-0.958	-0.7858	-0.9796	-0.222	1	
Growth	0.870	-0.2281	-0.020	0.1640	-0.1567	0.715	0.2960	1

Table No. 4.2 shows the result about Karl Pearson Correlation of Various variable of the Nepal Aoushadi Ltd. The relationship between profitability and current ratio is positive. It means, If we increase liquidity position we can increase the profitability. We can found profit is negatively associated with debt ratio. There is negative relation between profitability and No of days Account receivable, No of days Inventory and No of days Bills payable also negatively correlated with gross margin. Generally, we expect negative relationship

between firm profit and cash conversion cycle but in this company there is significant positive relation between those two components. The relationship between profit and sales growth rate is positive.

3. Correlation Coefficient Analysis of Khadya Udyog Ltd

Table No. 4.17

	Gross Margin	Current Ratio	Debt Ratio	No. Of Day's AR	No. Of Day's BP	No. Of Day's Inventory	CCC	Groth
Gross Margin	1							
Current Ratio	-0.2254	1						
Debt Ratio	0.4804	-0.2295	1					
No. Of Day's AR	-0.0801	0.1979	-0.7082	1				
No. Of Day's BP	-0.0850	0.5714	0.1941	0.3201	1			
No. Of Day's Inventory	-0.0113	0.1280	-0.7938	0.9660	0.0851	1		
CCC	0.0573	-0.4112	-0.6528	0.3269	-0.7895	0.5441	1	
Groth	0.9376	-0.5942	0.7526	-0.2332	-0.3374	-0.1991	-0.0185	1

The table 4.3 presents Karl Pearson Correlation Coefficient of all the variable considered of Khadya Udyog Ltd. There is negative relation between grass margin and current ratio. But we found there is positive relation with debt ratio, there is negative relation with No. of days Account Receivable No of Days Bills Payable and No of days inventory. It suggest that managers can increase corporate profitability by increase corporate profitability by reducing the Number of days Account Receivable, No. of Days Bills Payable and No. of Days inventory. There is positive relation between cash conversion cycle and profitability of the firm. In or priori hypothesis we describe that sales growth increase the profitability of the firm. The relationship between profitability and sales growth is positively correlated which is positive according to our priori hypothesis.

4. Correlation Coefficient Analysis of Udayapur Cement Factory

Table No. 4.18

	Gross Margin	Current Ratio	Debt Ratio	No. Of Day's AR	No. Of Day's BP	No. Of Day's Inventory	CCC	Growth
Gross Margin	1							
Current Ratio	0.4935	1						
Debt Ratio	-0.0908	-0.3542	1					
No Of Day's AR	0.1323	0.0629	-0.8174	1				
No Of Day's BP	0.1279	-0.4823	0.7551	-0.7277	1			
No Of Day's Inventory	0.9836	0.5407	-0.0312	-0.0148	0.2089	1		
CCC	0.9692	0.5859	-0.3266	0.3288	-0.0962	0.9371	1	
Growth	-0.5395	-0.9795	0.4696	-0.2747	0.6292	-0.5518	-0.6621	1

Table 4.4 tells us about relation between different variables or it presents Karl Pearson Correlation Coefficient between various variable of udayapur cement factory. Relation between Current ratio and gross margin is positive. It means if the company increase current it can increase its operating profit. There is a positive relation between gross operating income on the one hand and the measures of working capital management (Number of days account receivable and number of days inventory) We found that there is positive relation between gross margin and cash conversion cycle. It suggests that managers can increase corporate profitability by increasing the No of days account receivable and inventory. Relation between gross margin and No of days bills payable also positive. There is negative relation of debt ratio with gross margin. It tells us that if management decrease the level of debt. It can be increase the profitability of the firm. There is negative relation between gross margin and growth main goal of public enterprises of service oriented so that these types of result we can found.

5. Correlation Coefficient Analysis of Dairy Development Corporation

Table No. 4.19

	Gross Margin	Current Ratio	Debt Ratio	No. Of Day's AR	No. Of Day's BP	No. Of Day's Inventory	CCC	Growth
Gross Margin	1							
Current Ratio	0.5970	1						
Debt Ratio	0.4483	0.1650	1					
No. Of Day's AR	-0.4168	-0.6580	-0.0733	1				
No. Of Day's BP	-0.7728	-0.7516	-0.2278	0.8975	1			
No. Of Day's Inventory	0.4254	-0.0419	0.2282	0.6304	0.2293	1		
CCC	0.9163	0.7530	0.3002	-0.7387	-0.9599	0.0525	1	
Growth	0.4490	0.9265	0.1108	-0.8838	-0.8412	-0.5651	0.7653	1

In the above table we can found correlation coefficients between various components of the Dairy Development Corporation. The relationship between gross margin and current ratio is positive. In general leverage will increase the profitability. In the same way there is positive relationship between profitability and Debt ratio. We found that gross margin is negatively correlated with No of days Account receivable and No of days Bills Payable. It suggests that the Company can increase its gross operating profit by reducing the No of days Account receivable and No. of days Bills Payable, but there is negative relation between gross margin and No of days inventory, which s opposite to our priori hypothesis cash conversion cycle is major components to measure the working capital management. Generally longer the cash conversion cycle might increase profitability because it leads to higher sales. In above table also there is significant positive relation between profitability and cash conversion cycle. We found profit is positively associated with sales growth, which also positive with our priori hypothesis.

4.2.2 Descriptive Analysis

This table presents Gross margin income is (sales-cost of sales)/Sales. NO .of days accounts receivable is (accounts receivable*365)/sales .No. of days inventories is (inventories*365)/cost of goods sold. No. of days accounts payable is (account s payable*365)/purchase. The cash conversion cycle is (No. of day's accounts receivable +No .of days' inventories-No. of day's accounts payable.)Sales are expresses in thousand of Nepalese currencies. Sales growth is (this year's sales-previous year's sales)/previous year's sales. Debt ratio

is total debt/total Assets. Current ratio is current assets/current liabilities.

Table No. 4.20

	Gross margin	Sales	Growth	CR	Debt	No. AR	No. BP	No. INV	CCC
Mean	0.1975	480844	.0609	1.5942	.5085	111.2853	286.9798	146.7332	1410.1766
Median	0.2022	378011	.0795	1.4360	.4768	67.5125	269.4342	77.6951	1073.0923
Std. Deviation	0.22084	476005	.08105	.94582	.14882	157.8209	178.7816	167.96743	1190.03791
Minimum	-0.15	71020	-.06	.65	.31	17.40	78.71	12.90	276.67
Maximum	0.51	1164388	.21	3.80	.74	552.70	574.97	547.70	3688.23

Table 4.7 presents descriptive statistics. Gross operating income is on average 19.75% of sales while the median is 20.22%.The average cash conversion cycle is very high in Nepalese manufacturing companies i.e. 1410 days (median is 1073 days). It means firms are unable to manage working capital in good way. Firms receive payment on sales after an average of 111 days (the median 68 days).It takes on average of 147 days (median 78 days) to sell inventories and firms wait on average 287 days (the median 269 days) to pay their purchases. The firm's current ratio is an average is 1.59 times. The mean sales growth rate is only 7%, while median sales growth rate is near about 8%.This figure reflects that the growth rate on sales is in weak position. The debt ratio in average is 51% while the median debt ratio is 48 %. The maximum rate of gross profit margin is 51% while the minimum rate is -15%.

4.2.3 Correlation Analysis (Analysis of Relationship between different Variables)

In this section we present Karl Pearson correlation coefficient for all variables considered of all selected enterprises

Table No. 4.21

	Gross margin	sales	Growth	CR	Debt	NO.AR	No. BP	NO.INV	CCC
Gross margin	1	-.057	.563(*)	.004	-.421	-.519	.126	-.192	.575(*)
sales	-.057	1	-.290	-.348	-.078	-.318	-.832(**)	-.496	-.141
Growth	.563(*)	-.290	1	.532	-.194	-.519	.259	.384	.043
CR	.004	-.348	.532	1	.086	-.052	.059	.736(**)	-.527
Debt	-.421	-.078	-.194	.086	1	.115	-.042	.126	-.289
No. AR	-.519	-.318	-.519	-.052	.115	1	.509	.332	-.290
No BP	.126	-.832(**)	.259	.059	-.042	.509	1	.459	.128
No. INV	-.192	-.496	.384	.736(**)	.126	.332	.459	1	-.610(*)
CCC	.575(*)	-.141	.043	-.527	-.289	-.290	.128	-.610(*)	1

* Correlation is significant at the 0.05 level (1-tailed).

** Correlation is significant at the 0.01 level (1-tailed).

This table presents Gross margin income is (sales-cost of sales)/Sales. NO .of days accounts receivable is (accounts receivable*365)/ sales. No. of days inventories is (inventories*365)/cost of goods sold. No. of days accounts payable is (accounts payable*365)/purchase. The cash conversion cycle is (No. of day's accounts receivable + No. of days' inventories-No. of day's accounts payable.)Sales are expresses in thousand of Nepalese currencies. Sales growth is (this year's sales-previous year's sales)/previous year's sales. Debt ratio is total debt/total Assets. Current ratio is current assets/current liabilities.

Table 4.21 presents Pearson correlation coefficients for all variables considered. There is a negative relation between gross operating income on the one hand and the measures of working capital management (Number of days account receivable and number of day's inventory). But we found there is positive relation between operating profit and number of accounts payable. It suggests that managers can increase corporate profitability by reducing the number of day's accounts receivable and inventories. Generally longer the number of days accounts payable helps to reduce the cash conversion cycle but here we can say that less profitable firms wait for longer to pay their bills. An alternative explanation for a positive relation between the number of days accounts payable and profitability could be that firms wait too long to pay their accounts payable due to their inability to pay at right time. Speeding up payments to suppliers might increase profitability because of receiving cash discount from supplier but Nepalese firms are unable to receive discount from prompt payments. Another important aspect in this table we found the negative correlation between firms' profitability and sales which is opposite to our priori hypothesis. It may be due to more increase in cost of goods sold than in the increasing proportion of sales. The relationship between profit and sales growth rate is positive according to our priori hypothesis that this growth rate will bring positive impact on profitability. Looking at another side of liquidity position of firms to increase the profitability of firms the liquidity should be reduced. It means there should be negative relationship between profitability and liquidity. But in Nepalese manufacturing concern to this study found positive relationship between the profitability and liquidity. The study found profit is negatively associated with debt ratio .It also shows that it is also in the opposite of our priori hypothesis that the leverage will increase the profitability of firms in Nepalese firms. Generally we expect negative relationship between firms profit and cash conversion cycle but in above result we found significant positive relation between these two components. Longer the time lag, the large the investment in working capital. A longer cash conversion cycle might increase profitability because it leads to higher sales. However; corporate profitability might also

decrease with the cash conversion cycle, if the costs of higher investments in working capital rise faster than benefits of holding more inventories and or granting more trade credit to customers.

4.2.4 Analysis of the Impact of WCM on Corporate Profitability

In this step regression analysis is used to investigate the impact of working capital measures on corporate profitability. Marc Deloof (2003) conducted this type of research to measure the effect of working capital management in the profitability of Belgian firms. His regression model was:

Gross operating profit = β_0+ β_1Ln (Sales) + β_2 Sales Growth + β_3 Financial Debt + β_4 Financial Assets + β_5Variability + β_6No. of Days Accounts Receivable + β_7No. of days Inventories +β_8No. of Days Accounts Payable+ β9Cash Conversion Cycle.

In this analysis he found that his model was fit according to his priori hypothesis. So in this study also first we tried to measure the relationship between profit and different variables as under.

The Determinants of Corporate Profitability for selected Enterprises

The sample consists of 5 manufacturing enterprises in Nepal for the period 2002-2006.The table shows a regression result of profitability level on sales, growth and other controlling variables. The fist columns shows independent variables and second column shows the results of regression analysis. The variable are as follows: Gross margin income is (sales-cost of sales)/Sales. NO .of days accounts receivable is (accounts receivable*365)/sales.No.of days inventories is (inventories*365)/cost of goods sold. No.of days accounts payable is (accounts payable*365)/purchase. The cash conversion cycle is (No. of day's accounts receivable+No.of days' inventories-No. of day's accounts payable.)Sales are expresses in thousand of Nepalese currencies. Sales growth is (this year's sales-previous year's sales)/previous year's sales. Debt ratio is total debt/total Assets.

Table No. 4.22

Variables	Coefficients	t value	Significance
(Constant)	-.689	-.367	.749
sales	.056	.477	.680
Growth	.802	.314	.784
Debt	-.215	-.331	.772
NO.AR	.000	-.311	.785
NO. BP	.001	.373	.745
NO.INV	.000	.173	.879
CCC	.000	.693	.560

R square=.698

Dependent Variable: Gross margin

This model shows that it is not significant in Nepalese manufacturing companies. No one variable is significant according to our priori hypothesis. The coefficient of sales, growth and number of bills payable is positive while it is negative in case of constant and debt. There is zero coefficient incase of number of days inventory, number of days accounts receivable and cash conversion cycle. It means these independent variables have no any effect in the profitability of the firm.

Hyun Han &Luc Soenen (1998) conducted same type of study in 58,985 Firms covering the time period of 1975-1994.The model used by them was as under:
Profitability= β_o+ β_1NTC + $\beta_2$current ratio+ β_3 Debt ratio + β_4Sales growth

In this analysis they found in all cases, a strong negative relationship between the length of the firm's net trade cycle and its profitability and shorter net trade cycles associated with higher risk adjusted stock returns. While applying same model in Nepalese context we found the following results.

The Determinants of Corporate Profitability for selected Enterprises

The sample consists of 5 manufacturing enterprises in Nepal for the period 2002-2006.The table shows a regression result of profitability level on, growth and other controlling variables. The fist columns shows independent variables and second column shows the results of regression analysis. The variable are as follows: Gross margin income is (sales-cost of sales)/Sales. The cash conversion cycle is (No. of day's accounts receivable +No. of days' inventories-No. of day's accounts payable.)Sales are expressed in thousand of Nepalese currencies. Sales growth is (this year's sales-previous year's sales)/previous year's sales. Debt ratio is total debt/total Assets. Current ratio is current assets/current liabilities

Table 4.23

Variables	Coefficients	t value	Significance
(Constant)	.103	.335	.751
CCC	.000	1.467	.202
CR	.008	.080	.939
Debt	-.265	-.633	.555
Growth	1.332	1.375	.228

R square=.650

Dependent Variable: Gross margin

In the above result also we found that model is insignificant and the role of cash conversion cycle is zero due to its zero beta coefficients. It shows positive relationship between current ratio, and sales growth while it is negative with debt ratio. But these entire coefficients are insignificant on the basis of probabilities or significant values.

In next step we developed on regression model to measure the relationship between gross operating profit and independent variables including sales, growth, current ratio, no. of day's inventories, and no. of accounts receivables, no. of day's bills payable and cash conversion cycle.

$$\text{Profit} = \beta_0 + \beta_1 \text{LnSales} + \beta_2 \text{Growth} + \beta_3 \text{Current} + \beta_4 \text{No. AR} + \beta_5 \text{No.BP} + \beta_6 \text{No.INV.} + \beta_7 \text{CCC}$$

The Determinants of Corporate Profitability for selected Enterprises

The sample consists of 5 manufacturing enterprises in Nepal for the period 2002-2006.The table shows a regression result of profitability level on sales, growth and other controlling variables. The fist columns shows independent variables and second column shows the results of regression analysis. The variable are as follows: Gross margin income is (sales-cost of sales)/Sales. NO .of days accounts receivable is (accounts receivable X 365)/sales. No. of days inventories is (inventories X 365)/cost of goods sold. No. of days accounts payable is (accounts payable X 365)/purchase. The cash conversion cycle is (No. of day's accounts receivable + No. of day's inventories - No. of day's accounts payable). Sales are expressed in thousand of Nepalese currencies. Sales growth is (this year's sales-previous year's sales)/previous year's sales.

Table No.4.24

Variables	Coefficients	t value	Significance
(Constant)	-6.150	-5.489	.032
Sales(Ln)	.370	5.486	.032
Growth	-4.888	-3.651	.068
CR	.549	5.107	.036
NO.AR	-.003	-4.468	.047
No. BP	.005	5.194	.035
NO. INV	.000	-1.140	.372
CCC	.000	4.861	.040

R Square=.977

Dependent Variable: Gross margin

In this result we found that except no. of days inventories all variables are significant at 10% significant level. It means our null hypothesis is rejected and alternate is accepted. In case of sales there is positive relationship between sales and profit but there is negative relationship between sales growth and profit. It is also found positive relationship with profit and current ratio and same situation happened incase of no. of days bills payable. But there is negative relationship between profit and no. of day's accounts receivable. This model also shows that there is no effect of no. of day's inventories and cash conversion cycle in the profitability of Nepalese manufacturing public enterprises. To correct this model again we developed another model adding debt ratio, and using log on cash conversion cycle and no. of day's inventories.

$$\text{Profitability} = \beta_0 + \beta_1 \text{Sales} + \beta_2 \text{Growth} + \beta_3 \text{Current Ratio} + \beta_4 \text{Debt Ratio} + \beta_5 \text{No.BR} + \beta_6 \text{No.INV (Ln)} + \beta_7 \text{No.AP} + \beta_8 \text{CCC (Ln)}$$

The Determinants of Corporate Profitability for selected Enterprises

The sample consists of 10 public manufacturing enterprises in Nepal for the period 1993-2004.The table shows a regression result of profitability level on sales, growth and other controlling variables. The fist columns shows independent variables and second column shows the results of regression analysis. The variable are as follows: Gross margin income is (sales-cost of sales)/Sales. NO .of days accounts receivable is (accounts receivable*365)/sales.No.of days inventories is (inventories*365)/cost of goods sold.No.of days accounts payable is (accounts payable*365)/purchase. The cash conversion cycle is (No. of day's accounts receivable+No.of days' inventories-No. of day's accounts payable.)Sales are expresses in thousand of Nepalese currencies. Sales growth is (this year's sales-previous year's sales)/previous year's sales. Debt ratio is total debt/total Assets. Sales, cash conversion cycle and no. of day's inventories are transformed into natural logarithms.

Table No.4.25

Variables	Coefficients	t Value	sig.
(Constant)	-12.343	-51.608	.012
Sales (Ln)	.444	70.264	.009
Growth	-6.314	-56.066	.011
CR	.556	67.912	.009
Debt	.499	24.504	.026
NO.AR	-.003	-66.297	.010
No. BP	.004	60.774	.010
CCC (Ln)	.607	36.041	.018
INV (Ln)	.278	20.443	.031

Dependent Variable: Gross margin

R square =1.00

Adjusted R Square = .999

Looking at this model we found that the model is significant at 5%. Sales are treated in natural log form. It shows that the impact of sales is according to our priori hypothesis that higher the sales and higher the amount of profit. It shows negative relationship between growth and profit which is not according to our priori hypothesis. Our next priori hypothesis is there should be negative relation between liquidity and profitability but here we found positive relation. It means Nepalese firms are not able to manage liquidity in effective way and the liquidity is not also maintaining according to industry standard. In case of leverage the priory hypothesis is that the leverage will increase in the profitability of firms. In this model we found positive relation between these two variables in significant way. The relationship between no. of account receivable and profitability should be negative and this condition is also found in this study. Likewise there should be negative relation between no. of days inventories and profitability but here we found positive relation between these components it means Nepalese firms are not able to convert their inventory into finished goods as well as in cash at right time. In the case of no. of bills payable the no. of days accounts payable will increase in the profitability of the business organization due to taking more opportunities by making delay in payments. It is also based on the assumption that less profitable firms wait longer to pay and they can not take discount and that situation their profitability will be negatively affected. Looking at the case of Nepalese firms it is found positive relation between these two components.

So this analysis can interpret that this happened due to their slow bill paying capacity and inability to take discount from their suppliers. Our priori hypothesis about cash conversion cycle is that the longer the time lag, the larger the investment in working capital. So, longer cash conversion cycle might reduce the profitability of the firm. In above model there is positive relationship between cash conversion cycle and profit of the firm. It shows longer cash conversion cycle might increase in the profitability of the firms. Hence we found the relationship between profit and cash conversion cycle is not according to our assumptions. This result came in this analysis due to longer conversion period of inventory as well as receivables into cash and slow bill paying trend of Nepalese firms. Reducing the firm's cash conversion to a reasonable minimum is one way to create shareholder value and should be a major concern for financial executives

4.3 Concluding Remarks

It can be expected that the way in which working capital is managed will have a significant impact on the profitability of the firms. This study is enable to find out the positive relation between gross operating income and no. of bills payable and no. of days inventory but there is negative relation with number of day's accounts receivable. It is true that managers can create value for their shareholders by reducing the number of days accounts receivable and inventories to a reasonable minimum and the negative relation between accounts payable and profitability is due to less profitable firms wait longer to pay their bills. In this study we found some inconsistencies in the results of regression coefficients.

On the basis of the overall analysis of primary questionnaire and their responses collected firm Nepalese business organization we came to the conclusion that most of the firms have their own formal working capital policy and most of them are adopting situational strategy while asking policies relating with this. The first aim of Nepalese enterprises behind working capital management is to increase in the anticipated sales and there after to minimize the cost of short term credit. They are using oral or verbal request to reduce the negative float in cash and discount system is not so effective. Most of the firms are using Cheque for payment to their suppliers as well as others. The cash forecasting of the more firm is in monthly basis and they generally maintain surplus cash balance in their firm. Their inventory policy and its changes depend upon the changes in inventory cost due to that new policy. The working capital reviews is in monthly basis and after those responses were for quarterly basis. There is minimum use of Economic order quantity and lead time in the case of purchasing inventory and no any fixed policy is found incase of days sales outstanding.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

In concluding chapter we have divided in the three sections. Firstly summarize the whole finding. Secondly concluded the obtained result of study and lastly some practical recommendation are suggested to solve the problems observed on the basis of findings.
The main objective of the study is to analyze the practice of working capital management in Nepalese manufacturing companies in the manufacturing sector. The study is focus on the evaluation of relationship between Profitability and working capital management in Nepalese enterprises. This study covers only five manufacturing companies of Nepal. They are Shree Arun Vanaspati Udyog Ltd, Nepal Aoushadhi Ltd. Khadya Udyog Ltd, Udayapur Cement Factory and Dairy Development Corporation. For the purpose of the study, the necessary data on working capital were collected for the period 2002-2006.The financial statements mainly the profit and loss accounts, and balance sheet published in the Annual reports of the Auditor general provided the data required for empirical analysis. The primary data were collected by distributing 55 questionnaires relating with working capital management practices at which 43 usable questionnaires were returned by the respondents in appropriate form.

This study used descriptive, correlation and regression analysis to examine the effect of working capital management in the profitability of the organizations. The major findings of the study are described in the following pages.

Most firms have a large amount of cash invested in working capital. It can therefore be expected that the way in which working capital is managed will have a significant impact on the profitability of the firms. Shin and Soenen (1998) found a strong negative relationship between the cash conversion cycle and corporate profitability for a large sample of listed American firms for the year 1975-1994. Deloof(2003) also found a significant negative relation between gross operating income and the number of days accounts receivable, inventories and accounts payable of Belgian firms. In this study it is to be found that the

positive relation between gross operating income and no. of bills payable and no. of days inventory but there is negative relation with number of day's accounts receivable.

It is true that managers can create value for their shareholders by reducing the number of days accounts receivable and inventories to a reasonable minimum and the negative relation between accounts payable and profitability is due to less profitable firms wait longer to pay their bills. In this study we found some inconsistencies in the results of regression coefficients.

5.2 Conclusion

This analysis is based on financial data obtained from AG office and from SEBON for the sample companies. Thus it possesses all the inherent limitations of financial data. Unavailability of required data in this short period the whole period of the study has restricted the size of the 6 companies. Therefore the limitations of the small sample are also very much prevalent in this study. It is also not unlikely that the multi co-linearity among independent variables might give rise to unexpected signs for estimated coefficients. In this study the R Square is very high i.e.1.00.So it may be due to multi co-linearity among independent variables. Hence this may also create some problems while handling such situation. Thus while using the findings of the study one should be careful and use the same judiciously by taking the various limitations into consideration.

On the basis of the overall analysis of primary questionnaire and their responses collected from Nepalese business organizations we came to the conclusion that most of the firms have their own formal working capital policy and most of them are adopting situational strategy while asking policies relating with this. The first aim of Nepalese enterprises behind working capital management is to increase in the anticipated sales and there after to minimize the cost of short term credit. Their first preference on working capital management action is speeding collection of receivables and second emphasis for minimum investment in inventory. To reduce the negative float in cash their first measure is oral or verbal request and discount system is not so effective. Most of the firms are using cheque to make payment to their suppliers as well as others. The cash forecasting of the more firm is in monthly basis and they generally maintain surplus cash balance in their firm. Their inventory policy and its changes depend upon the changes in inventory cost due to that new policy. While asking about their using trend of the banks, majority of the firms dealt. They are using more than two banks for their collection and payments. The working capital

reviews is in monthly basis and after those responses were for quarterly basis. There is minimum use of Economic order quantity and lead time in the case of purchasing inventory and also no any fixed policy is found incase of days sales outstanding.

5.3 Recommendations

This study with the helps of survey evidences has tried to gain some insight into the change in the approaches taken by Nepalese management. It is helped that the information presented will stimulate those involved in working capital management making to consider their present practices in light of knowledge of policies and techniques adopted by other firms.

Working capital management has been hailed as a prefect discipline. Unfortunately, the interpretation of the working capital management is often confused to solve the different financial problems into business houses. This study provides evidence of the importance of the effective working capital management. Therefore, managers and practitioners should consider enhancing working capital management and its practices since a firm those effective managers working capital will be mote successful. It means this study shows that working capital management as a practice could be the most inflective strategy in Nepalese industries.

The study has exposed a number of opportunities for further examination pertaining to organizational elements that influence the success of implementing working capital management as a whole. One of the central tenets of this study is that effective working capital management enables goods management to be extracted from different sectors. Some degree of caution is recommended to the readers in generalized the results of any sample based to a wider population firms, although the positive and encouraging responses were received. There is also an issue of response bias to be borne in mind.

The analysis in this study is based on financial data obtained from annual report, general and other offices as the sample companies. Thus, it possesses all the inherent limitations of financial data. Unavailability of required data in this short period of the study has however, restricted the size of the 20 companies. Therefore the limitations of the small sample as well as time series data are also very much prevalent here. It is also not unlikely that the multi co-linearity among independent variables might give rise to unexpected signs for estimated coefficients. So this may also create some problems while handling such situation. Under discriminate analysis only few samples have been taken and it shows 100 % original grouped correctly classified. So it cannot be generalized this for all industries

Thus while using the findings of the study one should be careful and use the same judicious by taking the various limitations into consideration.

With a better idea of what exists in the practice of working capital management in Nepalese industries, hopefully, there will be subsequent efforts to investigate working capital practices on a truly global scale. It is believed that such subsequent efforts are both feasible and potentially beneficial. Furthermore, an improved global perspective on what is happening in practice will be a useful input into important question of does practice differs from theory exposited in the latest f8hahc8ao management textbooks. Although not attempted in this study, subsequent comparison of theory and practice could help in developing better theories and practice could help in developing better theory of working capital management, lastly given the importance of working capital management to organizations. It is hoped that a stream of researches will emerge that provides father confirmation to the results reported in this study and identifies other consequences of effective working capital management.

Lastly, based on the findings of the study following recommendations are forwarded for the improvement of Nepalese manufacturing companies.

1 According to regression analysis, there is negative relationship between sales growth and profitability. It is very serious matter for Nepalese manufacturing companies. Open of causes for it is high operating cost of production. The management should give attention towards the minimization of administrative and operating expenses. The unskilled manpower overstaffing unsystematic purchase of raw material, unnecessary expenses, misuse of facilities, heavy expenses on overhead are the major causes for high operating cost.

2 A popular measure of working capital management is cash conversion cycle, i.e. the time lag between the expenditure for the purchase of raw material and collection of sales of finished. But from this analysis we cannot found prefect result. So the company must use the concept of working capital management. In this analysis some manufacturing companies borrow cheaper fund in this condition this situation will change. A longer cash conversion cycle might increase profitability.

3 In this analysis gross margin is negatively associated with debt ratio. It shows that, these manufacturing companies debt management condition is poor. If these companies perfectly manage the debt equity ration, they might increase the profitability and the operating condition of the company. Generally leverage will increase the profitability of the firm.

4 There are many ways to achieve effective management of cash in the manufacturing companies such as minimization of cost, better synchronization of cash flows, slowing disbursements and more frequent requisitioning of cash to branches etc. most of the Nepalese manufacturing companies have deficit cash balance. So, they should estimate the requirement of cash immediately. If the cash appears more than requirement, the company should invest such idle fund in marketable securities.

5. Most of the Nepalese manufacturing companies have liquidity crises. So the manager of manufacturing company should take the following steps to deal with liquidity problem.

- õ The slackness in the inventories can be controlled by co-ordination between schedule of raw materials requirements and production with consumer demand.
- õ Re examines and tightens up the credit and reduces the firm's level of account receivable.
- õ Increase short or long term debt or issue equity.
- õ Control overhead and increase awareness of the need for effective assets management.

6. Nepalese manufacturing companies should develop appropriate information system by preparing timely reports. This aids in determining the amount of working capital needs. They should recognize the value of management information system. Today many executives make decision based on adequate, accurate and timely information. However, the cost of acquiring information should be reasonable and whatever information's collected must enable the manufacturing companies to accomplish effective management of working capital.

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Appendix - I

Survey -Questionnaires

Respondent's Profile

Name of the Organization…….. Name of the Respondents. (Optional)……..

Age----……. Gender: Male/Female

Education (optional) ------ Designation……..

Experience (Years)…….. Date……..

Some instructions

1. You are asked to choose only one answer among the alternatives.
2. Use 1 to refer to the most important, 2 for the second most important and so forth.
3. Please do not assign ranks to alternatives that do not apply to your firm-Just leave the spaces blank.
4. Feel free to write helpful comments, where appropriate, in the margins.

Part 1.Working Capital Policy

1. Does your Firm have an overall policy for the management of its working capital?

(a) Formal policy (b) Informal Policy (c) No policy

2. Who sets the management policy for working capital for your one?

(a) Board of director (b) President/Managing Agent

(c) Vice president, (Finance)/General Manager (d) Financial Manager

(e) Other (Please Specify)

3. How often is the management policy for working capital (If there is one) reviewed?

(a) Monthly (b) Quarterly (c) Semi-annually (d) Annually

4. How would you describe your policy (if there is one) for the management of working capital?

(a) Risk avoiding (b) Risk Accepting (c) Situational (d) Changes over time

5. Please rate the followings objectives of your working capital management on a scale from 1 (least important) to 4 (most important).

To support anticipated sales	1	2	3	4
To minimize investment in current assets	1	2	3	4
To minimize the cost of short term credit	1	2	3	4
To provide a financial buffer	1	2	3	4

Part II. Managing working capital overall

6. Please indicate who has the primary responsibilities for managing the following components of your firm's working capital?

	President	V.P. Finance	Financial Manager		others (Specify)
(a) Cash	------	----------	---------		----------
(b) Marketable securities	------	----------	----------	----------	----------
(c) Account receivables	---------	---------	----------	---------	---------
(d) Inventory	…….	……..	……	…….	.....
(e) Accounts Payable	……	…….	……..	……	……..
(f) Short term loans	……..	…….	……..	……..	…….
(g) Other accruals	……..	…….. .	……	……	…….

7. In monitoring the working capital of your firm over time, which of the following measures do you find useful?

(a) Current ratio (b) Working capital as a percentage of total assets

(c) Working capital turnover (d) other (please specify)

8. What are the most important working capital actions for your firms?

(a) Speeding collections of receivables (b) Minimizing investment in inventory

(c) Minimizing bank balance (D) Slowing payments of payables

Part III. Managing working capital components

9. With respect to the management of cash, which of the following techniques do you utilize to reduce the negative float (i.e., value of the length of time until your customers' payments are received)?

Rank in order of importance. Rank

(a) Verbal or written request -----

(b) Cash discounts -----

(c) Penalties/charges …..

(d) Other (please specify) …….

10. What characteristics of marketable securities are important to you in your planning?

(a) Marketability -------

(b) Stability of market price -------

(c) Yield ---------

(d) Maturity --- -----

11. In monitoring the payment behaviors of your credit customers, which of the following measures do you find most useful?

(a)Account receivable turnover -----

(b) Collection period -----

(c) Aging Schedule ------

(d) Other (specify) ------

13. With respect to managing inventory, how do you decide on the appropriate amounts to replenish your ware houses or other inventory storage points?

(a) Adhoc Decisions (b) Industry guidelines

(c) Cost balancing models (d) computerized inventory control system

14. What criteria do you utilize in evaluating proposed changes in inventory policy of your firm?

Rank

(a) Effect on level of inventory -----

(b) Effect on inventory costs -----

(C) Effect on firm profit ------

(d) Effect on return of investment ------

15. What is your practice with respect to cash discount offered by your suppliers?

(a) Always take the discount by paying on the discount time (b) Sometimes take the discount

(c) Pay later than discount date, but still take the discount (d) never take the discount

16. With respect to managing Short term loans from commercial banks, what is your primary use for those funds?

(a) Regular and constant part of total firm financing (b) Cyclical part of total firm financing

(c) Seasonal part of total firm financing (d) Non-spontaneous need as it arise

17. To what extent is collateral a part of your short term loans?

(a) Loans never require collateral (b) Loans occasionally requires collateral

(c) Loans always require collateral (d) any other

18. What is the common practice in your organization while making payment?

(a) Cash payment (b) Cheque payment (c) Others

19. How many banks accounts are in the practice of your organization?

(a) One (b) Two (C) More

20. What is your cash forecasting practice?

(a) M0nthly (b) Quarterly (c) Semi annually (d) Annually

21. What are you facing in your organization about cash balance?

(a) Surplus (b) Deficit (c) Balance

22. What is the practice of your most of sales?

(a) More Cash (b) More Credit (c) Equal

23. EOQ is in common practice of your organization.

(a) Yes (b) No

24. What is the Lead time of inventory in your organization?

…….

25. What is the Days Sales Outstanding in your organization?

……

Thanks

Appendix – 1

Total Assets of Selected Nepalese Manufacturing Company

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Udyog Ltd	342892	351536	346888	545345	501519	417636	87529.54
Nepal Aoushadi Ltd.	148511	132489	124576	134456	155371	139080.6	11220.78
Khadya Udyog Ltd.	102978	101169	163918	69963	61775	99960.6	35941.93
Udayapur Cement Factory	5789987	4689231	6356897	5869421	6995231	5940153	758844.36
Dairy Development Corporation	703654	746512	964857	869512	893624	835631.8	96509.68

Appendix - 2

Total Current Assets of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Udyog ltd	226354	248625	243533	397848	434618	310195.6	80029.30
Nepal Aoushadi Ltd.	109878	94244	88655	99848	122297	102984.4	10893.89
Khadya Udyog Ltd.	92540	89270	84493	28295	21939	63307.4	28620.05
Udayapur Cement Factory	365532	412563	442145	452145	498754	434227.8	40281.95
Dairy Development Corporation	299784	322451	345896	356895	314524	327910	18989.84

Appendix – 3

Cash and Bank of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Udyog ltd	5512	4175	3906	7020	8909	5904.4	1703.46
Nepal Aoushadi Ltd.	3794	4497	2939	3764	44691	11937	14956.87
Khadya Udyog Ltd.	401	311	501	811	209	446.6	188.27
Udayapur Cement Factory	56231	59452	62451	65425	69785	62668.8	4283.25
Dairy Development Corporation	189784	200145	225632	256145	202451	214831.4	21678.73

Appendix – 4

Total Inventory of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Udyog Ltd	65231	67999	61430	236571	146452	115536.6	62347.27
Nepal Aoushadi Ltd.	55123	50869	48706	53646	43472	50363.2	3739.95
Khadya Udyog Ltd.	2100	2990	25106	3521	2798	7303	8136.53
Udayapur Cement Factory	250452	254123	195420	269874	275841	249142	25997.54
Dairy Development Corporation	56421	62458	75412	65124	78452	67573.4	7486.99

Appendix – 5

Total Bills Receivable of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation

Shree Arun Vanaspati Udyog ltd	13562	19648	33530	50373	92133	41849.2	25701.44
Nepal Aoushadi Ltd.	21065	19584	16813	19986	16337	18757	1690.99
Khadya Udyog Ltd.	5241	1254	9254	13627	8515	7578.2	3780.03
Udayapur Cement Factory	98125	85478	112452	145785	102452	108858.4	18616.21
Dairy Development Corporation	49856	52896	62532	69421	72451	61431.2	8096.50

Appendix – 6

Total Debt of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Udyog ltd	95000	104990	100000	112000	207465	123891	38489.67
Nepal Aoushadi Ltd.	40235	53462	69973	112599	213997	98053.2	57408.42
Khadya Udyog Ltd.	3652	2541	2543	2447	1794	2595.4	545.65
Udayapur Cement Factory	2045124	2245631	2458952	1986524	2789124	2305071	267881.94
Dairy Development Corporation	352462	36895	375862	382451	395000	308534	124626.49

Appendix – 7

Total Current Liabilities of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Udyog Ltd	29458	306361	306405	493107	407575	308581.2	142459.92
Nepal Aoushadi Ltd.	30589	42829	101449	116828	86211	75581.2	30497.10
Khadya Udyog Ltd.	13562	14256	16425	17895	14256	15278.8	1483.12
Udayapur Cement Factory	13252	21000	20132	18436	14338	17431.6	2830.60
Dairy Development Corporation	212546	228125	231452	228125	230125	226074.6	6281.63

Appendix – 8

Total Bills Payable of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Uduog Ltd.	12562	12451	15632	18456	27562	17332.6	5088.93
Nepal Aoushadi Ltd.	13562	15425	26016	38165	48110	28255.6	12096.39
Khadya Udyog Ltd.	62530	7968	30822	1462	1950	20946.4	21352.86
Udayapur Cement Factory	256421	276895	280425	282450	285421	276322.4	9430.07
Dairy Development Corporation	202123	210125	220125	102125	225120	191923.6	41626.17

Appendix – 9

Total Cost of Goods Sold Of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Uduog Ltd.	534212	546875	454699	600320	593007	545822.6	47672.07
Nepal Aoushadi Ltd.	89562	78065	61797	56212	58073	68741.8	11828.30
Khadya Udyog Ltd.	165234	157132	110763	68861	836466	267691.2	261529.32
Udayapur Cement Factory	250125	265421	289452	275412	265421	269166.2	11840.21
Dairy Development Corporation	1245896	1325987	1125478	1325635	1245365	1253672	67046.39

Appendix – 10

Total Purchase of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Uduog Ltd.	235462	260458	213456	245612	301245	251246.6	26751.08
Nepal Aoushadi Ltd.	41562	35120	28120	33562	21356	31944	6217.44
Khadya Udyog Ltd.	128321	117354	123151	15012	16025	79972.6	48146.45
Udayapur Cement Factory	250125	265125	277525	280125	282415	271063	11003.07

Dairy Development Corporation	905236	972125	1001251	987542	1101250	993480.8	57667.24

Appendix –11

Total Gross Profit of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Uduog Ltd.	19254	101429	56776	44073	12506	46807.6	28942.89
Nepal Aoushadi Ltd.	1250	3500	-1690	9995	-6267	1357.6	4943.49
Khadya Udyog Ltd.	15231	13691	5126	-1914	-1704	6086	6671.74
Udayapur Cement Factory	352654	219425	213425	214523	325	200070.4	103232.59
Dairy Development Corporation	4256	2563	5623	6254	7568	5252.8	1566.75

Appendix – 12

Total Sales of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Udyog Ltd.	621320	648304	511476	644393	605513	606201.2	45521.38
Nepal Aoushadi Ltd.	95421	81565	60106	66207	51805	71020.8	14248.41
Khadya Udyog Ltd.	208965	170823	115889	669471	666345	366298.6	226425.44
Udayapur Cement Factory	450253	475863	495125	500125	482452	480763.6	16014.98
Dairy Development Corporation	923456	982451	1052125	1612452	1251458	1164388	228069.73

Appendix – 13

Total Opening Stock of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Uduog Ltd.	51231	28563	31525	26735	73183	42247.4	16230.55
Nepal Aoushadi Ltd.	43521	50125	48562	53456	46983	48529.4	3008.15
Khadya Udyog Ltd.	33210	20456	28300	49221	1812	26599.8	14203.79
Udayapur Cement Factory	272452	265412	250125	2450125	265421	700707	798524.21
Dairy Development Corporation	75002	55120	65124	42512	67425	61036.6	10252.79

Appendix – 14

Total Closing Stock of Selected Nepalese Manufacturing Companies

Name of Company	2001	2002	2003	2004	2005	Average	Std. deviation
Shree Arun Vanaspati Uduog Ltd.	28563	31525	26735	73183	32456	38492.4	15943.91
Nepal Aoushadi Ltd.	50125	48562	53456	46983	53412	50507.6	2362.31
Khadya Udyog Ltd.	20456	28300	49221	1812	1141	20186	16377.10
Udayapur Cement Factory	242125	255412	265412	263452	275125	260305.2	10083.58
Dairy Development Corporation	75125	87458	63125	55125	53125	66791.6	11781.87

Appendix – 15

Correlation Coefficient Analysis of Shree Arun Vanaspati Uduog Ltd.

	Gross Margin	Current Ratio	Debt Ratio	No. Of Day's AR	No. Of Day's BP	No. Of Day's Inventory	CCC	Groth
Gross Margin	1	0.386717						
Current Ratio	0.3867	1						
Debt Ratio	-0.4324	-0.114	1					
No. Of Day's AR	-0.9611	-0.486	0.629	1				
No. Of Day's BP	-0.9613	-0.446	0.433	0.9472	1			
No. Of Day's Inventory	-0.6881	-0.386	-0.291	0.5108	0.576	1		
CCC	-0.8263	-0.455	-0.068	0.6910	0.720	0.974	1	

Groth	-0.0856	-0.192	-0.572	-0.1312	-0.156	0.768	0.657	1

Appendix – 16

Correlation Coefficient Analysis of Nepal Aoushadi Ltd.

	Gross Margin	Current Ratio	Debt Ratio	No. Of Day's AR	No. Of Day's BP	No. Of Day's Inventory	CCC	Groth
Gross Margin	1							
Current Ratio	0.124	1						
Debt Ratio	-0.533	-0.5708	1					
No. Of Day's AR	-0.330	-0.8477	0.905	1				
No. Of Day's BP	-0.625	-0.5584	0.990	0.8920	1			
No. Of Day's Inventory	0.318	-0.8313	0.466	0.7638	0.4130	1		
CCC	0.737	0.4109	-0.958	-0.7858	-0.9796	-0.222	1	
Groth	0.870	-0.2281	-0.020	0.1640	-0.1567	0.715	0.2960	1

Appendix – 17

Correlation Coefficient Analysis of Khadya Udyog Ltd

	Gross Margin	Current Ratio	Debt Ratio	No. Of Day's AR	No. Of Day's BP	No. Of Day's Inventory	CCC	Groth
Gross Margin	1							
Current Ratio	-0.2254	1						
Debt Ratio	0.4804	-0.2295	1					
No. Of Day's AR	-0.0801	0.1979	-0.7082	1				
No. Of Day's BP	-0.0850	0.5714	0.1941	0.3201	1			
No. Of Day's Inventory	-0.0113	0.1280	-0.7938	0.9660	0.0851	1		
CCC	0.0573	-0.4112	-0.6528	0.3269	-0.7895	0.5441	1	
Groth	0.9376	-0.5942	0.7526	-0.2332	-0.3374	-0.1991	-0.0185	1

Appendix – 18

Correlation Coefficient Analysis of Udayapur Cement Factory

	Gross Margin	Current Ratio	Debt Ratio	No. Of Day's AR	No. Of Day's BP	No. Of Day's Inventory	CCC	Groth
Gross Margin	1							
Current Ratio	0.4935	1						
Debt Ratio	-0.0908	-0.3542	1					
No. Of Day's AR	0.1323	0.0629	-0.8174	1				
No. Of Day's BP	0.1279	-0.4823	0.7551	-0.7277	1			
No. Of Day's Inventory	0.9836	0.5407	-0.0312	-0.0148	0.2089	1		
CCC	0.9692	0.5859	-0.3266	0.3288	-0.0962	0.9371	1	
Groth	-0.5395	-0.9795	0.4696	-0.2747	0.6292	-0.5518	-0.6621	1

Appendix – 19

Correlation Coefficient Analysis of Dairy Development Corporation

	Gross Margin	Current Ratio	Debt Ratio	No. Of Day's AR	No. Of Day's BP	No. Of Day's Inventory	CCC	Groth
Gross Margin	1							
Current Ratio	0.5970	1						

Debt Ratio	0.4483	0.1650	1					
No. Of Day's AR	-0.4168	-0.6580	-0.0733	1				
No. Of Day's BP	-0.7728	-0.7516	-0.2278	0.8975	1			
No. Of Day's Inventory	0.4254	-0.0419	0.2282	0.6304	0.2293	1		
CCC	0.9163	0.7530	0.3002	-0.7387	-0.9599	0.0525	1	
Groth	0.4490	0.9265	0.1108	-0.8838	-0.8412	-0.5651	0.765	1

Appendix –20

Average Value of Total Assets, Current assets, Cash, Inventory, Total Assets, Current Liabilities

Name of Company	Total Assets	Current Assets	Cash	Inventory	Total Debt.	CL
Shree Arun Vanaspati Udyog Ltd.	417636	310195.6	5904.4	115536.6	123891	308581.2
Nepal Aoushadi Ltd.	139080.6	102984.4	11937	50363.2	98053.2	75581.2
Khadya Udyog Ltd.	99960.6	63307.4	446.6	7303	2595.4	15278.8
Udayapur Cement Factory	5940153	434227.8	62668.8	249142	2305071	17431.6
Dairy Development Corporation	835631.8	327910	214831.4	67573.4	308534	226074.6

Appendix –21

Average Value of Bills Payables, Purchase, Gross Profit, Sales, Opening Stock, Closing Stock

Name of Company	Bills Payables	Cost Of Goods Sold	Purchase	Gross Profit	Sales	Opening Stock	Closing Stock
Shree Arun Vanaspati Udyog Ltd.	17332.6	545822.6	251246.6	46807.6	606201.2	42247.4	38492.4
Nepal Aoushadi Ltd.	28255.6	68741.8	31944	1357.6	71020.8	48529.4	50507.6
Khadya Udyog Ltd.	20946.4	267691.2	79972.6	6086	366298.6	26599.8	20186
Udayapur Cement Factory	276322.4	269166.2	271063	200070.4	480763.6	700707	260305.2
Daiiry Development Corporation	191923.6	1253672	993480.8	5252.8	1164388	61036.6	66791.6

Appendix – 22

Descriptive Analysis

Name of Company	Gross Margin	Current Ratio	Debt Ratio	No. Of Day's AR	No. Of Day's BP	No. Of Day's Inventory	CCC
Shree Arun Vanaspati Udyog Ltd.	0.0996016	1.005232	0.296648	25.19784	25.18004	77.26110828	77.27891
Nepal Aoushadi Ltd.	0.0320892	1.362566	0.70501	96.39859	322.8554	267.4147026	40.95786
Khadya Udyog Ltd.	0.2691995	4.14348	0.025964	7.551334	95.60069	9.957723676	-78.0916
Udayapur Cement Factory	0.4401277	24.91038	0.388049	82.64627	372.082	337.8463938	48.41061
Dairy Development Corporation	-0.0766789	1.45045	0.369222	19.2568	70.51179	19.67363952	-31.5814