

# CHAPTER-I

## INTRODUCTION

### 1.1 Background of the Study

Working capital refers to the resources of a firm that are used to conduct day-to-day operations that makes the business successful. Without cash, bills cannot be paid, without receivables, a firm cannot allow timing difference between delivering goods or services and collecting the money to pay for them. Without inventories a firm cannot engage in production nor can it stock goods to provide immediate deliveries. As a result of the critical nature of current assets, the management of working capital is one of the most important areas in determining whether a firm will be successful. The term working capital refers to the current assets of a firm which can be converted into cash within a year. It includes cash and marketable securities, receivables, inventories and current liabilities with an objective of maximizing overall value of a firm.

Gross Working Capital: "It is simply called Working Capital and refers to a firm's investment in current assets. Current Assets are the assets which can be converted into cash within an accounting year (or operating cycle). It includes cash, marketable securities, inventory, accounts receivable and debtors," (Pandey, 1999: 239).

Net Working Capital: This is of critical importance to a firm. Working capital refers to the difference between current assets and current liabilities. In other words, it is that part of current assets financed with long term funds. It focuses on the liquidity position of a firm.

Another way of defining working capital is that portion of firm's current assets financed with long term fund. Both liquid assets and liabilities are important in working capital management.

Net Working Capital may be positive or negative. A Positive net working capital will arise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets.

Proper financial decision making is extremely important for its efficiency and profitability. Most of the financial decisions of a bank are concerned with current assets and current liabilities.

There are various types of assets and liabilities in every enterprise to run smoothly. One of the most important assets is current assets, which is required to meet the daily or short-term obligation. Like equipment, manpower, etc. working capital is the major component for daily operation. In the absence of working capital other things are useless. Working capital is that portion of total assets, which circulates from one to another in the ordinary conduct of business. Working capital management is a crucial aspect of financial management including the administration of all aspects of the current asset and current liabilities, which plays vital role for success or failure of organization.

This study focuses on the various aspects of working capital management of Nepal Telecom. This study covers the current assets management policy, current assets utilization and current assets structure. Moreover, this study focuses on the finding of this enterprise for achieving goals.

### **Profile of Nepal Telecom**

Telecommunication facilitates by conveying information quickly over long distance with a cheap cost. It is also known as one of the quickest, cheapest as well as the most scientific means of communication in the modern world. In a developing country like Nepal, the role, importance and contribution of telecommunication for the economic development of country is remarkable. Telecommunication sector plays an important role for the development of every sector. The effects of telecommunication on the rural areas and their contribution to rural development are extremely important.

The history of telecommunication development in Nepal is not so long. The first telecommunication service was started in Nepal during the regime of late Chandra Samsher in 1972 B. S. It was the first time and good opportunity for Nepalese people to transmit their message from Kathmandu to Birgunj. This telephone line attributed as magneto connected Birgunj with Kathmandu under the name of "Shree Chandra

Telephone". Another telephone line connecting Kathmandu and Gour was installed in the year 1980 B.S. "In the year 1992 B.S., 25 automatic Telephone lines were distributed among the high-ranking personalities of Nepal for their own individual uses. The first telecommunication office was established near Ranipokhari, Kathmandu," (Annual Report of NTC, 2012: 3).

Further telecommunication lines were mainly available during the rule of the then Prime Minister late Juddha Shamsheer by connecting telephone line to different districts to the extent of 300 miles long. The telephone line being extended from Kathmandu to Siraha and Saptari. In the year 1998 B.S. additional installation of telephone line linking Dhankuta, Dhahran and Biratnagar were distributed.

"A noticeable change happened toward telecommunication during the period of late Juddha Shamsheer. About 200 miles long telephone lines were also bought into use in western part of Nepal. The government of Nepal felt the need of telecommunication for effective administration and active participation of people to achieve national goal. So 200 C. B. telephone lines were setup and distributed in Nepal government offices having the exchange office at Singh Durbar. In the year 2002 B. S. before implementation of first five year plan, Nepal had 2000 C.B. lines, 100 magnets line, 15 automatic lines, 10 military exchange lines and 600 miles of trunk lines connecting Kathmandu with other districts," (Annual Report of NTC, 2012: 4).

Before the implementation of 1<sup>st</sup> five-year plan, Nepal had wireless relation between 28 centres in various parts of the country. "About 18 of their stations were equipped with modern equipment. The wireless services were made workable by means of petrol generators in different districts except Kathmandu and Biratnagar. As the material and machinery required for wireless services has been made available during the period of Second World War, a satisfactory service could not be achieved on account of problems faced while transporting the petrol in remote districts," (Annual Report of NTC, 2012: 4).

Nepal Telecom Ltd. was established in 2032/03/11 B.S. under the Nepal Telecommunication Act 1971 B.S. to provide reliable and affordable telecommunication service all over the country. Most rural area of Nepal are characterized by low population

density, long distances between settlement areas and unfavorable geographical and climate conditions. Other difficulties are low education level, less job opportunities, low per capita income, income increasing tendency of population to regulate to urban centre, poor, unreliable or non existent power supply, poor health care and medical services. The basic objectives of the need for providing telecommunication facilities in those rural areas is to trigger the development activities and to minimized the above mentioned disadvantages, thereby by improving the quality of life. "Nepal Telecom is planning rural serve rural areas by adopting the various technologies. VSAT shall be deployed in high mountain areas and in those remote areas where other terrestrial system are nor feasible or viable. Mid mountain areas and southern plain areas are shall be served by combination of wireless local loop (WLL), VHF Radio communication, small rural exchanges with copper Networks or other appropriate terrestrial systems," (Annual Report of NTC, 2012: 5).

Although NTC has far better performance than other State Owned Enterprises (SOEs) of Nepal, in the sense that it is such a public enterprise which is operating under the net profit position since its establishment, the coming days are not as easy as earlier because its days of monopoly are almost over now. Its profitability definitely, can be considered as major indication of financial performance. However, only net profit cannot ascertain that its assets are financed appropriately and sources and application of fund have been effectively mobilized, so the need of study on the existing working capital position to observe and evaluate the sources and application of funds in NTC is considered relevant. Thus this study attempted to assess whether the size, liquidity, efficiency and profitability of working capital in NTC are adequate or not and provide suggestions for sound working capital position and maximize profitability of NTC in future days. Thus the research was focused on analysis of the working capital management of NTC.

## **1.2 Statement of the Problem**

Working capital management decisions is the most sensitive for every firm. It has various factors affecting the decisions; it should maintain optimal level of working capital.

Determining the optimum level of working capital is the crux problems of every business organization, it constrained to maintain the trade- off between risk and return.

Nepalese organizations are still facing the problem of working capital management due to unprofessional manpower, focusing only on the procurement aspect of working capital & want of every investor to earn return on their investment. Nepalese enterprises are facing various problems to manage the working capital due to unproductive manpower, unclear financial market, unclear government policies etc. Managers still focus their attention on their procurement aspect of working capital but, not on the efficient utilization of funds. There is no budgeting in enterprise for the next year, no clear market research and other scenario for future. In the unclear vision every business decision puzzle the management of working capital and other business decision. The working capital management not only focuses on profitability position in the short run but it also effects the survival in the long run of an organization .So every firm must maintain sound working capital components for effective and efficient utilization of funds in business organization. Nepalese industrialization process is in a very slowly process. In spite of various attractive policies of government in respect to industrialization, new investment on industrial sector is not satisfactory.

The financial composition and performance of Nepalese enterprises are not so satisfactory. Most of the industries were operating in losses and such condition discourage new investment due to established enterprises financial position. The poor performances of Nepal Telecom were because of internal and external financial environments. Such problem should be investigated and removed from the organization to correct for the improvement of their performance. Without effective and efficient financial management firm is cannot reach its target.

There are several indicators of working capital management. So, basically this study has tried to find out the issues of working capital management of Nepal Telecom Ltd. In this study, the answers to the research would be explored:

- What are the major factors affecting the management of working capital in Nepal Telecom?

- How working capital is being financed in Nepal Telecom?
- How far is the firm being able to utilize its current assets properly?
- Are there sound liquidity positions in Nepal Telecom?

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

The main objective of this study is to examine the working capital management of Nepal Telecom. The specific objectives of this study are as follows:-

- To determine the factor determining of working capital.
- To assess the liquidity and profitability position of Nepal Telecom.
- To determine the structure and utilization of working capital of Nepal Telecom.
- To analyze the working capital policy of Nepal Telecom.

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

The size of working capital reflects the size of investment in each type of current asset. Each of the current asset should be managed efficiently and affectively. It is because decision regarding working capital affects not only the profitability of the firm in the short term, but also it is the basis for survival in the long run. The management of working capital should not be neglected by enterprises.

This study will be of great references for government to formulate appropriate economic policy for their enterprises. It will help other similar nature of Nepalese enterprises to determine and manage working capital. This study helps to evaluate impact of working capital on profitability of business enterprises. It will help for new financial manager of new business to take decision for efficient working capital management.

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

Every study is conducted under certain limitations. The researcher has tried to include all the required information for the conduct of the study as far as possible. Despite it this study has the following limitations:

1. The analysis was based on the primary as well as secondary data, which were provided by Nepal Telecom Ltd. and the study was based on reliability and validity of these data.
2. The study covered the time period of five fiscal years from 2007/08 to 2011/12.
3. The analysis was based on the data extracted from balance sheet, P/L account of

Nepal Telecom.

## **1.6 Organization of the Study**

The whole study was categorized into five major chapters. These are as follows:

**Chapter I: Introduction:** The first chapter 'Introduction' dealt with the background of the study, a brief overview of Nepal Telecom, statement of the problem, objectives of the study, significance of the study, limitations of the study and organization of the study.

**Chapter II: Review of Literatures:** The second chapter 'Review of Literatures' dealt with the review of related literatures and conducted by different experts and researchers in the field by working capital.

**Chapter III: Research Methodology:** The third chapter included the methodology used in this study. It dealt with research design, population and sample, financial and statistical tools used for the study.

**Chapter IV: Presentation and analysis of data:** The fourth chapter dealt with the presenting data and analyzing them with the help of various statistical tools.

**Chapter V: Summary, Conclusion and Recommendation:** The fifth chapter contained summary of the whole study based on which conclusions were drawn and forwarded recommendations for further improvement of working capital management of Nepal Telecom.

In the beginning part of the study recommendation, viva-voce sheet, declaration, acknowledgements, contents, abbreviations were included presented and finally, bibliography and appendices were incorporated at the end of the study.

## CHAPTER II

### REVIEW OF LITERTURE

#### 2.1 Conceptual Framework

The management of funds of business can be described as financial management. Financial management is mainly concerned with two aspects. Firstly, Fixed assets and fixed liabilities. In other words, long term investment and sources of funds. Secondly, current assets and current liabilities, which are concerned with current uses and sources of funds. Both of these types of funds play a vital role in business finance. Business firms need various types of assets in order to carry out its operation. Some assets are required to meet the needs of regular production and some other are required specially to meet day to day expenses and short term obligations. The assets such as cash, marketable securities, account receivables and inventories, which are known as current assets, are required to maintain at a certain level depending upon the volume of production and sales.

The cash and marketable securities are as purely liquid and near liquid assets whereas the account receivable and inventories are not. However, they can be liquidated as and when necessary within a period of less than one year. The capital investment on these assets is known as working capital. In short, working capital is the source of financing current assets and it includes short as well as long-term financing.

Working capital is a controlling nerve of business it is an important and integral part of financial management as short-term survival is a pre-requisite to long-term success. As pointed out by Ralph Kennedy and Steward MC Mullary, "the inadequacy or mismanagement of working capital is the heading cause of business failure. Unless the payment is made at the maturity of the particular debt, the firm is at worst and the creditors may force the firm to terminate its business," (Flink and Donald: 1964:13).

Firms need cash to pay all their day-to-day activities. They have to pay wages, pay for raw materials, pay bills and so on. The money available to them to do this is known as the firm's working capital. The main sources of working capital are the current assets as these

are short-term assets that the firm can use to generate cash. However, the firm also has current liabilities and so these have to be taken into account for ascertaining how much working capital a firm has at its disposal. Working capital is therefore:

Working capital (WC) = Current assets (CA) – Current liabilities (CL)

"Thus working capital is the same as net current assets. It is vital to a business to have sufficient working capital to meet all its requirements. Many business have gone under, not business they were unprofitable, but because they suffered from shortages of working capital," (www. bized ac.uk)

Working capital refers to the cash a business requires for day-to-day operations, or more specifically, for financing the conversion of raw materials into finished goods, which the company sells for payment. Among the most important items of working capital are levels of inventory, account receivable and accounts payable. Analysts look at these items for signs of a company's the better a company manages its working capital, the less the company needs to borrow. Therefore, the role of working capital management is more significant for every business organization irrespective of their nature.

### **2.1.1 Concept of Working Capital Management**

Working capital refers to the resources of a firm that are used to conduct operations to do day-to-day work that makes the business successful. Without cash, bills cannot paid, without receivables, the firm cannot allow timing difference between delivering goods or services and collecting the money to pay for them without inventories the firm cannot engage in production not can it stock goods to provide immediate deliveries As a result of the critical nature of current assets, the management of working capital is one of the most important areas in determining whether a firm will be successful. The term working capital refers to the current assets of the firm—those items that can be converted into cash within the year. Hence, working capital management is the management for the short-term. It is a process of short-term decision making regarding the current assets and current liabilities affecting the long-term operation of an enterprise. It is a process of planning and controlling the level of mix of current assets of the firm as well as financing

these assets. It concludes decision regarding cash and marketable securities, receivables, inventories and current liabilities with an objective of maximizing the overall value of a firm.

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### **2.1.2 Types of Working Capital**

There are two types of working capital Permanent Working Capital and Variable Working Capital. These working capital are necessary for any organization for continuous production and sales without any interruption.

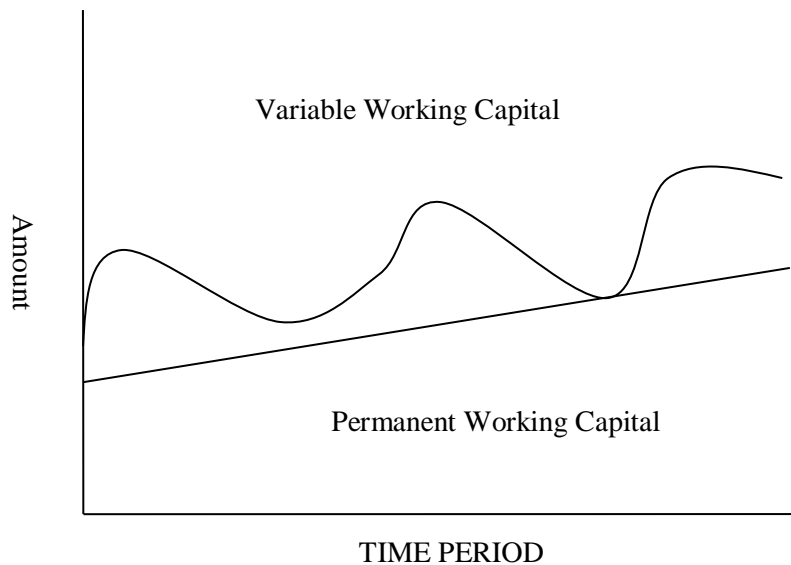
#### **i. Permanent Working Capital**

Permanent working capital refers to that level of current assets, which is required on a continuous basis over the entire year. A manufacturing concern cannot operate regular production and sales functions in the absence of this portion of working capital. Therefore, a manufacturing concern holds certain minimum amount of working capital to ensure uninterrupted production and sales functions. This portion of working capital is directly related to the firm's expansion of operation capacity.

#### **ii. Variable Working Capital**

Variable Working Capital represents the portion of Working capital which is required over permanent working capital. If the nature of production and sales of a firm is directly related to seasonal variations, it should stock extra raw materials, working in progress and inventory of finished goods. Therefore, this portion of working capital depends upon the nature of firms' production relation.

**Figure 2.1**  
**Types of working capital**



Source: Weston and Brigham, 1996: 343

### **2.1.3 Working Capital Policy**

"Working capital policy refers to a firm's basic policies regarding target levels for each category of current assets and how current assets will be financed" (Western, 1996: 343). So first of all, in working capital management, a firm has to determine how much funds should be invested in working capital in gross concept. Every firm can adopt different financing policy according to financial manger's attitude towards the risk return trade off. One of the most important decisions of finance manager is how much current liabilities should be used to finance current assets. Every firm has to find out the different sources of funds for working capital.

#### **i. Current Assets Investment Policy**

Current assets investment policy refers to the policy regarding the total amount of current assets to be carried to support the given level of sales. There are three alternative current assets investment policies-Fat, Cat and Lean & Mean and Moderate.

**a. Fat Cat Policy**

This is known as relaxed current assets investment policy. It is the policy under which relatively large amounts of cash and marketable securities and inventories are carried, and sales are stimulated by liberal credit policy which results in high level of receivables. This also creates the longer receivable collection period. Thus this policy provides the low expected return in investment with lower risk.

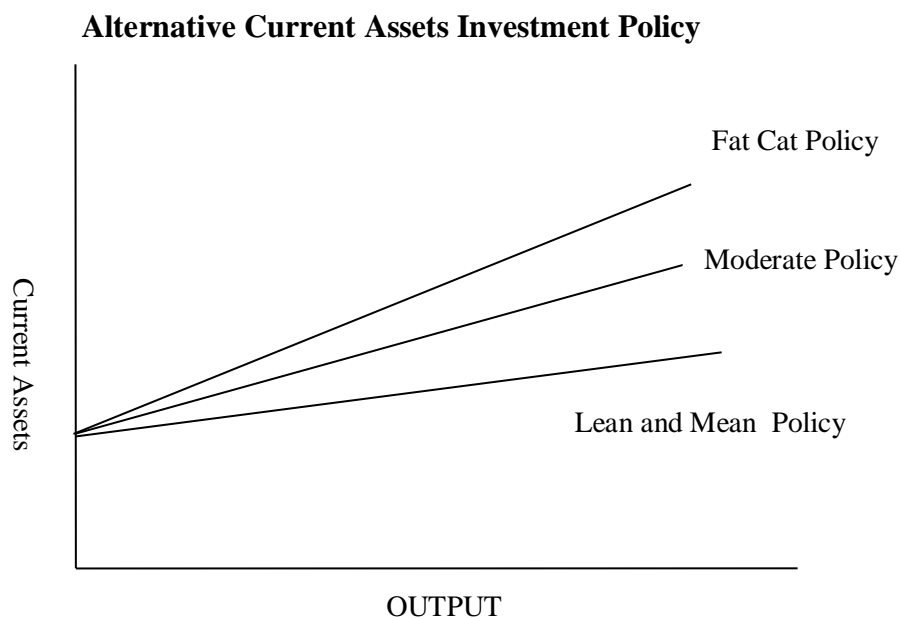
**b. Lean and Mean Policy**

This is known as restricted current assets investment policy. This is the policy under which holding of cash and marketable securities, inventories and receivables are minimized. This policy tends to reduce the policy conversion and receivable conversion cycle. Under this policy a firm follows a tight credit policy and bears the risk of losing sales.

**c. Moderate Policy**

It is the policy that takes into reference of the relaxed and restrictive policies. In moderate policy, a firm holds the amount of current assets in between the relaxed and restrictive policies. Both risk and return are moderate in this policy.

**Figure 2.2**



The relationship between output and current assets level for these alternative is illustrated in the above figure. The table explains that the greater the output, the greater the need for investment in current assets to support that output and sales. This relationship is based on the notion that it takes a greater proportional investment in current assets when only a few units of output are produced than it does later on, when the firm can use its current assets more efficiently.

## **ii. Current Assets Financing policy**

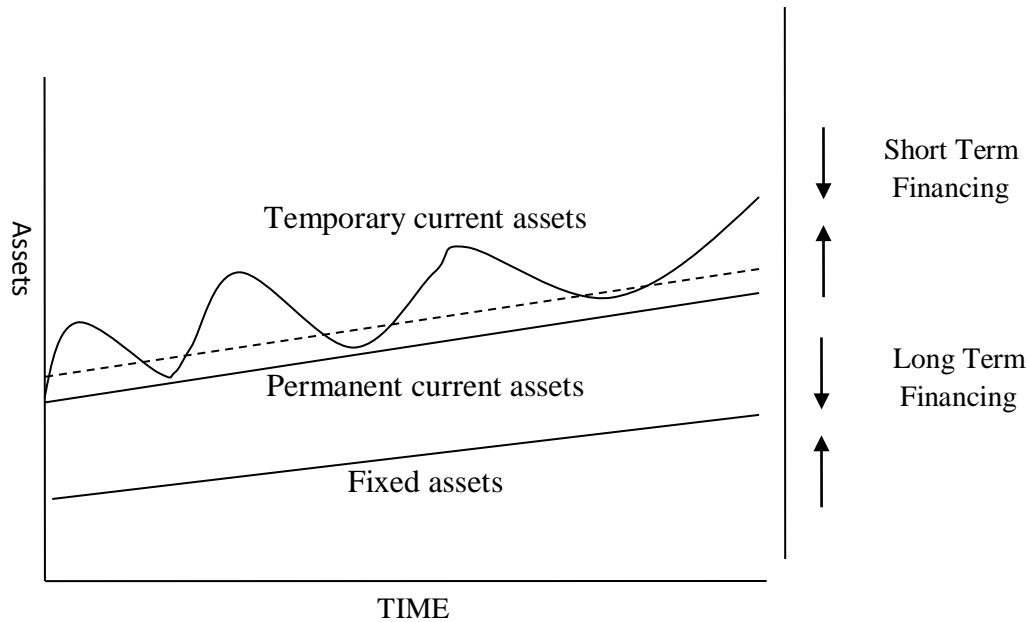
It is the manner in which the permanent and temporary current assets are financed. Current assets are financed with funds raised from different sources. But cost and risk affect the financing of any assets. Thus, current assets financing policy should clearly outline the source of financing of currents. There are three policies – aggressive, conservative and matching policies of current assets financing.

### **a. Aggressive Policy**

In this policy, the firm finances a part of its permanent current assets with short-term financing and rest with long-term financing. In other words, the firm finances not only temporary current assets but also a part of permanent current assets with short-term financing. In this policy, the liquidity position will be low and the risk will be high. A low liquidity position may expose the firm to opportunity costs. If a firm relies heavily on short-term borrowings, during the period of high money, credit may be rational and the firm may be unable to obtain all the financing its needs.

#### **Figure 2.3**

#### **Aggressive Financing Policy**



Source: Weston and Brigham, 1996: 346

Above figure shows that short-term financing 50 percent of the permanent current assets. In general interest rate increases with time i.e. shorter time, lower the interest rate. It is because lenders are risk adverse and risk generally increases with the length of lending period. Thus, under normal situation the firm borrows on a short-term financing rather than long-term financing, then it runs the risk of renewing the borrowing again and again. The continued financing exposes the firm to certain risk . It is because, in future the retest expenses will fluctuate widely and also, it may be difficult for the firm to raise the funds during the stringent credit periods. In conclusion, there is higher risk, higher risk, higher return and low liquidity position under this policy.

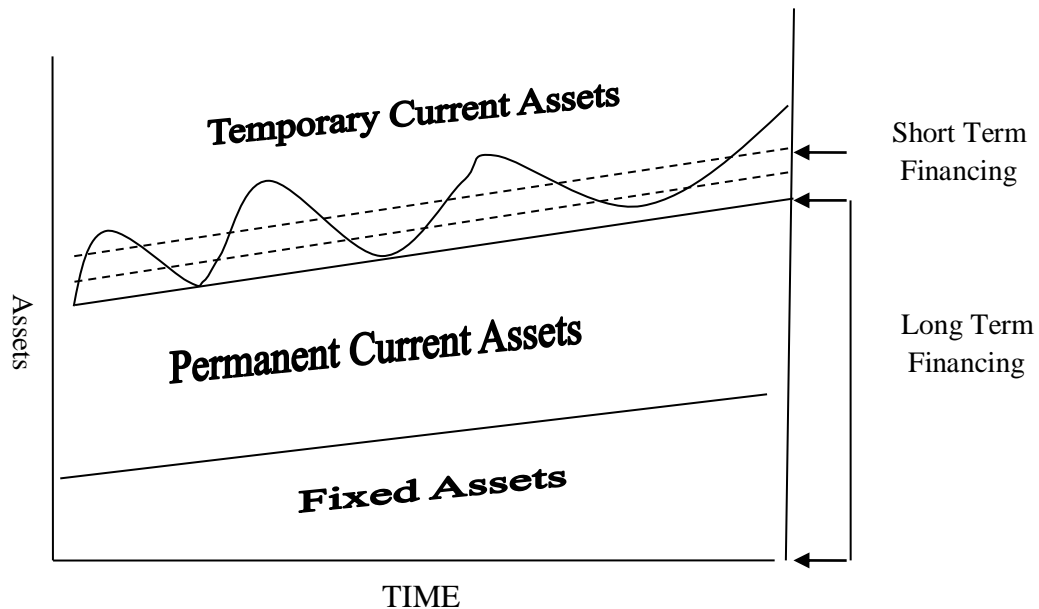
#### b. Conservative Policy

In this policy, the use of short-term fund is restricted to the emergency situation when there is necessity to invest current assets. Otherwise, the long-term fund should be used as far as possible in financing of investment in current assets. However, the cost of financing in this policy will be more, the liquidity will b relatively greater and risk will be minimized.

"A firm may adopt a conservative policy in financing its current and fixed assets. The financing policy of the firm is said to be conservative when it depends more on long-term

fund for financing need. Under a conservative plan, the firm finances its permanent assets and a part of temporary current assets with long-term financing. When the firm has no temporary current assets, it stores liquidity by investing surplus funds into marketable securities. The conservative financing relies heavily on long-term financing and, therefore is less risky. The conservative financing policy is shown in figure below," (Pandey 1995:684)

**Figure 2.4**  
**Conservative Financing Policy**

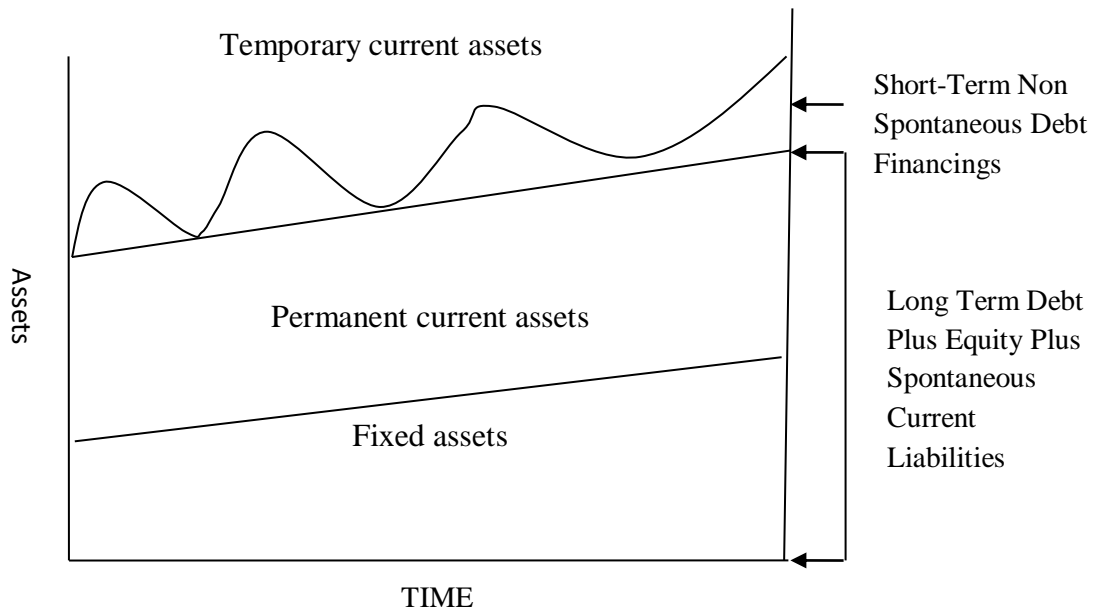


Source: Weston and Brigham, 1996: 347

**c. Maturity Matching Policy**

It is self-liquidity approach. In this policy, the firm finances the permanent current assets with long term financing and temporary with short-term financing. It means that the firm matches the maturity of financing sources with an assets useful life. It lies in between the aggressive and conservative policies. It leads to both neither high nor low level of current assets and current liabilities. It lies in between low profitability. The figure 2.5 shows that the temporary working capital is financed by short-term financing and long term financing. Thus, no working capital is financed by long-term funds. Hence, net working capital is zero under this policy.

**Figure 2.5**  
**Maturity Matching Financing Policy**



Source: Weston and Brigham, 1996: 348

#### **2.1.4 Need for Working Capital**

Working Capital is the effective life blood and controlling nerve center of every business organization because without proper control upon it, no business organization can run smoothly. Thus, it plays a crucial role in the success and failure of an organization. The need for working capital to run the day-to-day business activities cannot be overemphasized. No business firm can exist which does not require any amount of working capital. Indeed, firms differ in their requirements of working capital. Know that firms aim at maximizing the wealth of shareholders. In this endeavor, a firm should earn sufficient return from its operation. The extent to which profit can be earned naturally depends upon the magnitude of sales among the other things. For constant operation of business, every firm needs to hold working capital components like cash, receivable, inventory etc. Therefore, every firm needs working capita to meet the following motives.

##### **i. Transaction Motive**

Transaction motive requires a firm to hold cash and inventories to facilitate smooth production and sales operation in regular. Thus, the firm needs working capital to meet the transaction motive.

## **ii. Precautionary Motive**

Precaution is a kind of safety that forces to hold cash and inventories to guard against the risk of unpredictable change in demand and supply forces and other factors such as strike, failure of important customers, unexpected slow down in collection of account receivables cancellation of some order for goods and some other unexpected emergency. Thus, the firm needs working capital to meet contingencies in future.

## **iii. Speculative Motive**

It refers to the desire of a firm to take advantage of the opportunities like opportunities of profit making investment, an opportunity of purchasing raw material at a reduced price on payment of immediate cash, to speculate on interest rates and to make purchase at favorable price etc. Thus the firm needs working capital to meet the speculative motive.

### **2.1.5 Financing of Working Capital**

Every organization requires additional assets whether they are in stable or growing conditions. A growing firm generally requires fixed capital as well as working capital. Additional portion of working capital is approximately dominated by the same rate as sales. But this portion of capital requirement depends up on the nature of a firm. So the most important function of financial manager is to determine the level of working capital and to decide how it is to be financed. Financing of any assets is concerned with two major factors-cost and risk. Therefore the financial manager must determine an appropriate financing mix or decide how current liabilities should be used to finance current assets. However, a number of financing mixes are available to the financial manager. He can present generally three kinds of financing.

#### **1. Long Term Financing**

Long Term financing has high liquidity and low profitability. Ordinary share, debenture, preference share, retained earning and long-term debts from financial institution are the major sources of long-term financing. Even it includes retained earnings and long-term loan also.

## **2. Short-Term Financing**

Firm must arrange short term credit in advance. The sources of short term financing of working capital are trade credit and bank borrowing.

### **i. Trade Credit**

It refers to the credit that a customer gets from supplies of goods in the normal course of business. If the buying firm does not pay cash immediately for the purchase is called trade credit. It is mostly an informal arrangement and granted on an open account basis. Another form of trade credit is bill payable. It depends upon the term of trade credit.

### **ii. Bank Credit**

Bank Credit is the primary institutional sources for working capital financing. For the purpose of bank credit, amount of working capital requirement has to estimated by the borrowers and banks are approached with the necessary supporting data. Bank determines the maximum credit based on the margin requirement of the security. The following types of loan are provided by commercial banks.

#### **a) Loan Arrangement**

Under this arrangement the entire amount of loan is given credit by the bank to the borrowers account, and the loan is repaid in instalments, interest is payable on actual balance outstanding.

#### **b) Overdraft Arrangement**

Under this arrangement the borrowers is allowed to overdraw on this current account with the bank up to stipulate limit. Within this limit, any number of drawings are permitted. Repayment should be made in short period.

#### **c) Commercial Papers**

It is used only by well-established companies. This evidence of debts is an unsecured short-term promissory note. It is sold either through dealers or directly to inventories. Besides the above form of credit, bank provider loan against the warehouse receipt, inventory receivable. In our context, most popular sources of short term financing are

short-term loan from public deposit, which is also a major source of working capital financing in our country.

### **3) Spontaneous Financing**

Spontaneous financing arises from the normal operation of a firm. Two major sources of such financing are trade credit (i.e., credit and bills payable) and accruals. Whether trade credit is free of cost is not actually depends upon the terms of trade credit. Financial manager of the firm would like to finance its working capital with spontaneous sources as much as possible. In practical aspect, the real choice of current assets financing is either short-term or long term sources. Thus, the financial manger concentrates his power in short term versus long term financing. Hence, the financing of working capital policy, which is perfectly dominated by the management attitude towards the risk-return.

#### **2.1.6 Determinants of Working Capital**

Every firm, whether public or private, manufacturing or non- manufacturing, must have adequate working capital to survive in competitive market. It should have neither too excess nor too inadequate working capital. But there are no sets of rules or formulate to determine working capital requirement of a firm. It is because of a large number of factors that influence the working capital requirement of a firm. A number of factors affect different firm in different ways. Internal policies and changes in environment also affect working capital requirement of a firm. Generally, the following factors affect working capital requirement of a firm.

##### **a) Nature and Size of Business**

It depends upon the nature and size of a business. If the size of the firm is bigger, than it requires more working capital. While a small firm needs less working capital. Trading and financial firm require larger amount of working capital relatively to public utilities, while services concern lies between two extremes.

##### **b) Growth and Expansion**

This also affects the working capital requirement of a firm. A growing firm needs more working capital than those static ones. However, it is difficult to precisely determine the relationship between the growth and expansion of the firm and working capital needs.

**c) Credit Policy**

Working capital requirement depends on terms of sales. Different terms may be followed to different customers according to their credit worthiness. If the firm follows the liberal credit policy then it requires more working capital. Conversely, if the firm follows the stringent credit policy, it requires less working capital.

**d) Production Policy**

If a firm produces seasonal goods, then it sells its products in a certain month of the year. In this situation, it can either confine its production only to that period when goods are sold or follow a steady production policy through the year and produce goods at a level to meet the peak demand. The former policy does not need more working capital than the latter does.

**e) Availability of Credit**

Availability of credit facility is another factor that affects the working capital requirement. If the creditors avail a liberal credit term then the firm will need less working capital and vice-versa. In other words, if the firm can get credit facility easily on favorable conditions, it requires less working capital to run the firm smoothly otherwise more working capital is required to operate the firm smoothly.

**f) Manufacturing Cycle**

Working capital requirement of an enterprise is also influenced by the manufacturing or production cycle. It refers to the time involved to make the finished goods from the raw materials. During the process of manufacturing cycle, there will be a large working capital requirement and vice-versa.

**g) Profit Margin**

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

**h) Price level change**

Generally, a firm is required to maintain the higher amount of working capital if the price level rises, because the same level of current assets needs more funds due to the increasing price. In conclusion, the implications of changing price level of working capital position will vary from firm to firm depending on the nature and other relevant consideration of the operation of the concerned firms.

**i) Operating Efficiency**

It is also the important factor, which influence the working capital requirement of the firm. It refers to the efficient utilization of available resources at minimum cost. Thus, financing manager can contribute to strong working capital position through operation efficiency then it needs less amount of working capital otherwise it requires if a firm has strong operating efficiency large amount of working capital.

**j) Level of Taxes**

The level of taxes also influences working capital requirement. The amount of taxes to be paid advance is determined by prevailing tax regulations. But the firm's profit is not constant or can't be pre-determined. Tax liability in a sense of short-term liquidity is payable in cash. Therefore, the provision for tax liability increases, it needs to increase the working capital and vice-versa.

**2.2 Review of the Previous Thesis**

Some of the related previous studies on working capital management are reviewed here under.

Shrestha, Pradip (2003) carried out "A study on overall picture of working capital of National Trading Limited" an unpublished Master Level Thesis submitted to Central Department of Management, T.U.

**Objective of the study:**

- To overview the overall picture of working capital of National Trading Limited.
- To evaluate current assets to total assets of NTL and STCL both are in fluctuating trend.

**Major findings of the study:**

- The investment in current is high in both of the trading companies with respect to its total assets and net fixed assets.
- Cash and bank balance holds the highest portion followed by inventor in NTL whereas cash and bank balance holds the least portion in STCL and inventory hold the highest portion.
- The turnover position of the NTL and STCL are in fluctuating trend.
- The liquidity position of the STCL is satisfactory and favorable in comparison to the liquidity position of the NTL.

Pradhan, Radheshyam (2004) carried out "A study on management of working capital which related that most of the selected enterprises" an unpublished Master Level Thesis submitted to Central Department of Management, T.U.

**Objective of the study:**

- To analyze the demand for working capital by Nepalese corporations.
- To show a trade off between risk and return there by following neither an aggressive nor a conservative approach.

**Major findings of the study:**

- Almost all the selected PEs had a positive net working capital and much of the growth in net working capital might however, be attributed to inflation as the growth in net working capital at deflated prices has been much lower.
- The liquidity measures showed a poor liquidity position in majority of NPEs. It has been noticed that the enterprise had either negative cash flows or earning before tax or they had excessive net current debts, which could not be paid within a year.
- Of the current assets, which is an average, half of the total assets in PEs. The share of inventories is the largest followed by receivable and cash.
- There had been an improvement in utilization of current assets in the majority of PEs. He also noticed that the adjustment speed of actual to desired balance had been observed as highest for cash followed by inventories.
- However the speed of adjustment was much slower in all these cases. The results were, therefore surprising as the adjustment of even cash holding was not immediate. Further more, the inclusion of capacity utilization in the models did not seem to have contributed much to the demand functions of working capital and its various components.
- Thus, capacity utilization as a significant variable affecting these demand functions was doubtful. This book, provides an extensive and comprehensive survey on the overall liquidity position, working capital policy, working capital utilization and demand functions of the current assets.

Aryal, Gopal (2005) carried out "A study on a case study on working capital management of Bank of Kathmandu Ltd." an unpublished Master Level Thesis submitted to Shree Dev Campus, Faculty of Management, T.U. During his study, he had basically used the secondary data and mainly financial tools are embodied for analyzing the working capital management of BOK.

**Objectives of the study:**

- To analyze the working capital management of BOK.
- To evaluate the working capital position of bank of Kathmandu Ltd.

**Major findings of the study:**

- The working capital of BOKL has been increasing trend. The current ratio of the bank was quite fluctuating.
- The loan and advances to saving deposit ratio of the bank is in satisfactory position over the study period.
- The interest earned to total assets ratio of BOKL is not so much satisfactory it means the bank could not able to use its total assets properly to earned interest.
- The net profit to total assets ratio of the bank was fluctuating. It shows that the bank could not able to utilized its total assets to generate profit.

Shrestha, Deepak (2005) carried out "A study on portfolio behaviour of commercial banks in Nepal" an unpublished Master Level Thesis submitted to Central Department of Management, T.U. Some of the journals and articles published by management experts in working capital management have been reviewed in this section.

**Objectives of the study:**

- To analyze portfolio behavior of commercial banks in Nepal.
- To show total deposits have been major sources of fund for all the banks.

**Major findings of the study:**

- Capital and reserve funds do not seem to have changed much over the year.
- The user of fund analysis show that the resources of commercial banks are allocated in the liquid funds, investments on securities, loans and advances bills purchased and discounted.
- Among the portfolio, for Nepalese banks loan and advances share highest volume of the resources and the bills purchased and discounted the least over the year.
- The excess reserves of the commercial banks show unused resources. The cash resource exceeds much more than the required cash reserve.

Poudel, Narayan Prasad (2007) carried out "A study on which related on financial statement analysis : an approach to evaluate bank's performance" an unpublished Master Level thesis submitted to Central Department of Management, T.U.

**Objectives of the study:**

- To analyze financial statement analysis of banks' performance.

- To evaluate the financial position of selected commercial banks.
- To show the necessity and importance of financial statement analysis to evaluate bank's performance.

**Major findings of the study:**

- Analysis of bank financial statement is different from other companies due to special nature of assets and liabilities structure of the banking industry.
- The bank's balance sheet is composed of financial claims a liability in the form of deposits and as assets in the form of loans but fixed asset account for a small portion of the total assets.
- The described the major balance sheet characteristics of commercial banks. Which are as follows.

Characteristics	Significance	Risk	Return
1) Few Fixed Assets	Low degree of operating leverage	Reduce	Reduce
2) Substantial amount of short term liabilities (Deposits)	To be liquid	Increase	Increase
3) Substantial amount of financial assets	High degree of operating leverage	Increase	Increase

- At last, he added that analysis of financial statements can give a good insight into financial health and performance of a bank.

Shrestha, Manohar Krishna (2007) carried out "A study on which revealed on a working Capital management in public enterprises" an unpublished Master Level Thesis submitted to Central Department of Management, T.U.

**Objectives of the study:**

- To evaluate working capital management in PEs.
- To show working capital management in those PEs in his article.
- To focus on the liquidity, turnover and profitability position of those enterprises.

**Major findings of the study:**

- He found that four PEs had maintained adequate liquidity position, two had excessive and remaining four had failed to maintain describable liquidity position.

- On the turnover, four had a adequate turnover, one had high turnover and remaining five had not satisfactory turnover on net working capital.
- He had also found that out of ten PEs, Six PEs were operating at losses while only four were getting some percentage of profits.
- With reference to those findings he had brought certain policy issues such as lack of suitable financial management, deviation between liquidity and turnover of assets and inability to show positive relationship between turnover and return on net working capital.

Shrestha, Laxman (2007) carried out "A research on a study on working capital management of Dairy Development Corporation" an unpublished Master Level thesis submitted to Shanker Dev Campus, Faculty of Management, T.U. During his study, he had basically used the secondary data and mainly financial tools are embodied for analyzing the working capital management of DDC.

**Objectives of the study:**

- To analyze the current assets and current liabilities and their impact and relationship to each other.
- He tried to analyze corporation's investment in the form of working capital has been increasing and DDC followed the conservative working capital policy with respect current assets management.

**Major findings of the study:**

- The average investment in current assets is lower with respect to net fixed assets during this study period and DDC has no clear vision about the investment current assets portion. Cash and bank balance holds the second largest portion of the current assets and has fluctuating trend.
- Other major components of current assets i.e. inventories and receivables are in fluctuating trend. The company does not follow credit sales policy. The company has been able to maintain its current ratio in an average 1.78:1 during the study period which is regarding satisfactory level.
- The gross and net profit margin in DDC shows that company is suffering from a heavy loss during the study period.

- The overall return position of DDC is negative, not in favorable condition. It is because of inefficient utilization of current assets, total assets and shareholders wealth.

Acharya, Kamal (2008) carried out "A study on which related on problems and implements in management of working capital in Nepalese enterprises" an unpublished Master Level Thesis submitted to Shanker Dev Campus, Faculty of Management, T.U.

**Objective of the study:**

- To identify the problems and implements in management of working capital in Nepalese enterprises.
- To show two major problem i.e. operational problems and organizational problems regarding the working capital management in Nepalese PEs.

**Major findings of the study:**

- The operational problems he found are listed in the current ratio 2:1 and slow turnover of inventory.
- Similarly, change in working capital in relation to fixed capital had very low impacts over the profitability, thin transmutation of capital employed to sales, absent of apathetic management information system, break even analysis, fund flow analysis and ratio analysis were either undone or ineffective for performance evaluation.
- Finally monitoring of the proper functioning of working capital management has never been considered a managerial job. In the second part, he has listed the organizational problems in the PEs.
- In the most of the PEs, there is lack of regular internal and external audit system as well as evaluation of financial results. Similarly, very few PEs have been able to their capital requirement, functioning of finance department is not satisfactory and some PEs are even facing the under utilization of capacity.
- To make an efficient use of fund for minimizing the risk of loss and to attain profit objective, he has made some suggestion.

Mahat, Sujit (2009) carried out "A study on which revealed the spontaneous sources of working capital management" an unpublished Master Level Thesis submitted to Central Department of Management, T.U.

**Objectives of the study:**

- To identify the spontaneous sources of working management.
- To define the three major sources of working capital i.e. equity financing, debt financing and spontaneous sources of financing, regarding the working capital management.

**Major findings of the study:**

- Debt financing include short-term banking financing such as bank overdraft, cash credit, bills purchase and discounting, letter of credit etc. Whereas spontaneous sources of working capital include trade credit, provisions and accrued expenses. Working capital management is one of the important pillars of corporate finance.
- However, Nepalese industries are facing difficulty in their survival by the cause of rescission, which can bring best and worst in corporate finance such an environment should be efficient enough to cope with the possible worst happenings in future for working capital management.
- He has said that managing the working capital resources for a profit making industries are routine affairs of just making payment and arranging collection of debtors.
- In contrast, the company in debt trouble, it is rather difficult to meet its working capital gap by way of debt financing, the company should have to be interest, which may cause to increase in the percentage of operating expenses to the turnover and depletion in the profits.
- Therefore, spontaneous sources of working capital will be a better source for working capital in order to improve its performance.
- Consequently, in a changed economic scenario, every company should realize that inability to manage working capital might lend them in a various circle that can be hard to get out from.
- It is indeed essential for industries to tighten their belts had checks their financial stability to face and stand in forth coming complete day.

Bansal, Payal (2009) carried out "A research on a study on working capital management of commercial bank" an unpublished Master Level Thesis submitted to Central Department of Management, T.U. During the study, she had used secondary data & used many financial tools analyzing the working capital management.

**Objectives of the study:**

- To highlight and examine the management of working capital in standard chartered Bank Nepal Ltd. and Himalyan Bank Limited.

**Major findings of the study:**

- She found out the net working capital of both banks is positive.
- The liquidity position of both banks are increasing trend. It shows the satisfactory level of working capital.
- The major components of current assets of both banks are cash and bank balance, loan & advance and government securities.
- The trend value of interest earned to total assets ratio on banks are decreasing.
- In case of profitability position, both banks have constant level of growth in profitability during the study period.

Yogi, Dhruva Nath (2011) carried out "A study on a study on working capital management of Unilever Nepal Limited (ULN Ltd)" an unpublished thesis submitted to Shanker Dev Campus, Faculty of Management, T.U. This study was conducted through basically secondary data. The data had been collected from annual reports and audited financial statements of the company submitted to Nepal Stock Exchange Company. The data has been directly extracted from the balance sheet and income statement of the company. The primary information has been collected through interview with the officials of ULN Ltd. Various Ratio analysis is used to analyse the data and Karl Pearson's coefficient of correlation 'r' is used to examine the relationship between liquidity position.

**Objectives of the study:**

- To analyze the liquidity, composition of working capital, assets utilization and profitability position.

- To analyze of the optimal level of working capital, to analyze the current assets and current liability policy.
- To analyze the financing pattern of working capital, liquidity position, and profitability position.
- To examine the relationship between liquidity and profitability position.

**Major findings of the study:**

- The liquidity position of the company is fluctuation 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.

Thapa, Punam (2012), carried out "A study on working capital management of Nepal Telecom" an unpublished Master Level Thesis submitted to Central Department of Management, T.U.

**Objectives of the study:**

- To analyze and evaluate the working capital management of Nepal Telecom.
- To show the efficiency of management of working capital through the turnover ratios.

**Major findings of the study:**

- The receivables turnover ratios are moderately fluctuating and vary from the lowest 2.34 times and the highest 3.35 times.
- Likewise, the cash turnover ratio has are moderately fluctuating and vary the lowest 0.51times to 0.89 times during the study period since the rate of increase in the sales volume is lower than that of cash& bank balance.
- In the three years, cash & bank balance are exceeding net sales by a significant amount. Hence the result is dissatisfactory.

- The average net working capital turnover is 0.488 times. Since the ratio has decreased from 0.58 times to 0.36 times during the study period, we can say that the company is not utilizing its net working capital effectively.
- The amount of working capital is exceeding net sales every year.
- Hence from the analysis, it is revealed that Nepal Telecom has kept excess amount of working capital in comparison to sales which can be considered as the sign of efficient working capital management.

### **2.3 Research Gap**

Some of the previous researchers have selected various enterprises whereas some have concentrated on only one or two companies. Many changes took place in working capital and production processes as compared to the last few years. So, fresh study related to working capital management of Nepal Telecom is required to explore impact on financial performance because of change in working capital. Some researcher used secondary data only. Both financial as well as statistical tools like ratio analysis, turnover, cash conversion cycle, mean, standard deviation, coefficient of correlation and probable error were used in this research.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

This study on working capital management in Nepal Telecom Limited, is exploratory type of research. This study is based on the data obtained from secondary sources. A descriptive research design was used to explore investment on working capital of NTC.

#### **3.2 Population and Sample**

There are 392 listed companies in Security Board. Out of them, there are four communication organization viz. Nepal Telecom, NCELL, UTL and Hello Nepal. Among them, Nepal Telecom was selected because it has been able to provide qualitative telecom service as well as creating employment opportunities to Nepalese people. It has also brought sophisticated technology of producing services.

#### **3.3 Nature and Sources of Data**

This study was based on secondary data. The secondary data were obtained from annual reports and audited financial statements (P/L A/C and balance sheet) of the company submitted to NEPSE. The secondary data and information were collected from the various publications and the data available in the record of Nepal Telecom Limited. The major sources of secondary data are as follows:

- Various documents (i.e. accounting and financial reports) of Nepal Telecom.
- Different bulletin and annual reports of NTC.
- Related act and regulation published by government and the company.
- Statistical Year Book of Nepal (CBS), various institution's annual reports, related government and non- government publications about working capital management, books, journals articles, various research studies, website of the company and SEBON.

### **3.4 Collection of Data**

Required financial data were collected from the corporate office of NTC. Data used for the research were collected through audited annual reports, interview with related officials, published books and journals, bulletins and magazines.

### **3.5 Data Processing Procedure**

The collected data were tabulated as per the need of this study. In order to process the data, financial statement and other available information were reviewed. These data were grouped in different tables and charts according to their nature.

### **3.6 Tools for Analysis**

The data collected from various sources were managed, analyzed and presented in proper tables and formats and were interpreted and explained wherever necessary. Financial and statistical tools used to analyze the collected data were as follows:

#### **3.6.1 Financial Tools**

"The most useful tools of financial analysis are ratio analysis. In order to bargain more effectively for outside funds, the management of a firm should be interested in all aspects of financial analysis that outside supplier of capital use it in evaluating the firm" (Van Horn, 2000: 205). With the help of financial ratio analysis the financial condition and performance of the firm can be known. The following financial ratios were used to analyze financial position of an NTC.

#### **a) Liquidity Ratio**

Liquidity ratio is employed to measure the company's ability to meet short-term obligations. These ratios provide insight into the present cash solvency in the event of adverse financial condition. This ratio is used to measure the company's short-term obligations with short-term resources available at a given point of time.

#### **i) Current Ratio**

This ratio measures short-term solvency, i.e. its ability to meet short-term obligation. As

a measure of creditors versus current assets, it indicates each rupee of current assets available to meet current liabilities.

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

## **ii) Quick Ratio**

Quick Ratio establishes a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of value. Cash is the most liquid assets. Other assets, which are considered to be relatively liquid and included in quick assets, are book debts and marketable securities. This quick ratio can be found out by dividing the total of quick assets by total current liabilities.

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

## **iii) Cash to Current Assets Ratio**

This ratio is employed to measure whether total cash balance is sufficient to cover its current assets. It is calculated by dividing total cash balance by current assets.

$$\text{Cash Balance to Current Assets Ratio} = \frac{\text{Cash Balance}}{\text{Current Assets}}$$

## **b) Turnover Ratio**

In a business concern, through these ratios, it is known whether the funds employed have been used effectively in the business activities or not. The following are the ratio employed to analyze the activeness of the concerned company.

### **i) Inventory Turnover Ratio**

Inventory turnover ratio shows the efficiency of the business concern in an inventory management. It established the relationship between cost of goods sold during the given period and average amount of inventory and lower stock ratio suggests that management should manage its inventory properly. It is calculated as follows:

$$\text{Inventory Turnover Ratio} = \frac{\text{Sales}}{\text{Inventory}}$$

**ii) Debtors / Receivables Turnover Ratio:**

Although there is no measurement, higher turnover of current assets is always desirable as it indicates the maximum utilization of current assets during the year. Therefore, lower ratio indicates greater volume of working capital and vice versa.

$$\text{Debtors Turnover Ratio} = \frac{\text{Net Sales}}{\text{Debtors Receivable}}$$

**iii) Cash Turnover Ratio**

Cash turnover ratio shows the number of times the average cash balance is turned over during the year. It measures the speed with which cash moves through the organization operations. The ratio is computed by dividing sales by cash and bank balance.

$$\text{Cash Turnover Ratio} = \frac{\text{Sales}}{\text{Cash Balance}}$$

**iv) Net Working Capital Turnover Ratio**

The ratio shows the number of times the working capital turned over during the year. The higher ratio indicates the utilization of the working capital and vice versa. The ratios can be defined as,

$$\text{Net Working Capital Turnover Ratio} = \frac{\text{Sales}}{\text{Net Working Capital}}$$

Where,

$$\text{Net Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

**c) Profitability Position**

Profitability measures the efficiency of the organization; profitability of the firm can be measured by its profitability ratio. So, it plays significant role in any organization. Generally, the profitability positions of the companies are analyzed with the help of following ratios.

### **i) Net Profit Margin Ratio**

The ratio measures the relationship between net profit and sales of the company. It measures the overall profitability or company's ability to earn net profit. It is computed as net profit by sales.

$$\text{Net Profit Margin Ratio} = \frac{\text{Net profit}}{\text{Sales}}$$

### **ii) Operating Ratio**

The overall ratio is an important ratio, which is calculated to ascertain the relationship between operating expenses and volume of sales. The ratio is computed as follows:

$$\text{Operating Ratio} = \frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Sales}} \times 100$$

Operating Expenses = Administrative Expenses + Selling & Distribution Expenses + Financial Expenses

Higher ratio indicates the lower efficiency of the company and vice versa. Higher operating ratio means small amount of operating income to meet interest and dividends. So, it is not seems to be favorable for company while there is higher rate of operating ratio.

### **iii) Return on Total Assets Ratio**

Return on total assets ratio measures the profitability of the company by established relationship between net profit after taxes and total assets. It also helps to understand the utilization of assets of the company. The ratio is computed as follows:

$$\text{Return on Total Assets} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}} \times 100$$

### **iv) Return on Net Worth Ratio**

The ratio indicates the return to the shareholders. It shows whether the firm has earned satisfactory return for its shareholders or not. Higher return on net worth ratio indicates higher return to the shareholders and vice-versa. The ratio is computed as follows:

$$\text{Return on Net Worth Ratio} = \frac{\text{Net Profit After tax}}{\text{Net Worth}} \times 100$$

#### v) **Return on Working Capital / Return on Current Assets Ratio**

The ratio measures the profitability position of the company with respect to current assets. Higher ratio indicates higher utilization of current assets to earn profit and vice-versa. The ratio is computed by dividing net profit after tax by current assets or working capital.

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

#### d) **Working Capital Cash Flow Cycle**

The continuous flow from cash to supplier, to inventory, to account receivable and back into cash is known as working capital cash flow cycle. It continuously repeats. The cycle demonstrates the conversion of raw materials and labor to cash. Hence this concept is also called cash conversion cycle model.

Cash conversion cycle model has been applied to more complex business and it is useful when analyzing the effectiveness of a firm's working capital management. There are following four factors of cash conversion cycle model.

##### i. **Inventory Conversion Period (ICP)**

The length of time required converting raw material into finished goods and then to sell these goods can be defined as inventory conversion period. This period indicates its product. Inventory turnover is calculated by dividing the cost of goods sold by average inventory. It can be said as time required for conversion inventory into cash. It can be calculated as follows:

$$\text{Inventory Conversion Period} = \frac{360 \text{ Day}}{\text{Inventory Turnover}}$$
$$\text{Inventory Turnover} = \frac{\text{Cost of good Sold}}{\text{Average Inventory}}$$

##### ii. **Receivable Conversion Period (RCP)**

Receivable conversion period indicates the number of day's debtor's turnover into cash.

It analyses to determine collection of debtors and also efficiency of collection effects. It is one of the important financial tools for the measurement of cash conversion cycle. Generally, the longer the collection period, the more efficient is the management of credit receivable collection period is also known as average collection period or day's sales outstanding (DSO) RCP be calculated s follows:

$$\text{Receivable Conversion Period} = \frac{\text{Sales}}{\text{Receivalestu Mover}}$$

$$\text{Sales Receivable Turnover} = \frac{\text{Sales}}{\text{Devetors}}$$

### iii. Payable Deferral Period (PDP)

Time required purchasing raw material and labor and the payment of cash for them is called payable deferral period. It indicates the speed of creditor payable conversion period is favorable for the creditor too much higher period also can hamper the credit worthiness of the company. The payable deferral period can be calculated using following formula:

$$\text{Payable Deferral Period} = \frac{\text{Account Payable}}{\text{Purchase Perday}}$$

### iv. Cash Conversion Cycle (CCC)

Cash conversion cycle is an important financial tool and also a quick and convenient way to analyze the ongoing liquidity of the firm over time. It generally measures the length of time that funds tied up in working capital. Cash conversion cycle can be calculated by using following formula:

$$\text{Cash Conversion Cycle (CCC)} = \text{Inventory Conversion Period (ICP)} + \text{Receivable Conversion Period} - \text{Payable Deferral Period (PDF)}$$

As we know that inventory and receivables are cash inflow of business and PDP is cash outflow of business. So for the calculation of conversion cycle RCP and ICP should be added and PDP should be deducted.

## 3.6.2 Statistical Tools used

The research hold varies statistical tools, which are defined as follows:

### i. Mean

The most popular and widely used measure of representing the entire data by one value is known as average or mean. The value is obtained by adding together all the items and by dividing this total by the number of items. It represents the entire data, which lies almost between the two extremes. Mean can be calculated as;

$$\text{Mean} = \frac{\sum X}{n}$$

## **ii. Standard Deviation (S.D)**

The standard deviation is an important and widely used measure of dispersion. The measurement of the scatters of the mass of figures in a series about in average is known as dispersion. The standard deviation (SD) is an absolute measurement of dispersion in which the drawbacks present in other measures of dispersion are removed. The high amount of dispersion reflects high standard deviation. The small standard deviation means the high degree of homogeneity of the observations. It is calculated as:

$$\text{SD}(\sigma) = \sqrt{\frac{\sum(X - \bar{X})^2}{n}}$$

## **iii. Coefficient of Variation**

The coefficient of variation reflects the relation between standard deviation and mean. The relative measure of dispersion based on the standard deviations known as coefficient of variation. The coefficient of dispersion based on standard deviation multiplied by 100 is known as the CV. It is used for comparing variability of two distributions; the CV is defined as,

$$\text{CV} = \frac{\sigma}{\bar{X}} \times 100$$

Greater the CV, the more variable or conversely less consistent, less uniform, less sustainable and homogenous than the consistent more uniform, more stable and homogenous. This nature of CV uses that actual size of working capital.

## **iii. Simple Correlation Coefficient**

The relationship between two variables (one dependent and one independent) is called simple correlation. The most important method of measuring the correlation between the

two variables is "Karl Pearson's coefficient of Correlation". This method of measuring correlation is also called "Pearsonian coefficient of Correlation". This is the mathematical method of measuring the degree of association between the two variables.

$$\text{Coefficient of Correlation (r)} = \frac{\text{CoVariance of X \& Y}}{\sigma_x \sigma_y}$$

Where,

Cov (X,Y) = Covariance of X and Y

$\sigma_x$  = Standard deviation of X

$\sigma_y$  = Standard deviation of Y

#### **v. Probable Error (PE)**

Probable error of the correlation coefficient denoted by PE is measure of testing reliability of the calculated value of 'r'

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

- a) If  $r < 6PE$ , it is not significant. So there is no evidence of correlation.
- b) If  $r > 6PE$ , it is highly significant.

## CHAPTER - IV

### DATA PRESENTATION AND ANALYSIS

#### 4.1 Working Capital of NTC

Different kinds of assets are needed to operate a business for the day-to-day business operation. The major current assets of Nepal Telecom are cash and bank balance, loan and advances, sundry debtors and stores & Spares. Miscellaneous current assets are also one of the components of current assets. Interest accrued on investment and unexpired L/C & Advances are included in miscellaneous current assets.

The following table shows the amount of cash and bank balance, inter-branch balance, loan and advance, sundry debtors, stores & Spares and miscellaneous current assets of Nepal Telecom during the fiscal year 2007/08 to 2011/12.

**Table 4.1**  
**Current Assets Composition of Nepal Telecom**

(Rs. '000')

<b>Fiscal Year</b>	<b>Stores &amp; Spare</b>	<b>Sundry Debtors</b>	<b>Loans &amp; Advance</b>	<b>Cash &amp; Bank Balance</b>	<b>Miscellaneous</b>	<b>Total Current Assets</b>
2007/08	483,231	2,468,080	389,209	8,248,426	3,747,680	15,336,626
2008/09	400,784	3,030,277	394,753	10,116,463	4,481,870	18,424,147
2009/10	301,309	2,610,352	401,648	11,797,087	5,815,243	20,925,639
2010/11	309,857	2,825,943	505,656	9,584,469	7372,428	20,598,353
2011/12	329,315	3,099,496	601,027	12,028,795	6,467,889	22,526,522
Average	364899.2	2806829.6	458458.6	10355048	5577022	19562257.4

*Source: Annual Report of Nepal Telecom.*

The table 4.1 reveals that the compositions of current assets of Nepal Telecom. Cash & Bank balance increased rapidly over the study period. Similarly, Loan & Advance also increased. Sundry debtors were not in consistency. Store & spares decreased in the fiscal year 2009/10 and thereafter increased. Miscellaneous increased from the fiscal year

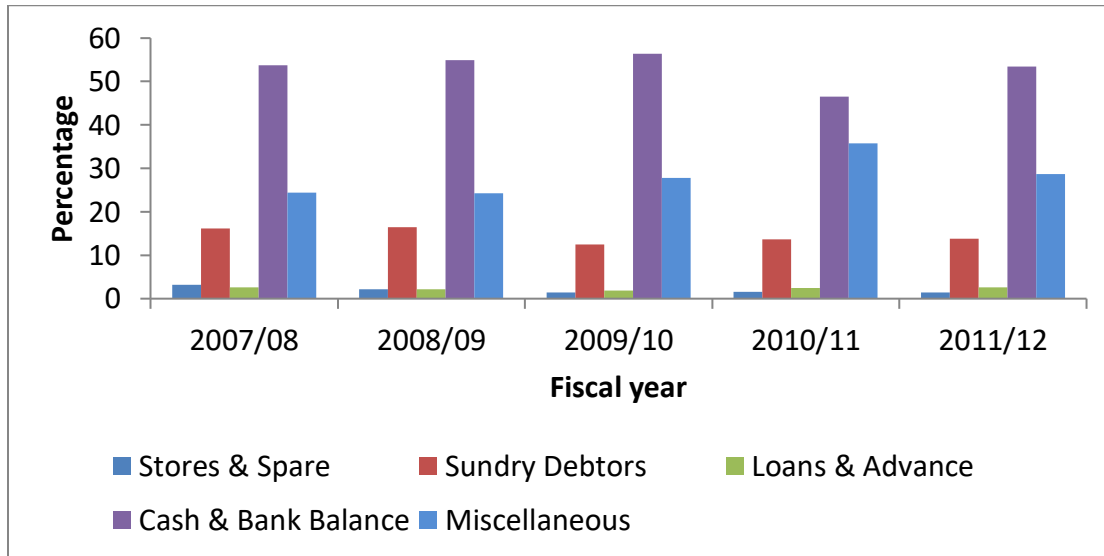
2007/08 and decreased in the fiscal Year 2011/12. The overall, total current assets increased progressively during the study period.

**Table 4.2**  
**Percentage of Current Assets on Total Current Assets**

<b>Fiscal Year</b>	<b>Stores &amp; Spare</b>	<b>Sundry Debtors</b>	<b>Loans &amp; Advance</b>	<b>Cash &amp; Bank Balance</b>	<b>Miscellaneous</b>	<b>Total</b>
2007/08	3.15	16.10	2.54	53.76	24.45	100
2008/09	2.18	16.45	2.14	54.91	24.33	100
2009/10	1.44	12.47	1.92	56.38	27.79	100
2010/11	1.50	13.72	2.46	46.53	35.79	100
2011/12	1.46	13.76	2.67	53.40	28.71	100
Average	1.946	14.5	2.346	52.996	28.214	100

Source: Table 4.1

**Figure 4.1**  
**Percentage of Current Assets**



The figure 4.1 shows the percentage of currents assets to total current assets of Nepal Telecom for the five fiscal years. In comparison to other current assets the percentage of cash & bank balance was high. Percentage of store & spare was less in comparison to other current assets during the five fiscal years of the study.

#### 4.1.1 Current Assets to Total Assets Ratio

The position of working capital on total assets of the company can be analyzed by calculating the percentage of total assets. It shows the percentage of investment made gross working capital of the company. It is calculated by dividing the total assets by the current assets.

**Table 4.3**

**The Percentage of Gross Working Capital (Current Assets) on Total Assets**

(Rs in '000')

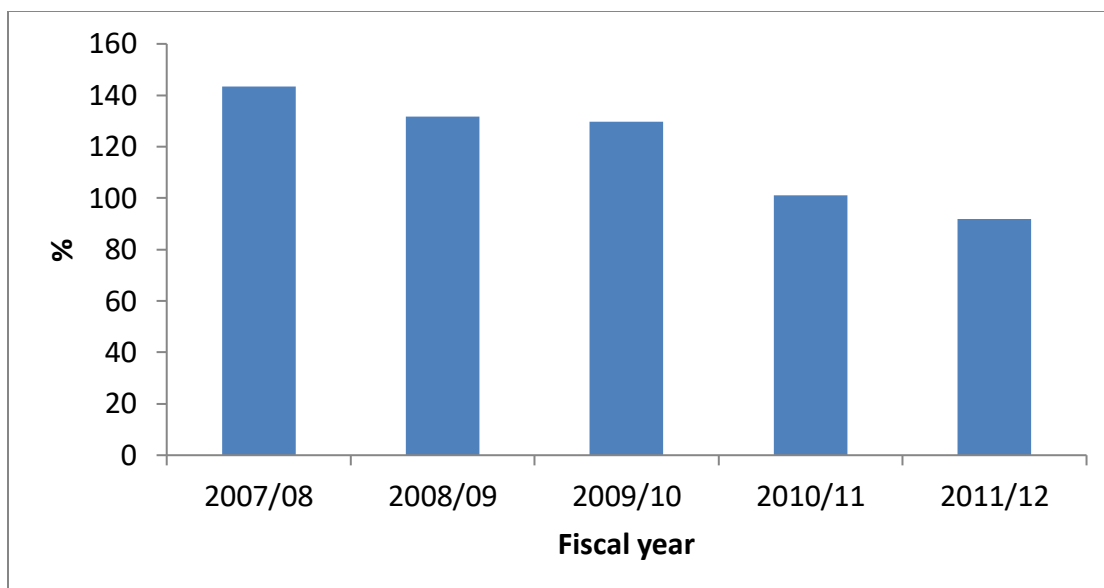
Fiscal year	Current Assets	Total Assets	%
2007/08	15,336,626	25,281,824	60.66
2008/09	18,424,147	29,892,993	61.63
2009/10	20,925,639	32,652,787	64.09
2010/11	20,598,353	35,572,772	57.90
2011/12	22,526,522	39,351,406	57.24
Mean	19,562,257.4	32,550,356.4	60.30
S.D.			2.51
C.V.			4.16%

*Source: Appendix-1*

The table 4.3 shows that the percentage of current assets to total assets are not consistent over the study period. The current assets and total assets were in increasing trend in every fiscal year. The current assets to total assets percentage increased upto the fiscal year 2009/10 thereafter it was in decreasing trend. The highest percentage was 60.66% in the fiscal year 2007/08 during which current assets were Rs. 15,336,626 thousand and total assets were Rs.25,281,824 thousand and the lowest percentage was 57.24% in the fiscal year 2011/12, during which current assets and total assets were Rs.97,811,287 thousand and Rs.162,751,782 thousand respectively. The standard deviation and coefficient of covariance was 2.51 and 4.16 % respectively.

**Figure 4.2**

**Gross Working Capital (Current Assets) to Total Assets Ratio**



The figure 4.2 shows that the trend of Current Assets to total assets percentage of Nepal Telecom which is not consistent over the study period.

#### 4.1.2 Percentage of Net Working Capital on Total Assets

The major objective of this percentage is to examine the portion of net working capital on total assets. Investment in net working capital is essential to run the business smoothly. It is calculated by dividing NWC by TA.

**Table 4.4**  
**Percentage of Net Working Capital on Total Assets Ratio**  
(Rs in '000')

Fiscal year	Net Working Capital	Total Assets	%
2007/08	12,393,250	25,281,824	49.02
2008/09	14,748,735	29,892,993	49.34
2009/10	16,835,286	32,652,787	51.56
2010/11	16,739,869	35,572,772	47.06
2011/12	18,050,769	39,351,406	45.87
Mean	15,753,581.8	32,550,356.4	48.57
S.D.			1.96
C.V.			4.04%

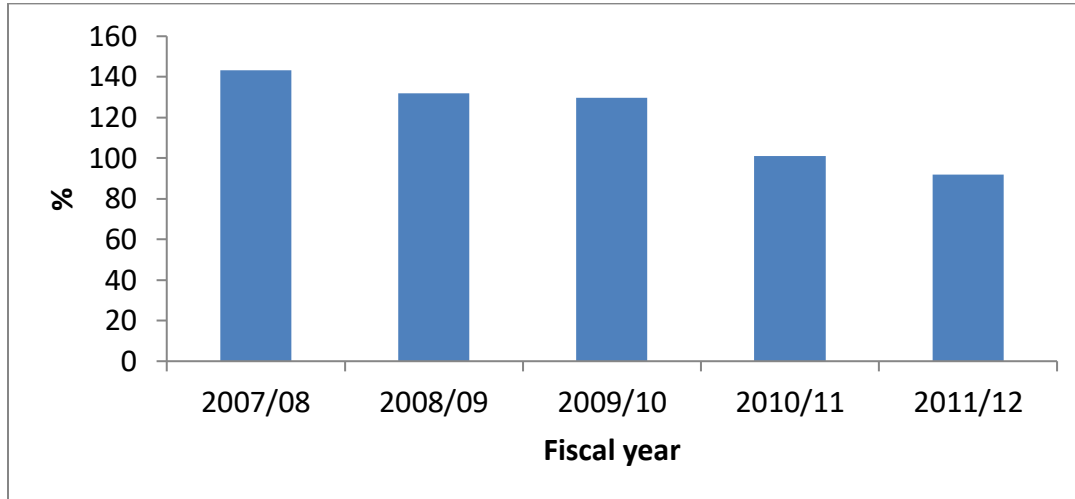
*Source: Appendix-2*

The table 4.4 shows percentage of net working capital on total assets of Nepal Telecom.

The net working capital and total assets are in increasing trend in every fiscal year. The percentage of net working capital on total assets increased up to the fiscal year 2009/10 and thereafter it was in decreasing trend. The highest ratio was 51.56% in the fiscal year 2009/10, during which net working capital was Rs.16,835,286 thousand and total assets were Rs.32,652,787 thousand. The lowest percentage was 45.87% in the fiscal year 2011/12, during which net working capital was Rs.18,050,769 thousand and total assets were Rs. 39,351,406 thousand. The standard deviation and coefficient of covariance were 1.96 and 4.04% respectively.

**Figure 4.3**

**Percentage of Net Working Capital on Total Assets**



The figure 4.3 shows percentage of net working capital on total assets of Nepal Telecom. The highest percentage was in the fiscal year 2009/10. Overall the percentage was not consistent during the study period.

**4.1.3 Calculation of Percentage of Net Working Capital on FA Ratio**

This ratio finds the financing policy of the company. It measures how much net working capital has been invested with respect to fixed assets. Net working capital is difference between CA and CL. This ratio can be calculated as NWC divided by FA as shown in the table.

**Table 4.5**

**Percentage of Net Working Capital on Fixed Assets**

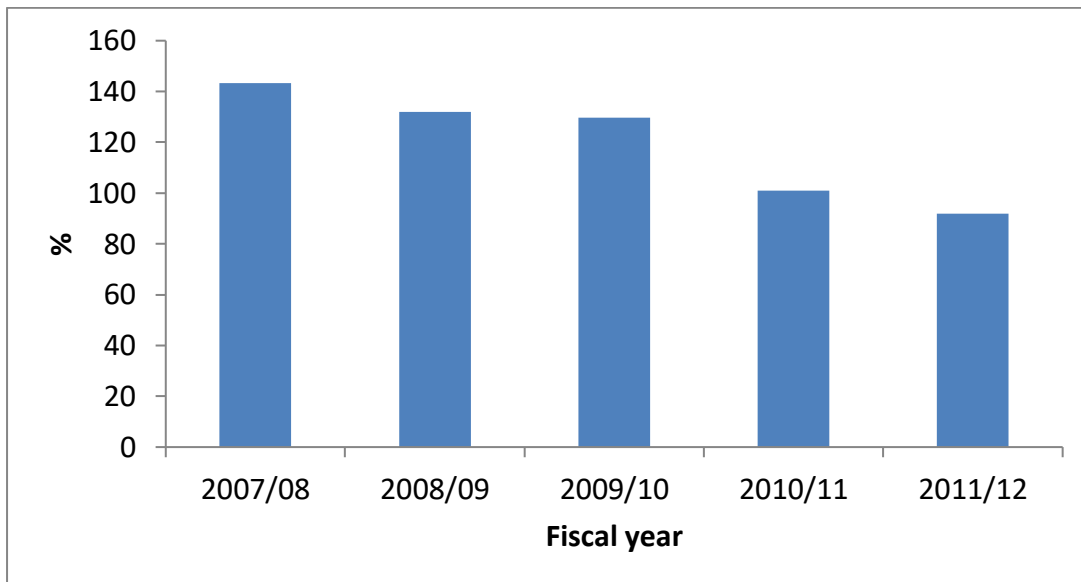
(Rs in '000')

Fiscal year	Net Working Capital	Fixed Assets	%
2007/08	12,393,250	6,840,397	181.18
2008/09	14,748,735	7,607,614	193.87
2009/10	16,835,286	7,664,206	219.66
2010/11	16,739,869	9,040,917	185.16
2011/12	18,050,769	10,088,427	178.93
Mean	15,753,581.8	6,728,433.6	191.76
S.D.			6.64
C.V.			3.46%

Source: Appendix-3

The table 4.5 reveals that the net working capitals to fixed asset percentage were not stable over the study period. The net working capital and fixed assets are in increasing trend in every fiscal year. The net working capital to fixed assets percentage increased to the fiscal year 2009/10 and thereafter it was in decreasing trend. The highest ratio was 185.16% in the fiscal year 2009/10, during which net working capital and fixed assets were Rs.16,835,286 thousand and Rs.7,664,206 thousand respectively and the lowest percentage was 178.93% in fiscal year 2011/12, net working capital was Rs. 18,050,769 thousand and fixed assets was Rs. 10,088,427 thousand. The standard deviation 6.64 and coefficient of covariance 3.46%.

**Figure 4.4**  
**Percentage of Net Working Capital on Fixed Assets**



The figure 4.4 shows that the net working capital to fixed assets percentage of Nepal Telecom. The highest percentage was 219.66% in the fiscal year 2009/10. Overall the percentage were not consistent during the study period.

#### **4.1.4 Calculation of Percentage of Cash & Bank Balance on Current Assets**

This ratio helps to know the position of cash and bank balance that has been used in the organization. It is calculated as cash and bank balance divided by current assets shown as table below.



**Table 4.6**  
**Percentage of Cash & Bank Balance on Current Assets**

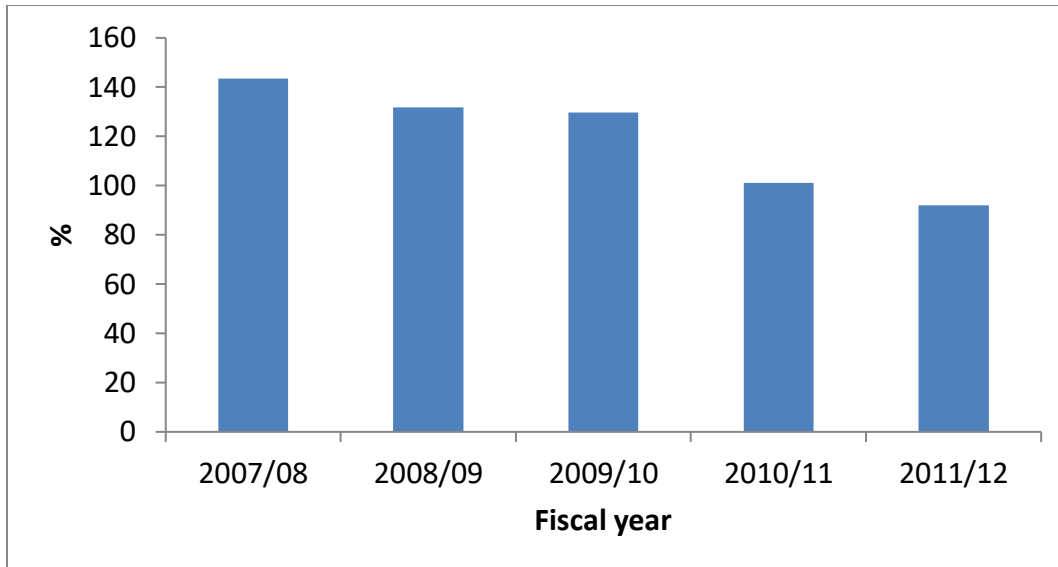
(Rs in '000')

<b>Fiscal year</b>	<b>Cash &amp; Bank Bal.</b>	<b>Current Assets</b>	<b>%</b>
2007/08	8,248,426	15,336,626	53.78
2008/09	10,116,463	18,424,147	54.91
2009/10	11,797,087	20,925,639	56.38
2010/11	9,584,469	20,598,353	46.53
2011/12	12,028,795	22,526,522	53.40
Mean	10,355,048	19,562,257.4	53.00
S.D.			3.40
C.V.			6.42%

*Source: Appendix-4*

The table 4.6 shows that the cash & bank balance percentage were not stable over the study period. The cash & bank balance increased every fiscal year except the fiscal year 2010/11. Similarly, current assets also increased every fiscal year of the study period. The highest ratio was 56.38% in the fiscal year 2009/10, during which cash & bank balance was Rs.11,797,087 thousand and current assets was Rs. 20,925,639 thousand and the lowest percentage of was 46.53% in fiscal year 2010/11, during which cash & bank balance was Rs.9,584,469 thousand and current assets was Rs.20,598,353 thousand. The standard deviation and coefficient of variance was 3.40 and 6.42% respectively.

**Figure 4.5**  
**Percentage of Cash & Bank Balance on CA**



The figure 4.5 presents that the Cash & Bank Balance on Current Assets percentage of Nepal Telecom. Cash & Bank Balance and current assets were rapidly increased over the study period but cash & bank balance to current assets ratio was not consistent.

#### 4.1.5 Calculation of Percentage of Debtor on Current Assets

Debtor is one of the major components of working capital. It indicates the debtor portion that is occupied in current assets. It is calculated as debtor divided by current assets shown in table below.

**Table 4.7**  
**Percentage of Debtors on Current Assets**

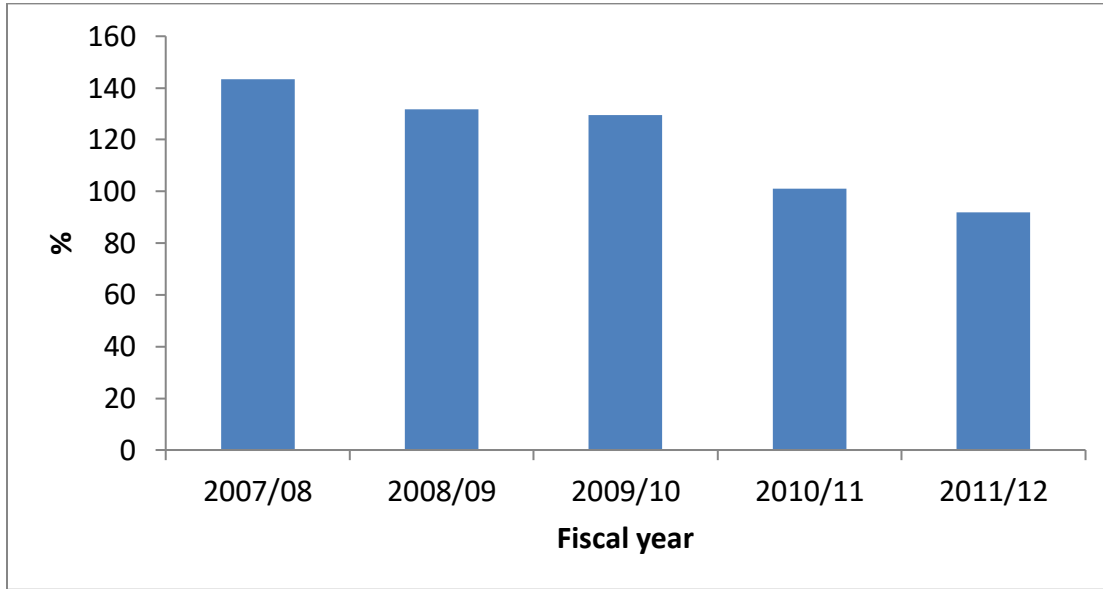
(Rs in '000')

Fiscal year	Debtors	Current Assets	%
2007/08	2,468,080	15,336,626	16.09
2008/09	3,030,277	18,424,147	16.45
2009/10	2,610,352	20,925,639	12.47
2010/11	2,825,943	20,598,353	13.72
2011/12	3,099,496	22,526,522	13.76
Mean	2,806,829.6	19,562,257.4	14.50
S.D.			1.52
C.V.			10.48%

Source: Appendix-5

The table 4.7 shows that the calculation of debtor to current assets percentage. The debtors increased every fiscal year except the fiscal year 2009/10 and 2010/11. But the current assets increased every fiscal year of the study period. The highest debtors to current assets percentage was 16.45% in the fiscal year 2008/09, during which debtor was Rs. 3,030,277 thousand and current assets was Rs.18,424,147 thousand and the lowest percentage of was 12.47% in fiscal year 2009/10, during which debtors was Rs. 20,925,639 thousand and current assets was Rs.2,610,352 thousand. The standard deviation was 1.52 and coefficient of variance was 10.48%

**Figure 4.6**  
**Percentage of Debtors on Current Assets**



The figure 4.6 shows that the debtors to current assets percentage of Nepal Telecom. The lowest percentage was in the fiscal year 2009/10. Overall the ratios are not consistent during the study period.

#### **4.1.6 Calculation of Percentage of Inventory on CA Ratio**

Inventory is one of major components of CA. This ratio will help to find proportion of inventory with respect to current assets. It can be calculated as inventory divided by current assets which can be shown as.

**Table 4.8**  
**Percentage of Inventory on Current Assets**

(Rs in '000')

<b>Fiscal year</b>	<b>Closing Inventory</b>	<b>Current Assets</b>	<b>%</b>
2007/08	483,231	15,336,626	3.15
2008/09	400,784	18,424,147	2.18
2009/10	301,309	20,925,639	1.44
2010/11	309,857	20,598,353	1.50
2011/12	329,315	22,526,522	1.46
Mean	364,899.2	19,562,257.4	1.95

S.D.			0.66
C.V.			33.85%

Source: Appendix-6

The table 4.8 shows that the calculation of inventory on current assets percentage. The inventory of Nepal Telecom was not stable during the study period. But the current assets increased every fiscal year of the study period. The highest inventory on current assets percentage was 3.15 % in the fiscal year 2007/08, during which inventory was Rs. 483,231 thousand and current assets was Rs.15,336,626 thousand and the lowest percentage of was 1.44 % in fiscal year 2009/10, during which inventory was Rs. 301,309 thousand and current assets was Rs. 20,925,639 thousand. The standard deviation was 0.66 and coefficient of variance 33.85 %.

**Figure 4.7**

**Percentage of Inventory on Current Assets Ratio**

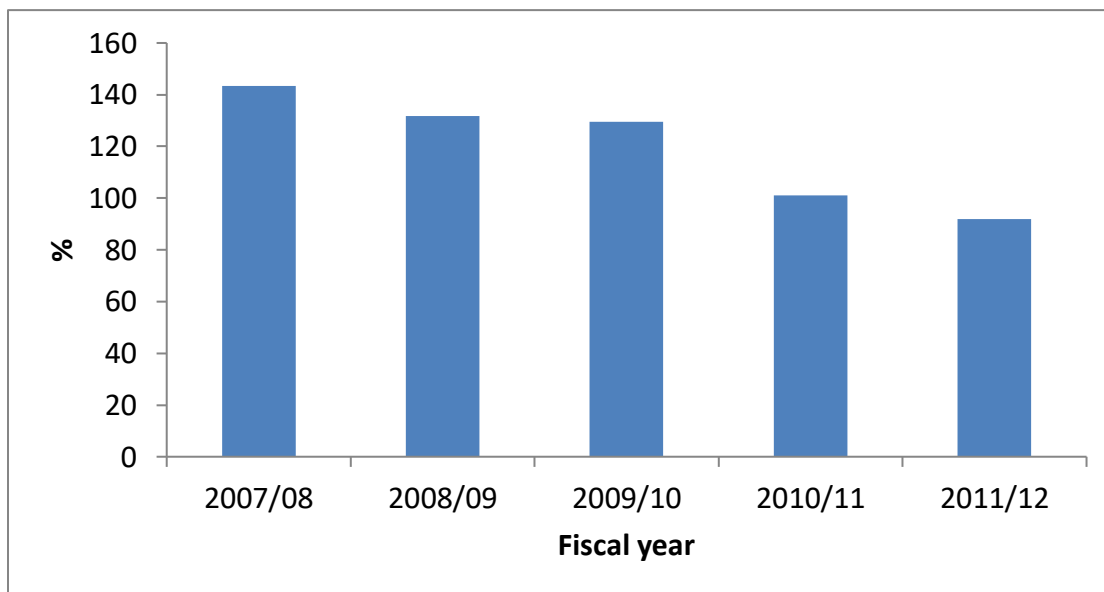


Figure 4.7 shows that the inventory to current assets Ratio of Nepal Telecom. The highest ratio was in the fiscal year 2007/08. Overall the ratios are decreasing trend during the study period.

**4.2 Analysis of Liquidity Position**

Liquidity of any business organization is directly related with working capital or current

assets and current liabilities of the organization. In other words, one of the main objectives of working capital management is keeping sound liquidity position. Nepal Telecom is a different organization, which is engaged in mobilization of funds. So without sound liquidity position, Nepal Telecom is not able to operate its function. To measure the Nepal Telecom's solvency position or ability to meet its short-term obligation, various liquidity ratios are calculated and to know the trend of liquidity, trend analysis of major ratio have been considered.

#### 4.2.1 Calculation of Current Ratio

This ratio indicates the current short-term solvency position of Nepal Telecom. Higher current ratio indicates better liquidity position. In other words, current ratio represents a margin of safety, i.e. a 'cushion' of protection for creditors and the highest the current ratio, greater the margin of safety, large the amount of current assets in relation to current liabilities, more the organizations ability to meet its current obligations. It is calculated as current assets by current liabilities.

The following table shows the current ratio to compare the working capital management of Nepal Telecom.

**Table 4.9**  
**Current Ratio**

(Rs in '000')

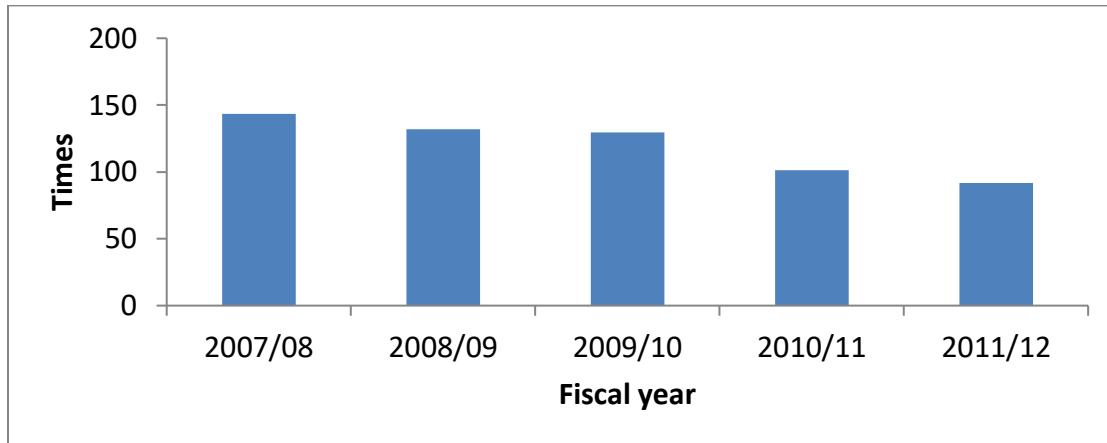
<b>Fiscal year</b>	<b>Current Assets</b>	<b>Current liabilities</b>	<b>Times</b>
2007/08	15,336,626	2,943,376	5.21
2008/09	18,424,147	3,675,412	5.01
2009/10	20,925,639	4,090,353	5.11
2010/11	20,598,353	3,858,484	5.34
2011/12	22,526,522	4,475,753	5.03
Mean	19,562,257.4	3,808,675.6	5.14
S.D.			0.12
C.V.			2.33%

*Source: Appendix-7*

The table 4.9, shows that the current assets of Nepal Telecom increased every fiscal year of study period. Similarly, current liabilities also increased every fiscal year except in the

fiscal year 2010/11. Current ratios are not consistent during the study period. The highest current ratio was 5.34 times in the fiscal year 2010/11, during which current assets was Rs.20,598,353 thousand and current liabilities was Rs.3,858,484 thousand and the lowest current ratio was 5.01 times in fiscal year 2008/09, the standard current ratio is 2:1, but the Nepal Telecom current ratio is greater than the standard ratio. The standard deviation was 0.12 and coefficient of variance was 2.33%.

**Figure 4.8**  
**Current Ratio**



The figure 4.8 represents that the current ratio of Nepal Telecom. Current assets ratio of Nepal Telecom was not consistent during the study period.

#### 4.2.2 Calculation of Quick Ratio

Quick ratio establishes a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of original value. Cash is a most liquid asset. Quick asset is equals to total current assets without Stores & Spares. This quick ratio is calculated as dividing the total of quick assets by total current liabilities.

For this study, except the stores & spares of total current assets are quick assets. The following table shows the quick ratio of Nepal Telecom.

**Table 4.10**  
**Quick Ratio**

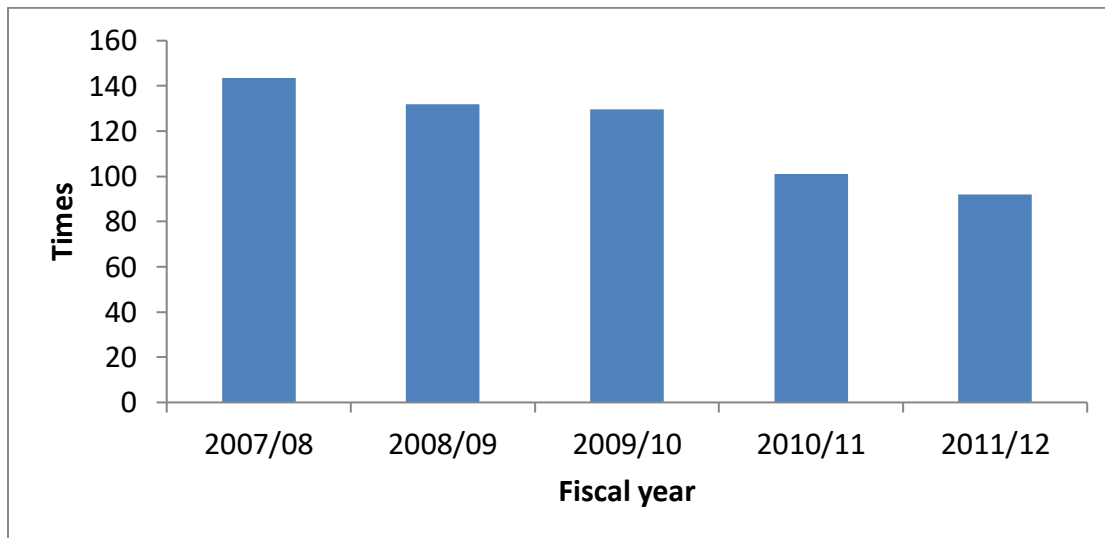
(Rs in '000')

Fiscal year	Quick Assets	Current liabilities	Times
2007/08	14,853,395	2,943,376	5.05
2008/09	18,023,363	3,675,412	4.90
2009/10	20,624,330	4,090,353	5.04
2010/11	20,288,496	3,858,484	5.26
2011/12	22,197,207	4,475,753	4.96
Mean	19,197,358.2	3,808,675.6	5.042
	S.D.		0.12
	C.V.		2.38%

Source: Appendix-8

The table 4.10 depicts that the quick ratios are not consistent over the study period. The quick assets of Nepal Telecom increased every fiscal year of study period. Similarly, current liabilities also increased every fiscal year except the fiscal year 2010/11. The highest quick ratio was 5.26 times in the fiscal year 2010/11, during which quick assets was Rs.20,288,496 thousand and current liabilities was Rs.3,858,484 thousand and the lowest current ratio of Nepal Telecom was 4.90 times in fiscal year 2008/09, during which quick assets was Rs.18,023,363 thousand and current liabilities was Rs.3,675,412 thousand. The standard quick ratio is 1:1, but the Nepal Telecom ratio is higher then the standard ratio. The standard deviation was 0.12 and coefficient of variance was 2.38%.

**Figure 4.9**  
**Quick Ratio**



The figure 4.9 represents that the quick assets and current liabilities with quick ratio of Nepal Telecom. Quick assets and current liabilities rapidly increased over the study period but quick ratio was not stable.

### **4.3 Analysis of Turnover Position**

Activity ratios are used to evaluate the efficiency with which the organization manages and utilizes its assets. These ratios are also employed to evaluate the speed with which assets are being converted and turnover. These ratios moreover, help in measuring the organizations ability to utilize their available resources.



### 4.3.1 Calculation of Inventory Turnover Ratio

This ratio indicates how effectively the organization manages inventory and the efficiency of the firm in selling its product. Inventory turnover ratio is defined as the cost of goods sold or sales dividing by inventories.

Inventory turnover ratio shows how rapidly the inventory is turning into receivable through sales. Generally, a high inventory turnover is the indicative of good inventory management. A low inventory turnover implies excessive inventory level then warranted by production and sales activities or a slow moving or obsolete inventory.

**Table 4.11**  
**Inventory Turnover Ratio**

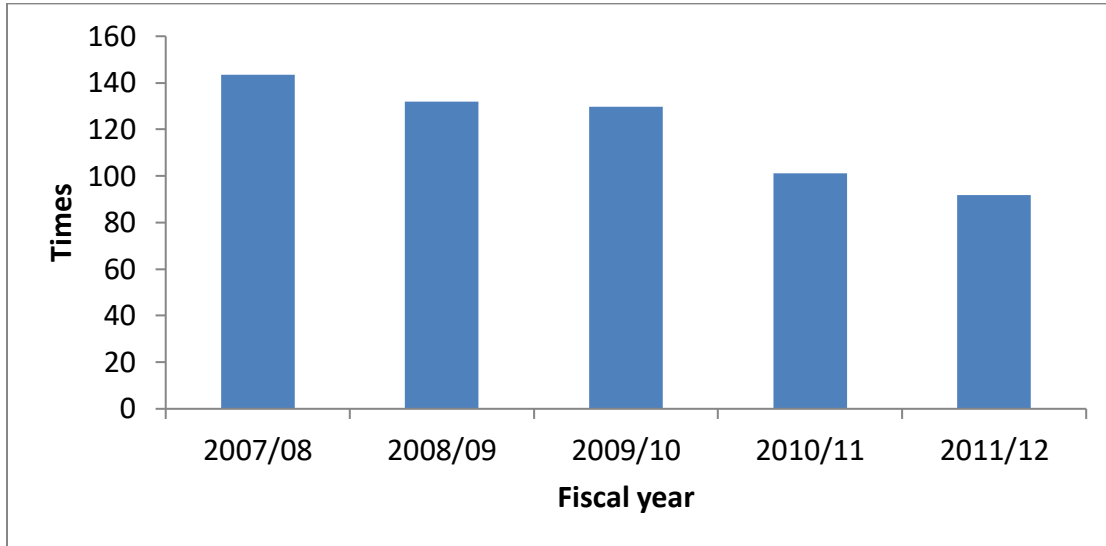
(Rs in '000')

<b>Fiscal year</b>	<b>Net sales</b>	<b>Closing inventory</b>	<b>Times</b>
2007/08	6,159,520	483,231	12.75
2008/09	7,208,087	400,784	17.98
2009/10	6,070,423	301,309	20.15
2010/11	8,584,144	309,857	27.70
2011/12	10,413,655	329,315	31.62
Mean	7,687,165.8	364,899.2	22.04
S.D.			6.78
C.V.			30.76%

*Source: Appendix-9*

The table 4.11 shows that the inventory turnover ratios of Nepal Telecom are always in increasing trend over the study period. The net sales increased every fiscal year but in the fiscal year 2009/10 net sales decreased. Closing inventory increased only on the fiscal year 2011/12, thereafter continuously decreased over the study period. The highest inventory turnover ratio was 31.62 times in the fiscal year 2011/12, during which net sales was Rs.10,413,655 thousand and closing inventories was Rs.329,315 thousand and the lowest inventory turnover ratio was 12.75 times in fiscal year 2007/08, during which net sales was Rs.6,159,520 thousand and closing inventories was Rs.483,231 thousand. The standard deviation was 6.78 and coefficient of variance was 30.76%.

**Figure 4.10**  
**Inventory Turnover Ratio**



The figure 4.10 represents that net sales and inventory with inventory turnover ratio. Net sales are increased except the fiscal year 2009/10 but inventory are increased only fiscal year 2007/08 thereafter decreased in the study period. Inventory ratio is rapidly increased over the study period.

#### 4.3.2 Calculation of Debtors/ Receivables Turnover Ratio

Debtors/Receivables turnover ratio indicates the speed with which receivable are being converted into sales. This turnover ratio is calculated as net sales by debtors.

The table below shows the net sales to debtors / receivables ratio. This ratio analyzes the capacity of Nepal Telecom management in utilization of fund in current assets.

**Table 4.12**  
**Debtors (Receivable) Turnover Ratio**

(Rs in '000')

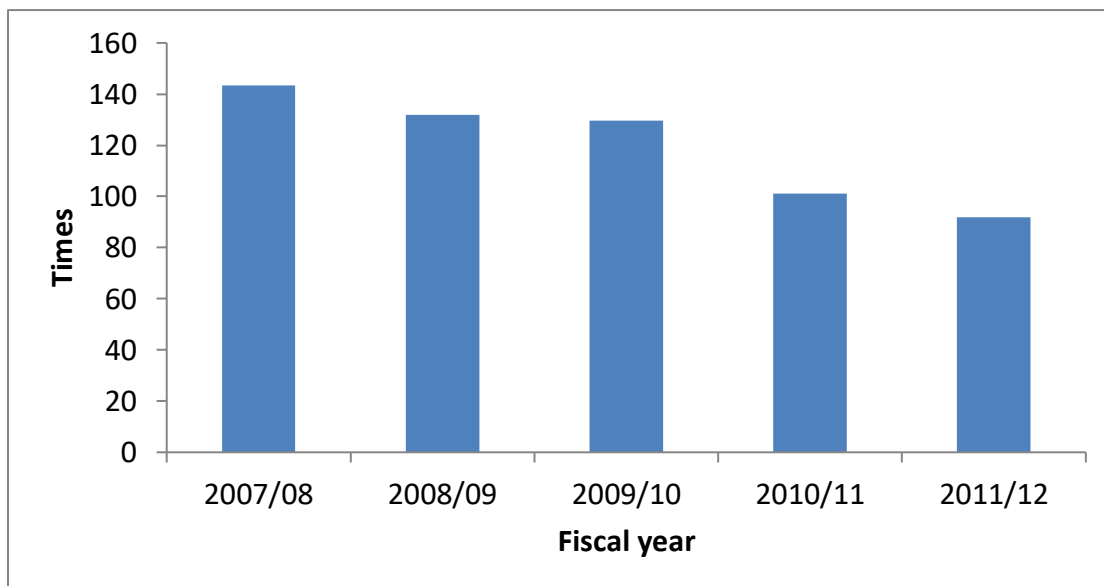
Fiscal year	Net sales	Debtors	Times
2007/08	6,159,520	2,468,080	2.50
2008/09	7,208,087	3,030,277	2.38
2009/10	6,070,423	2,610,352	2.34
2010/11	8,584,144	2,825,943	3.03
2011/12	10,413,655	3,099,496	3.35
Mean	7,687,165.8	2,806,829.6	2.72

S.D.			0.40
C.V.			14.71%

Source: Appendix-10

The table 4.12 shows that the debtors (receivable) turnover ratio was in increasing trend over the study period. The net sales of Nepal Telecom increased every fiscal year but fiscal year 2009/10 net sales decreased. Debtors of Nepal Telecom are not stable over the study period. The highest debtors turnover ratio was 3.35 times in the fiscal year 2011/12, which net sales was Rs.10,413,655 thousand and debtors was Rs.3,099,496 thousand and the lowest debtors turnover ratio was 2.34 times in fiscal year 2009/10, during which net sales was Rs.6,070,423 thousand and debtors was Rs.2,610,352 thousand. The standard deviation was 0.40 and coefficient of variance was 14.71%.

**Figure 4.11**  
**Debtors (Receivable) Turnover Ratio**



The figure 4.11 shows that net sales and debtors with debtor turnover ratio of Nepal Telecom. Net sales increased except the fiscal year 2009/10 but debtors are not consistent over the study period.

### 4.3.3 Calculation of Current Assets Turnover Ratio

The amount of working capital is affected by sales policy. If the credit sales are increased more working capital will be required to meet the daily requirement.

The current assets turnover ratio indicates the adequacy of sales in relation to the investment in current assets. Generally a high current assets turnover ratio indicates efficient utilization of current assets. The current assets turnover ratio is calculated by dividing net sales by current assets.

The current assets turnover position of the Nepal Telecom during the period of the study is tabulated as below:

**Table 4.13**  
**Current Assets Turnover Ratio**

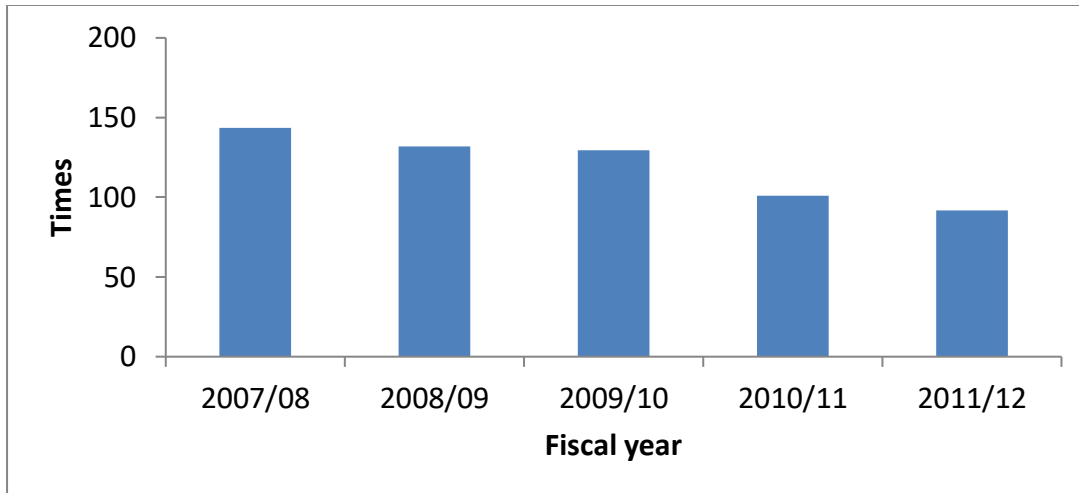
(Rs in '000')

<b>Fiscal year</b>	<b>Net sales</b>	<b>Current Assets</b>	<b>Times</b>
2007/08	6,159,520	15,336,626	0.40
2008/09	7,208,087	18,424,147	0.39
2009/10	6,070,423	20,925,639	0.29
2010/11	8,584,144	20,598,353	0.42
2011/12	10,413,655	22,526,522	0.46
Mean	7,687,165.8	19,562,257.4	0.39
S.D.			0.056
C.V.			14.45%

*Source: Appendix-11*

The table 4.13 shows that current assets turnover ratio increase and thereafter decrease to the fiscal year 2009/10 and increase from fiscal year 2010/11 to fiscal year 2011/12. The highest current assets turnover ratio of Nepal Telecom is 0.46 times in the fiscal year 2011/12, during which net sales was Rs.10,413,655 thousand and current assets was Rs.22,526,522 thousand and the lowest current assets turnover ratio of Nepal Telecom was 0.29 times in fiscal year 2009/10, which net sales was Rs.6,070,423 thousand and current assets was Rs.20,925,639 thousand. The standard deviation was 0.056 and coefficient of variance was 14.45%.

**Figure 4.12**  
**Current Assets Turnover Ratio**



The figure 4.12 represents that net sales and current assets with current assets turnover ratio of Nepal Telecom. Net sales are increased except the fiscal year 2009/10 but current assets are rapidly increased in the study period. Current assets turnover ratio is rapidly decreased till fiscal year 2009/10 than after increases up to 0.46 times in the fiscal 2011/12 over the study period.

#### 4.3.4 Calculation of Cash Turnover Ratio

Cash turnover ratio indicates the efficiency of management in application of cash. It is one of the main parts of current assets which have greatest value to meet the current obligations occurred in the business. Without adequate cash, business is not possible, but the excess unnecessary holding cost. So the company should try to maintain the adequate amount of cash fund, keeping in mind the risk-return trade off. The cash turnover ratio is calculated as net sales by cash & bank balances.

**Table 4.14**  
**Cash Turnover Ratio**

(Rs in '000')

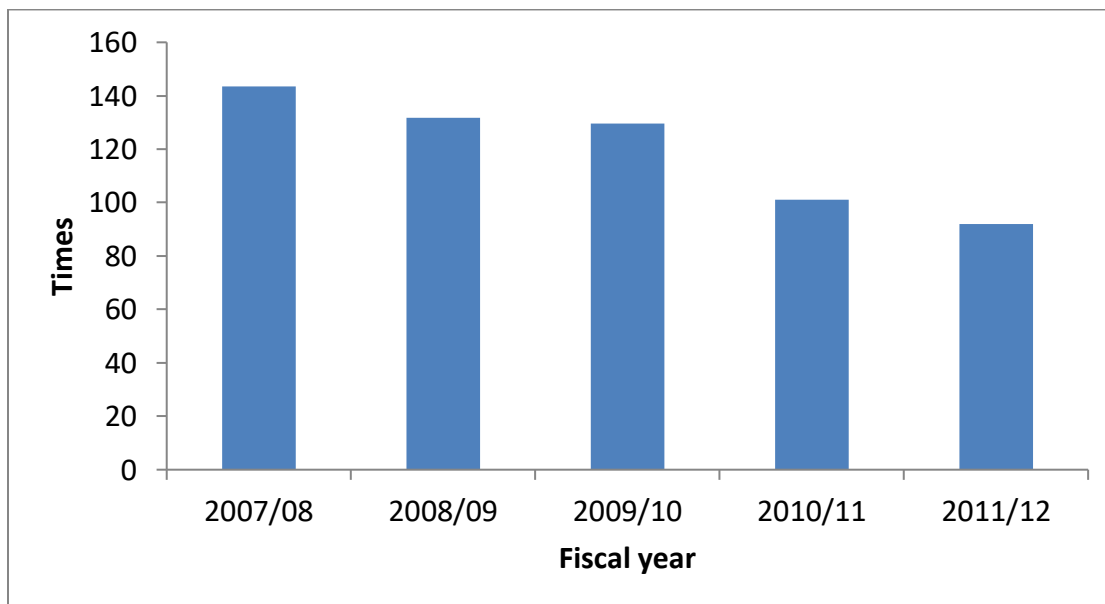
Fiscal year	Net sales	Cash & Bank Bal.	Ratio (Times)
2007/08	6,159,520	8,248,426	0.75
2008/09	7,208,087	10,116,463	0.71
2009/10	6,070,423	11,797,087	0.51
2010/11	8,584,144	9,584,469	0.89
2011/12	10,413,655	12,028,795	0.87
Mean	7,687,165.8	10,355,048	0.746

S.D.	0.14
C.V.	18.29%

Source: Appendix-12

The table 4.14 shows that the cash turnover ratios of Nepal Telecom are not consistent over the study period. The net sales of Nepal Telecom increased every fiscal year except the fiscal year 2009/10. Since accumulated cash and bank balance of Nepal Telecom was considered in the study it is seemed greater than sales in every fiscal year. Cash and bank balance is increased every fiscal year except the fiscal year 2010/11. The highest cash turnover ratio was 0.89 times in the fiscal year 2010/11, which net sales was Rs.8,584,144 thousand and cash & bank balance was Rs 9,584,469 thousand and the lowest cash turnover ratio was 0.51 times in fiscal year 2009/10, which net sales was Rs.6,070,423 thousand and cash & bank balance was Rs.11,797,087 thousand. The standard deviation was 0.14 and coefficient of variance was 18.29%.

**Figure 4.13**  
**Cash Turnover Ratio**



The figure 4.13 shows that net sales and cash & bank balance with cash turnover ratio of Nepal Telecom. Net sales are increased except the fiscal year 2009/10 but cash & bank balance are rapidly increased over the study period. Cash turnover ratio of the Nepal Telecom decreased from the fiscal year 2007/08 to the fiscal year 2009/10 and after

increased from fiscal year 2010/11.

#### **4.3.5 Net Working Capital Turnover Ratio**

Net working capital is the difference between current assets and current liabilities. This ratio explains the net working capital has been utilized to general sales in an organization. The size of working capital depends up on production cycle and business cycle.

This indicates the velocity of the utilization of working management. This ratio measures the efficiency with which the working capital is being used by Nepal Telecom. It is calculate as net sales by net working capital.

**Table 4.15**  
**Net Working Capital Turnover Ratio**

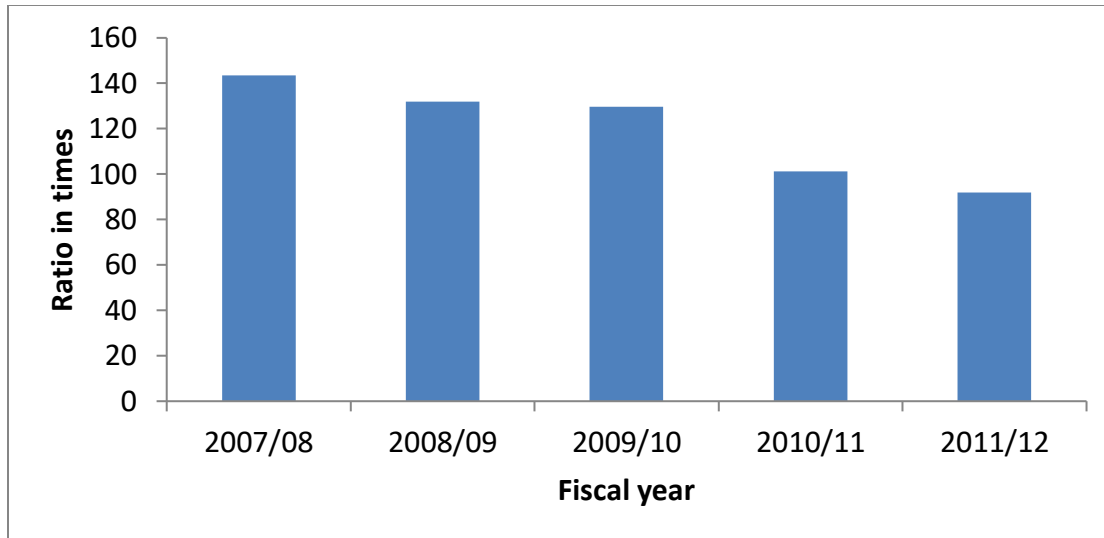
(Rs in '000')

<b>Fiscal year</b>	<b>Net sales</b>	<b>Net working Capital</b>	<b>Times</b>
2007/08	6,159,520	12,393,250	0.50
2008/09	7,208,087	14,748,735	0.49
2009/10	6,070,423	16,835,286	0.36
2010/11	8,584,144	16,739,869	0.51
2011/12	10,413,655	18,050,769	0.58
Mean	7,687,165.8	15,753,581.8	0.488
S.D.			0.071
C.V.			14.63%

*Source: Appendix-13*

The table 4.15 shows that the net working capital turnovers are not stable over the study period. Net sales increased every fiscal year over the study period. Similarly, net working capitals of Nepal Telecom are increasing trend. The highest net working capital turnover ratio was 0.58 times in the fiscal year 2011/12, during which net sales was Rs.10,413,655 thousand and net working capital was Rs.18,050,769 thousand and the lowest net working capital turnover ratio was 0.36 times in fiscal year 2009/10, which net sales was Rs.6,070,423 thousand and net working capital was Rs. 16,835,286 thousand. The standard deviation was 0.071 and coefficient of variance was 14.63%.

**Figure 4.14**  
**Net Working Capital Turnover Ratio**



The figure 4.14 represents that net sales and net working capital with net working capital turnover ratio of Nepal Telecom. Net sales are increased except the fiscal year 2009/10 but net working capitals are rapidly increased over the study period. Net working capital turnover ratio is increased just the fiscal year 2007/08 thereafter decreased over the study period till fiscal year 2009/10 and after the fiscal year 2009/10 net working capital turnover ratio increases till fiscal year 2011/12.

#### **4.4 Profitability Position**

Generally, profit is the difference between total revenue and total expenses over a period of time. Profitability measures efficiency and the search for it provides an incentive to achieve efficiency. Profitability ratios are those ratios which indicate degree of success in achieving desired profit level. Profit is an important factor that determines the firms' expansion and diversification. A required level of profit is necessary for the firms' growth and survives in the competitive environment. Various ratios can be developed upon the profit under different circumstances. These different ratios are called profitability ratios, which are required to support the purpose of the study.

##### **4.4.1 Calculation of Percentage of Net Profit Margin**

Net profit margin is the relation between net profit after taxes and net sales. It indicates management efficiency in controlling the manufacturing and administrative cost of the products. The net profit margin reflects how much amount of net profit has been earned in the sales of one rupee. A high result is favorable and otherwise vice-versa. High result insures adequate return to the owner. Net profit margin is as net profit after taxes by net

sales multiply hundred.

**Table 4.16**  
**Percentage of Net Profit Margin**

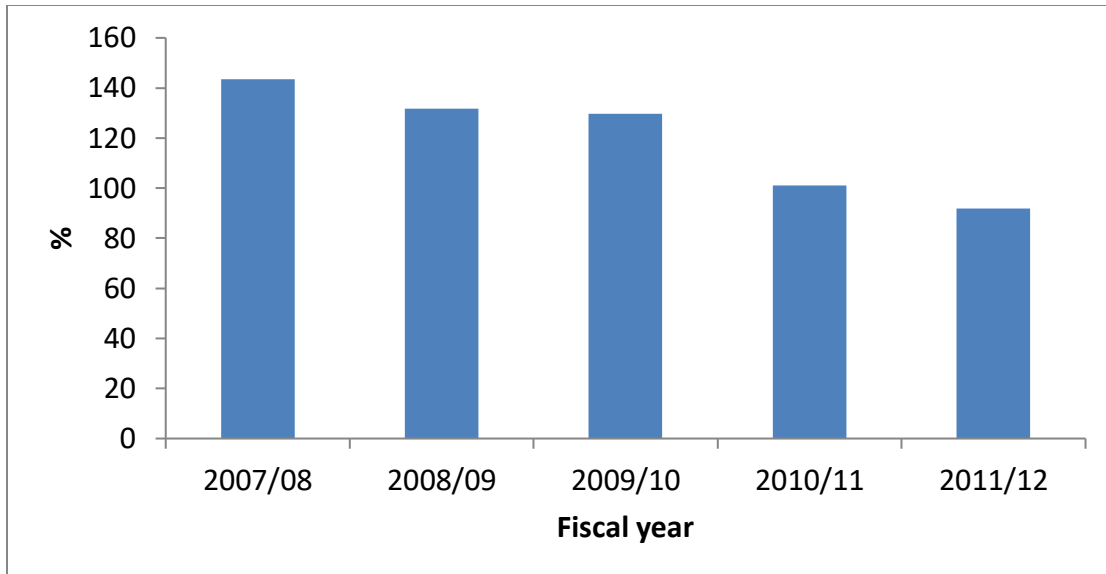
(Rs in '000')

<b>Fiscal year</b>	<b>Net profit after taxes</b>	<b>Net sales</b>	<b>%</b>
2007/08	2,467,930	6,159,520	40.07
2008/09	3,087,782	7,208,087	42.84
2009/10	2,247,301	6,070,423	37.02
2010/11	3,542,461	8,584,144	41.27
2011/12	4,936,647	10,413,655	47.41
Mean	3,256,424.2	7,687,165.8	41.72
S.D.			3.42
C.V.			8.21%

*Source: Appendix-14*

The table 4.16 depicts that net profit margin ratios are not consistent over the study period. Net profit after taxes of Nepal Telecom continuously increased except the fiscal year 2009/10. Similarly, net sales increased every fiscal year except the fiscal year 2009/10. The highest net profit margin ratio was 47.41% in the fiscal year 2011/12 which net profit after taxes was Rs.4,936,647 thousand and net sales was Rs.10,413,655 thousand and the lowest net profit margin ratio of Nepal Telecom was 37.02% in fiscal year 2009/10, during which net profit after taxes was Rs.2,247,301 thousand and net sales was Rs.6,070,423 thousand. The standard deviation was 3.42 and coefficient of variance was 8.21%.

**Figure 4.15**  
**Net Profit Margin**



The figure 4.15 represents that net profit margin of Nepal Telecom. Net profit and net sales increased except the fiscal year 2009/10.

#### **4.4.2 Calculation of Percentage of Operating Ratio**

The operating ratio is computed by dividing all operating expenses by net sales. The operating ratio is an important ratio that explains the change in the net profit margin ratio. A higher operating ratio is unfavorable since it will leave a small amount of operating income to meet interest as dividend. Operating ratio is calculated as operating expense by net sales multiply by hundred.

**Table 4.17**  
**Percentage of Operating Expenses**

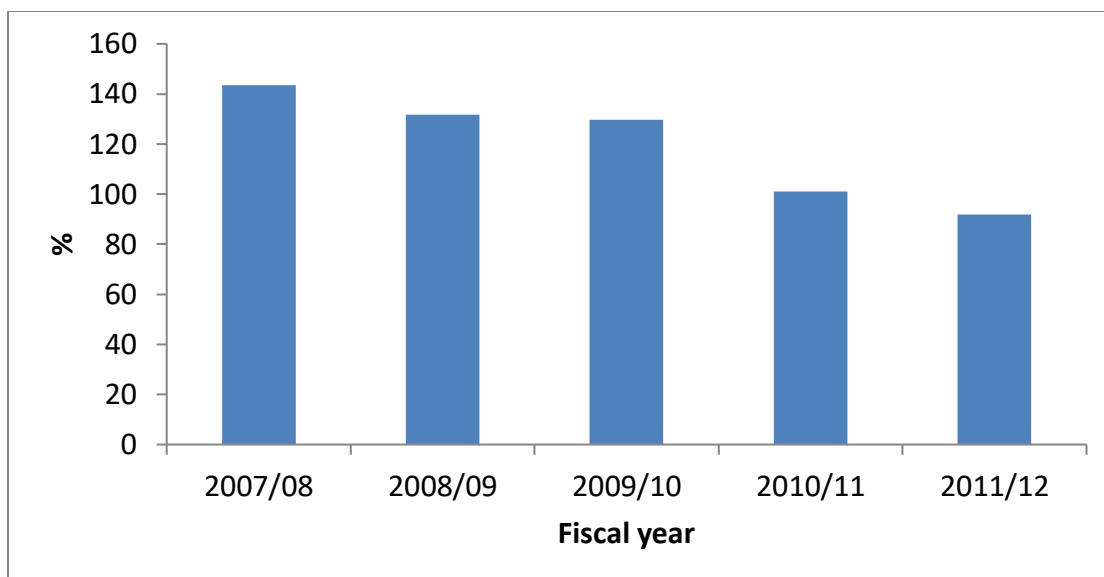
(Rs in '000')

<b>Fiscal year</b>	<b>Operating expenses</b>	<b>Net sales</b>	<b>%</b>
2007/08	3,235,929	6,159,520	52.54
2008/09	3,576,165	7,208,087	49.61
2009/10	3,308,767	6,070,423	54.51
2010/11	4,272,768	8,584,144	49.78
2011/12	4,215,188	10,413,655	40.48
Mean	3,721,763.4	7,687,165.8	49.38
S.D.			4.82
C.V.			9.75%

*Source: Appendix-15*

The table 4.17 shows that operating percentage was not consistent over the study period. Operating expenses of Nepal Telecom are not stable over the study period. Similarly, Net sales increased every fiscal year except the fiscal year 2009/10. The highest operating ratio was 54.51% in the fiscal year 2009/10, which operating expenses was Rs.3,308,767 thousand and net sales was Rs.6,070,423 thousand and the lowest operating ratio was 40.48 % in fiscal year 2011/12, during which operating expenses was Rs.4,215,188 thousand and net sales was Rs.10,413,655 thousand. The standard deviation was 4.82 and coefficient of variance was 9.75%.

**Figure 4.16**  
**Operating Expenses Percentage**



The figure 4.16 presents that operating expenses and net sales with operating ratio of Nepal Telecom. Operating expenses and net sales increased till the fiscal year 2008/09 and then decreased. Operating ratio of Nepal Telecom was not stable over the study period.

#### 4.4.3 Calculation of Percentage of Return on Total Assets

This ratio is useful in measuring the profitability of all financial resource invested in the firm's assets. The return on assets or profit to assets ratio is calculated by dividing the amount of net profit after taxes by the amount of total assets employed. The return on total assets is calculated as net profit after taxes by total assets multiply by hundred.

**Table 4.18**  
**Percentage of Return on Total Assets**

(Rs in '000')

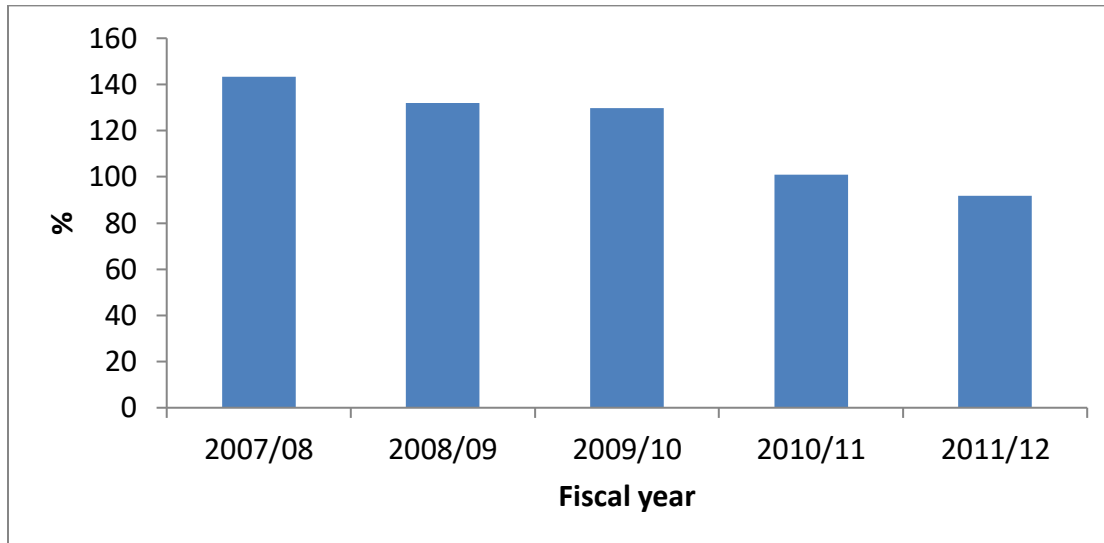
Fiscal year	Net profit after taxes	Total Assets	%
2007/08	2,467,930	25,281,824	9.76
2008/09	3,087,782	29,892,993	10.34
2009/10	2,247,301	32,652,787	6.88
2010/11	3,542,461	35,572,772	9.96
2011/12	4,936,647	39,351,406	12.55
Mean	3,256,424.2	32,550,356.4	9.89
S.D.			1.81

C.V.	18.35%
------	--------

*Source: Appendix-16*

The table 4.18 represents that return on total assets ratio are not consistent over the study period. Net profit after taxes continuously increased except fiscal year 2009/10. Similarly, total assets continuously increased every fiscal year of the study period. The highest return on total assets of Nepal Telecom was 12.55 % in the fiscal year 2011/12, which net profit after taxes was Rs 4,936,647 thousand and total assets was Rs.39,351,406 thousand and the lowest return on total assets was 6.88% in fiscal year 2009/10, during which net profit after taxes was Rs.2,247,301 thousand and total assets was Rs.3,265,2787 thousand. The standard deviation was 1.81 and coefficient of variance was 18.35%.

**Figure 4.17**  
**Percentage of Return on Total Assets**



The figure 4.17 shows that net profit vs. total assets and return on total assets of Nepal Telecom. Net profits increased except the fiscal year 2009/10 but total assets rapidly increased over the study period.

#### **4.4.4 Calculation of Percentage of Return on Net Worth**

The return on net worth ratio is measure of profitability of the firm in respect of the utilization of net worth. It is calculated by dividing net profit after taxes by net worth. The net worth includes total equity capital and total reserve & surplus. It reflects whether the corporation has earned a satisfactory return for its equity-holders or not. So, higher ratio is favorable of the stockholders. The return on net worth is calculated as net profit after taxes by net worth multiply by hundred.

**Table 4.19**  
**Percentage of Return on Net Worth**

(Rs in '000')

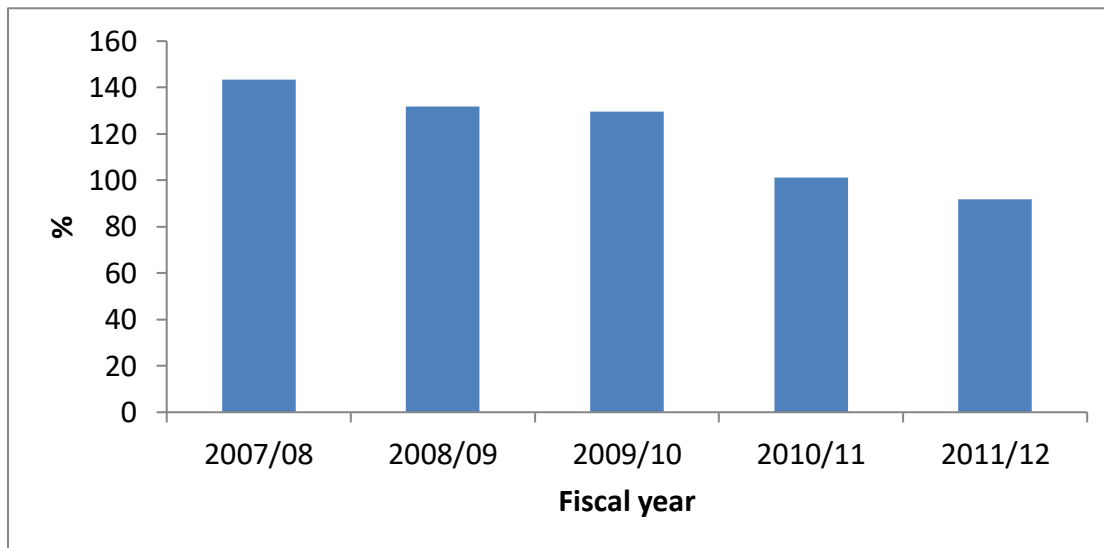
<b>Fiscal year</b>	<b>Net profit after taxes</b>	<b>Net worth</b>	<b>%</b>
2007/08	2,467,930	16,927,414	14.58
2008/09	3,087,782	19,521,866	15.82
2009/10	2,247,301	20,757,100	10.83
2010/11	3,542,461	20,825,855	17.01
2011/12	4,936,647	23,686,027	20.84
Mean	3,256,424.2	20,343,652.4	15.81

S.D.	3.257
C.V.	20.596%

Source: Appendix-17

The table 4.19 shows that return on net worth are not stable during the study period. Net profit after taxes continuously increased except the fiscal year 2009/10. But net worth of Nepal Telecom is rapidly increased every fiscal year. The highest return on net worth was 20.84% in the fiscal year 2011/12, during which net profit after taxes was Rs.4,936,647 thousand and net worth was Rs. 23,686,027 thousand and the lowest return on net worth was 10.83% in fiscal year 2009/10, during which net profit after taxes was Rs. 2,247,301 thousand and net worth was Rs. 20,757,100 thousand, this is because of political instability, competitor's new business scheme etc. The standard deviation was 3.257 and coefficient of variance 20.596%.

**Figure 4.18**  
**Return on Net Worth**



The figure 4.18 represents that the return on net worth of Nepal Telecom. Net profits are increased except the fiscal year 2009/10 but net worth is speedily increased over the study period.

#### **4.4.5 Calculation of Percentage of Return on Working Capital**

Return on net working capital measures the profitability and also indicates the efficiency of working capital of Nepal Telecom. It indicates how Nepal Telecom has used its

available resources. The return on net worth is calculated as net profit after taxes by working capital multiply by hundred.

**Table 4.20**  
**Percentage of Return on Working Capital**

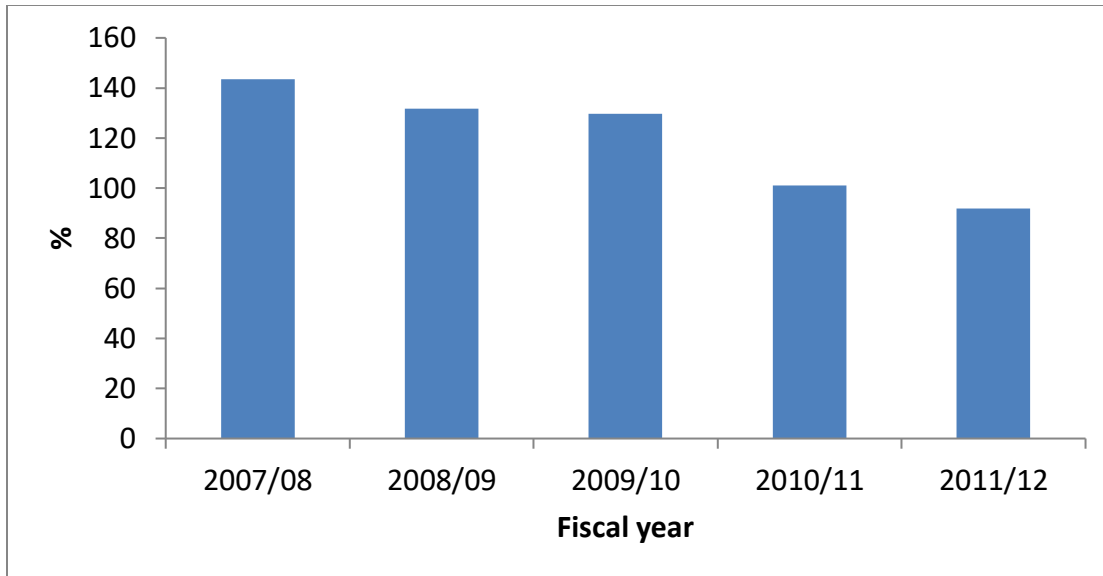
(Rs in '000')

<b>Fiscal year</b>	<b>Net profit after taxes</b>	<b>Working capital</b>	<b>%</b>
2007/08	2,467,930	12,393,250	19.91
2008/09	3,087,782	14,748,735	20.94
2009/10	2,247,301	16,835,286	13.35
2010/11	3,542,461	16,739,869	21.16
2011/12	4,936,647	18,050,769	27.35
Mean	3,256,424.2	15,753,581.8	20.54
S.D.			4.45
C.V.			21.76%

*Source: Appendix-18*

The table 4.20 shows that return on working capital is not consistent over the study period. Net profit after taxes is continuously increased except the fiscal year 2009/10 but working capital rapidly increased every fiscal year. The highest return on working capital was 27.35% in the fiscal year 2011/12, which net profit after taxes was Rs. 4,936,647 thousand and working capital was Rs. 18,050,769 thousand and the lowest return on working capital was 13.35% in fiscal year 2009/10, during which net profit after taxes was Rs.2,247,301 thousand and working capital was Rs.16,835,286 thousand. The standard deviation was 4.45 and coefficient of variance was 21.76%.

**Figure 4.19**  
**Percentage of Return on Working Capital**



The figure 4.19 represents that the return on working capital. Net working capital is in increasing trend during the study period. Return on working capital is in increasing trend except the fiscal year 2009/10.

#### 4.5 Analysis of Different Ratios

##### i. Analysis of Liquidity Ratio

Liquidity ratio measures the short term solvency position of the organization. It plays a vital role in the organization. Liquidity position shows the ability of the organization to pay its current obligation i.e. it determines the short-term solvency position of any organization.

**Table 4.21**  
**Liquidity Ratio**

Fiscal year	Current Ratio (times)	Quick Ratio (times)	Cash & Bank Bal. to Current Assets (%)
2007/08	5.21	5.05	53.78
2008/09	5.01	4.9	54.91
2009/10	5.12	5.04	56.38
2010/11	5.34	5.26	46.63
2011/12	5.03	4.96	53.40
Average	5.142	5.042	53.02

ii. **Analysis of Turnover Ratio**

**Table 4.22**  
**Turnover Ratio**

<b>Fiscal year</b>	<b>Inventory Turnover</b>	<b>Debtors Turnover</b>	<b>Current Assets turnover</b>	<b>Cash Turnover Ratio</b>
2007/08	12.75	2.50	0.40	0.75
2008/09	17.98	2.38	0.39	0.71
2009/10	20.15	2.33	0.29	0.51
2010/11	27.70	3.04	0.42	0.89
2011/12	31.62	3.36	0.46	0.87
Average	22.04	2.722	0.392	0.746

### iii. Analysis of Profitability Ratio

**Table 4.23**  
**Profitability Ratio**

<b>Fiscal year</b>	<b>Net Profit Margin</b>	<b>Operating Ratio</b>	<b>Return on Total Assets</b>	<b>Return on Net Worth</b>	<b>Return on Working Capital Ratio</b>
2007/08	40.07	52.54	9.76	14.58	0.50
2008/09	42.84	49.61	10.34	15.82	0.49
2009/10	37.02	54.51	6.88	10.83	0.36
2010/11	41.27	49.78	9.96	17.01	0.51
2011/12	47.41	40.48	12.55	20.84	0.58
Average	41.722	49.384	9.898	15.816	0.488

#### **4.6 Analysis of Working Capital Cash Flow Cycle**

Working capital management originated with the old Yankee peddler, who would borrow to buy inventory, sell the inventory to pay the bank loan, and then repeat the cycle. Cash conversion cycle model has been applied to more complex business and it is useful when analyzing the effectiveness of a firm's working capital management. There are following four factors of cash conversion cycle model.

- i. Inventory Conversion Period (ICP)
- ii. Receivable Conversion Period (RCP)
- iii. Payable Deferred Period (PDP)
- iv. Cash Conversion Cycle (CCC)

##### **4.6.1 Inventory Conversion Period (ICP)**

The inventory conversion period is the average length of time required to convert material into finished goods and then to sell those goods. The inventory turnover shows how rapidly the inventory is turning into receivable through sales. The short period indicates fast conversion of inventory to sale and the long period indicates slow conversion period. Inventory conversion period is calculated by dividing days in year by inventory turnover ratio.



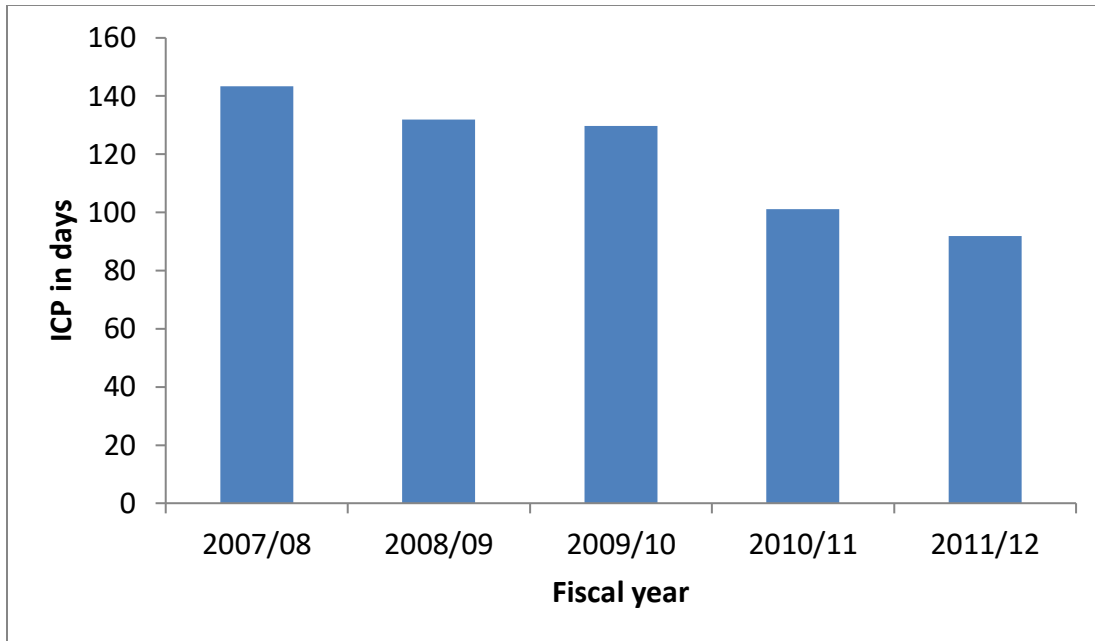
**Table 4.24**  
**Inventory Conversion Period (ICP)**

<b>Fiscal year</b>	<b>Days in year</b>	<b>Inventory turnover</b>	<b>ICP (days)</b>
2007/08	365	12.73	28.67
2008/09	365	17.98	20.30
2009/10	365	20.15	18.11
2010/11	365	27.70	13.18
2011/12	365	31.62	11.54
Mean			18.36
S.D.			6
C.V.			32.68%

*Source: Appendix-19*

The table 4.25 shows that the inventory conversion period of the five fiscal year of Nepal Telecom. The inventory turnover increased in every fiscal year of the study period. The inventory conversion period was in decreasing trend over the study period. The highest inventory conversion period was 28.67 days in the fiscal year 2007/08 and the lowest receivable conversion period was 11.54 days in the fiscal year 2011/12. The decreasing trend of ICP shows that the inventories rapidly convert into sales. The standard deviation was 6 days and coefficient of variance was 32.68%.

**Figure 4.20**  
**Inventory Conversion Period (ICP)**



The figure 4.20 presents the inventory conversion period of Nepal Telecom. It shows that the ICP was in decreasing trend.

#### 4.6.2 Receivable Conversion Period (RCP)

The receivable conversion period is the average length of time required to convert the firm's receivable into cash. High periods indicate slow collection of receivable and low collection period indicates fast conversion of receivable. RCP can determine the credit policy of the company. Long collection period refers liberal credit policy and the short period refers the strict credit policy. It is also called day's sale outstanding (DSO) and it is calculated by dividing days in year by receivable turnover ratio.

**Table 4.25**

#### **Receivable Conversion Period (RCP)**

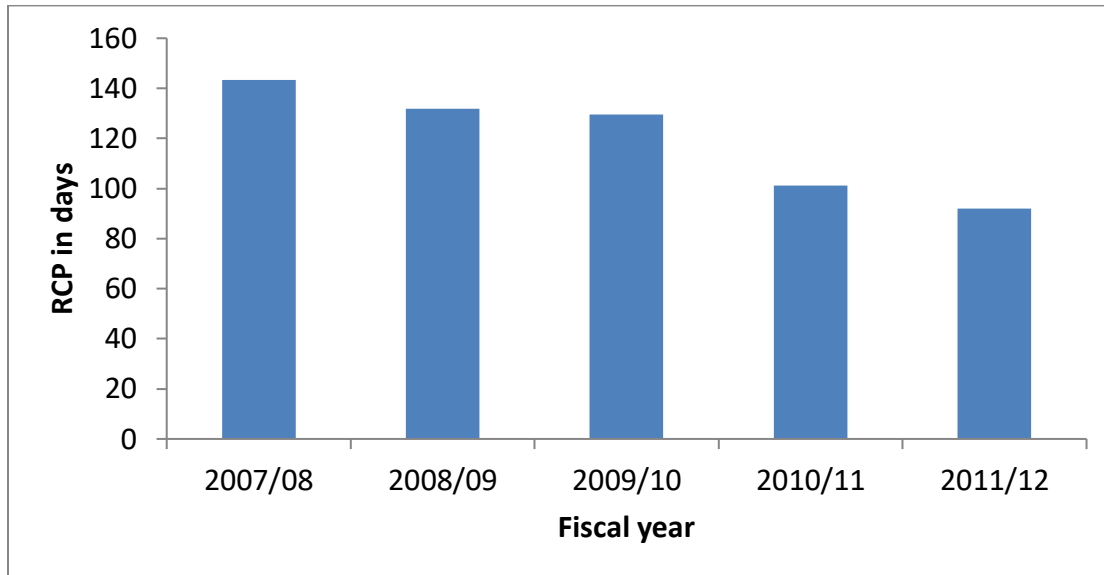
<b>Fiscal year</b>	<b>Days in year</b>	<b>Receivable Turnover</b>	<b>RCP ( days)</b>
2007/08	365	2.50	146.00
2008/09	365	2.38	153.36
2009/10	365	2.33	156.65
2010/11	365	3.04	120.07
2011/12	365	3.36	108.63

Mean	136.942
S.D.	19
C.V.	13.87%

*Source: Appendix-20*

The table 4.25 shows that the receivable conversion period of the five fiscal year of Nepal Telecom. The receivable turnover decreased in every fiscal year of the study period. The receivable conversion period was not consistent over the study period. The highest receivable conversion period was 156.65 days in the fiscal year 2009/10 and the lowest receivable conversion period was 108.63 days in the fiscal year 2011/12. The decreasing trend of RCP indicates that Nepal Telecom is able to collect its debts in short period. The standard deviation was 19 days and coefficient of variance was 13.87%.

**Figure 4.21**  
**Receivable Conversion Period (RCP)**



The figure 4.21 presents that the receivable conversion period was not consistent during the study period. The lowest conversion period was in the fiscal year 2011/12.

#### 4.6.3 Payable Deferred Period (PDP)

Payable deferred period measures the period of payment terms to the trade creditor of the company. The long period indicated that the company has got long credit from its creditor and the short period indicates short credit period. It can be calculated as days in a year divided by creditor payable shown as table below.

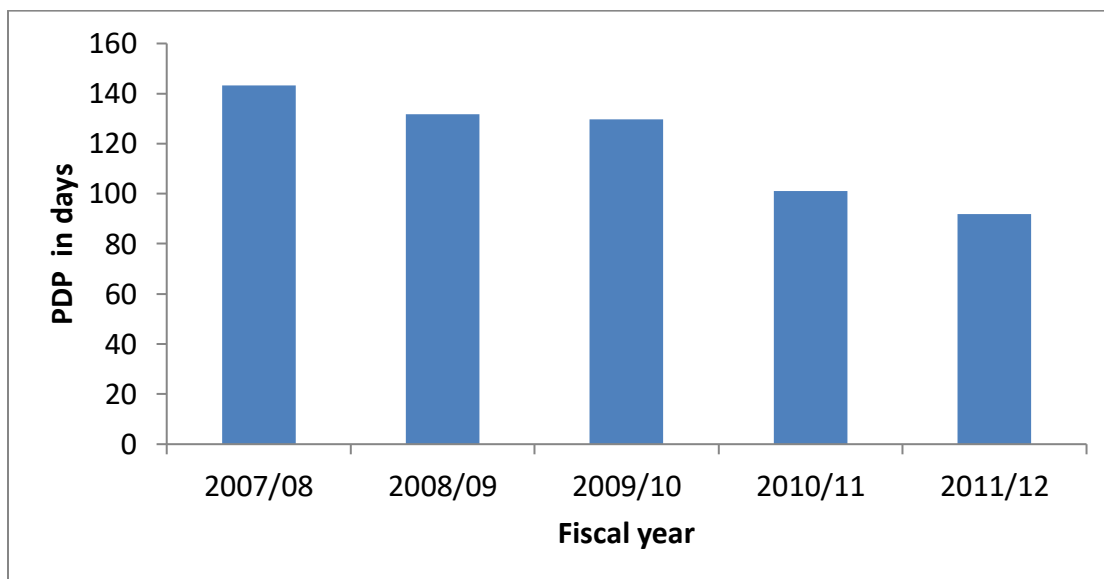
**Table 4.26**  
**Payable Deferred Period (PDP)**

Fiscal year	Days in year	Creditor Payable	PDP ( days)
2007/08	365	11.66	31.30
2008/09	365	5.76	63.37
2009/10	365	8.09	45.12
2010/11	365	11.34	32.19
2011/12	365	12.91	28.27
Mean		9.952	40.05
	S.D.		13
	C.V.		32.46%

*Source: Appendix-21*

The table 4.26 shows that the payable deferred period of the five fiscal year of Nepal Telecom. The creditor payable was not consistent during the study period. The payable deferred period was not stable over the study period. The highest payable deferred period was 63.37 days in the fiscal year 2008/09 and the lowest payable deferred period was 28.27 days in the fiscal year 2011/12. The decreasing trend of PDP shows that Nepal Telecom reduced its payment period from 31.30 to 28.27 days over the study period. The standard deviation and coefficient of variance with respect to payable deferred period are 13 days and 32.46 % respectively.

**Figure 4.22**  
**Payable Deferred Period (PDP)**



The figure 4.22 percent that the payable deferred period of Nepal Telecom. It was not consistent during the study period. Lowest payable deferred period was in the fiscal year 2011/12.

#### **4.6.4 Calculation of Cash Conversion Cycle (CCC)**

It refers the cash inflow and outflow of the company. ICP and RCP are cash inflow and PDF is cash outflow. The CCC is calculated as summation of ICP and RCP and deduct of PDP. The long CCC indicates slow production and slow collection of debtor and taking short credit period and vice versa. The calculation of CCC is shown in the following table.



**Table 4.27**

**Cash Conversion Cycle (CCC)**

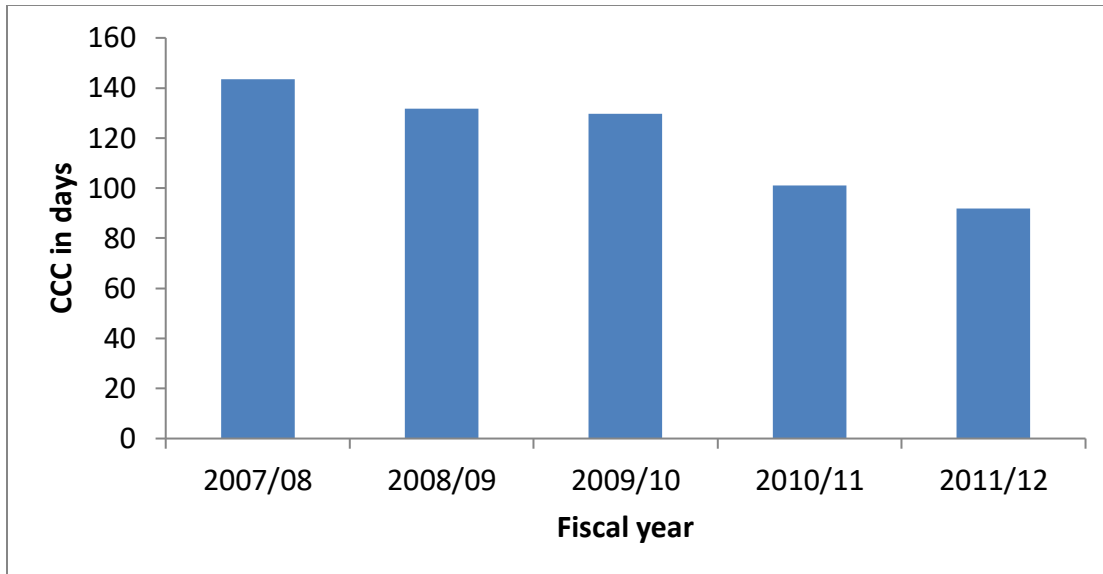
<b>Fiscal Year</b>	<b>CCC ( days)</b>
2007/08	143.37
2008/09	131.83
2009/10	129.64
2010/11	101.06
2011/12	91.90
Mean	119.56
S.D.	20
C.V.	16.73%

*Source: Appendix-22, 23*

The table 4.27 shows that the cash conversion cycle of Nepal Telecom for the five fiscal year of the study period. The cash conversion cycle of the Nepal Telecom was in decreasing trend over the study period. The highest cash conversion cycle was 143.37 days in the fiscal year 2007/08 and the lowest CCC was 91.90 days in the fiscal year 2011/12. The decreasing trend of CCC of Nepal Telecom shows that there was high speed of sales, high speed of collection and takes short period of credit. The standard deviation and coefficient of variance with respect to CCC are 20 days and 16.73 % respectively.

**Figure 4.23**

**Cash Conversion Cycle (CCC)**



The figure 4.23 presents the cash conversion cycle for the five fiscal year of Nepal Telecom. It was in decreasing trend during the study period.

#### 4.7 Statistical Tools

The financial performance of an organization is directly related to their ability to manage working capital management efficiently and effectively. Use of financial tools were made to analyze application of the working capital management. Use of statistical tools also help lot to assess the relationship between various components involved in working capital.

Correlation was used to assess the relationship between various variables.

##### i. Correlation between Current Assets and Current Liabilities

**Table 4.28**

**Correlation between Current Assets and Current Liabilities**

Correlation of coefficient (r)	Relationship	r <sup>2</sup>	P.E. Ratio	6 PE	Significant
0.9846	Positive	0.9694	0.0104	0.0624	Significant

*Source: Appendix-24*

The correlation between current assets and current liabilities of five fiscal years of 2007/08 to 2011/12 of Nepal Telecom is 0.9846 is positive. The value of r is greater than

0 (i.e.  $0.9846 > 0$ ). The table depicts that the coefficient of correlation value is more than 6 P.E. Hence, the relationship between current assets and current liabilities is significant.

**ii. Correlation between Sales and Net Profit**

**Table 4.29**

**Correlation between Sales and Net Profit**

<b>Correlation of coefficient (r)</b>	<b>Relationship</b>	<b>r<sup>2</sup></b>	<b>P.E. Ratio</b>	<b>6 PE</b>	<b>Significant</b>
0.9899	Positive	0.9799	0.0069	0.0412	Significant

*Source: Appendix-25*

The correlation between sales and net profit of five fiscal year of 2007/08 to 2011/12 of Nepal Telecom is 0.9899 is positive. The value of r is greater than 0 (i.e.  $0.9899 > 0$ ). The table depicts that the coefficient of correlation value is more than 6 P.E. Hence, the relationship between sales and net profit is significant.

**iii. Correlation between Total Assets and Current Assets**

**Table 4.30**

**Correlation between Total Assets and Current Assets**

<b>Correlation of coefficient (r)</b>	<b>Relationship</b>	<b>r<sup>2</sup></b>	<b>P.E. Ratio</b>	<b>6 PE</b>	<b>Significant/ Insignificant</b>
0.9571	Positive	0.9160	0.0287	0.1722	Significant

*Source: Appendix-26*

The correlation total assets and current assets of five fiscal year of 2007/08 to 2011/12 of Nepal Telecom is 0.9571 is positive. The value of r is greater than 0 (i.e.  $0.9571 > 0$ ). The table depicts that the coefficient of correlation value is more than 6 P.E. Hence, the relationship between total assets and current assets is significant.

**iv. Correlation between Sales and Debtors**

**Table 4.31**

**Correlation between Sales and Debtors**

<b>Correlation of</b>	<b>Relationship</b>	<b>r<sup>2</sup></b>	<b>P.E.</b>	<b>6 PE</b>	<b>Significant/</b>
-----------------------	---------------------	----------------------	-------------	-------------	---------------------

<b>coefficient (r)</b>			<b>Ratio</b>		<b>Insignificant</b>
0.7692	Positive	0.5917	0.1396	0.8376	Insignificant

*Source: Appendix-27*

The correlation sales and debtors of five fiscal years of 2007/08 to 2011/12 of Nepal Telecom is 0.7692 is positive. The value of r is greater than 0 (i.e.  $0.7692 > 0$ ). The table depicts that the coefficient of correlation value is less than 6 P.E. Hence, the relationship between total assets and current assets is insignificant.

#### **v. Correlation between Sales and Inventory**

**Table 4.32**

#### **Correlation between Sales and Inventory**

<b>Correlation of coefficient (r)</b>	<b>Relationship</b>	<b>r<sup>2</sup></b>	<b>P.E. Ratio</b>	<b>6 PE</b>	<b>Significant</b>
0.2161	Positive	0.0467	0.3259	1.9556	Insignificant

*Source: Appendix-28*

The correlation sales and inventory of five fiscal years of 2007/08 to 2011/12 of Nepal Telecom is 0.2161 is positive. The value of r is greater than 0 (i.e.  $0.2161 > 0$ ). The table depicts that the coefficient of correlation value is less than 6 P.E. Hence, the relationship between sales and inventory is insignificant.

### **4.8 Major Findings**

#### **i. Structure of Working Capital**

The observation of percentage of cash and bank to current assets shows that the major portion of current assets was in the form of cash and bank in Nepal Telecom. The average percentage of cash and bank to current assets is 53.00%. Since this percentage is too high, it can be stated that the company maintained excess cash and bank balance. Inventory is another element of working capital which is only stores and spare parts. It comprises a nominal portion of current assets since the average inventory turnover ratio is 22.04 times. This indicates that there is no considerable amount tied up in inventory in Nepal

Telecom. Another important element is Account Receivables which represents sundry debtors plus interest accrued on investment. The percentage of receivables fluctuated over the study period.

## **ii. Efficiency of Working Capital Management**

The efficiency of management of working capital is measured through the turnover ratios since the volume of sales in any business organization not only affects the size of working capital but also clearly reflects the efficiency with which assets are managed. The receivables turnover ratios were moderately fluctuated during the five fiscal years and recorded lowest of 2.34 times on the fiscal year 2009/10 highest of 3.35 times in the fiscal year 2011/12. Likewise, the cash turnover ratio has are moderately fluctuating and vary the lowest 0.51times to 0.89 times during the study period since the rate of increase in the sales volume is lower than that of cash& bank balance. In the three years, cash & bank balance are exceeding net sales by a significant amount. Hence the result is dissatisfactory. The average net working capital turnover is 0.488 times. Since the ratio has decreased from 0.58 times to 0.36 times during the study period, we can say that the company is not utilizing its net working capital effectively. The amount of working capital is exceeding net sales every year. Hence from the analysis, it is revealed that Nepal Telecom has kept excess amount of working capital in comparison to sales which can be considered as the sign of efficient working capital management.

## **iii. Liquidity Position**

Overall, the liquidity position of the firm has been found satisfactory. The current ratio varies from 5.01 times to 5.34 times with a throughout the study period which are however satisfactory compared to the conventional ideal ratio 2:1. Average ratio is 5.14 times and overall, it coincides with the conventionally accepted ratio 2:1. The average quick ratio is 5.042 times which were significantly higher than the standard quick ratio 1:1. Hence it can be said that the company is holding more than enough cash balance or liquid assets to meet their current payment which indicates mismanagement of liquid assets since and optimum liquidity is the necessity of a firm. There is inverse relation

between profitability and liquidity since there is negative correlation between liquidity and profitability.

#### **vi. Profitability of Working Capital**

Return on total assets is positive and not stable but it has highest 12.55 time to 6.88 times over the five year study period. Average return on total assets is 9.90%. The volume of net profit after tax has increased every year but the return on total assets has fluctuating each year, which signifies that the profitability is not sufficient with compared to the increment in investment in total assets. It clarifies the less effectiveness of utilization of total assets. Another ratio to measure profitability is return on net working capital. From the study, it is found that the return on working capital is continues increased except 2009/10, over the five years. The ratio varies from 13.35 to 27.35 %.From the study; it is found that Nepal Telecom has been utilizing its working effectively since the return on working capital is in increasing trend. Both NPAT and investment are increasing every year and the earning power of capital employed is increasing as well.

#### **4.9 Major Findings of Statistical Analysis**

- The correlation between current assets and current liabilities of five fiscal years of 2007/08 to 2011/12 of Nepal Telecom is 0.9846 is positive. There is significant relationship between current assets and current liabilities. There is low degree of positive correlation.
- The correlation between sales and net profit of five fiscal year of 2007/08 to 2011/12 of Nepal Telecom is 0.9899 is positive. There is significant relationship between sales and net profit. It shows significantly low degree of positive correlation.
- The correlation total assets and current assets of five fiscal year of 2007/08 to 2011/12 of Nepal Telecom is 0.9571 is positive. It shows that the relationship between total assets and current assets is significant. It shows the relatively moderate level of positive correlation.
- The correlation sales and debtors of five fiscal years of 2007/08 to 2011/12 of Nepal Telecom is 0.7692 is positive. Correlation between sales and debtors is

positive and the correlation coefficient shows the insignificant relationship because the 6 P.E is greater than the correlation value.

- The correlation sales and inventory of five fiscal years of 2007/08 to 2011/12 of Nepal Telecom is 0.2161 is positive. The correlation coefficient shows the insignificant relationship because the correlation value is less than 6 P.E. There is low degree of correlation in sale and inventory.

## CHAPTER - V

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary

As stated earlier, working capital management refers to the management of cash, receivables, inventory, and other factors of working capital. The main concern of this study was a very sensitive area of financial management i.e. working capital management of Nepal Telecom. Likewise, as stated in the introduction section of this study, the specific objectives of this study are:

- To examine and critically analyze the working capital management of Nepal Telecom.
- To examine liquidity position and profitability position of Nepal Telecom.
- To assess the size and growth of working capital, and
- To recommend viable suggestions to cope up with working capital management shortcomings in Nepal Telecom.

For the purpose of the study, the necessary data on working capital and other related variables were collected from secondary sources. The balance sheet and income statement for the fiscal years 2007/08 to 2011/12 were taken from annual report of Nepal Telecom. Various important financial and statistical tools and techniques were applied to analyze the available data. After the tabulation of available data in a systematic manner, various important financial and statistical tools and techniques were applied in order to accomplish the objective of the study.

The size and structure of working capital is analyzed by comparing current assets and its components with different related variables. Activity and profitability ratios were calculated to evaluate the efficiency of working capital. Liquidity position was assessed by calculating different liquidity ratios like current ratio, quick ratio etc. the growth trend of working capital and its related variables were studied in trend analysis. An analysis of sources and use of fund was carried out in order to get better insight into the acquisition and application of fund. More than 50% of total assets were held in the form of current

assets. The large portion of current assets was being unproductive by lying in absolute liquid form i.e. cash and bank since half of the current assets was in the form of cash and bank. More than one fifth of current assets were in the form of account receivables. Most of the components of working capital were found to be in increasing trend. The company collected fund mainly from its operation. A large portion of fund was kept in liquid form and some of them were used to purchase fixed assets and to pay long term loan.

Hence, an effort has been made in this chapter to present major findings of the study. Thereafter, in the same pattern, recommendations have been stated. Likewise, conclusions have been drawn at the end of the chapter.

## **5.2 Conclusion**

Conclusively, it can be stated that the overall financial management of Nepal Telecom is quite satisfactory during the study period since it has sound liquidity position and positive growing profitability. Most of the variables or working capital is in increasing trend and the company is operating with good profit. After a long analysis process, it is concluded that the overall financial management of Nepal Telecom was quite satisfactory during the five years study period. There was sufficient amount of current assets to meet the current obligations of the company which obviously is a sign of good liquidity position. The company had invested its considerable amount in current assets by increasing the investment on every fiscal year. Relatively large amount of current assets was held to support given level of sales. The firm had sufficient amount of working capital. Beside this, the researcher has also indicated some critical aspects of working capital management and has supplemented precise suggestions and recommendation too. The company had more resources available to increase the sales volume as per the demand of the market. The largest portion of current assets was being unproductive by lying in absolute liquid form which is the indication of inefficiency of management in using its assets in productive payment of current liabilities. A significant amount of receivables was tied up which resulted unnecessary amount held up of working capital. Likewise, a significant amount of current assets was covered by miscellaneous current assets. All the variables of working capital as well as volume of sales were in increasing trend and the company was operating with attractive profit. Being a public utility service provider,

Nepal Telecom larger volume of working capital, which indicates, excess liquidity position? The company is facing serious problem on outstanding debt collection. So far cash management and receivable management is concerned, the recommendations suggested above could, to a greater extent, uplift Nepal Telecom cash and receivables management situations.

### **5.3 Recommendations**

Following viable suggestions have been recommended to improve the working capital management efficiency in Nepal Telecom:

#### **1. Maintain Optimum Current Assets Variables and Current Liabilities Every Year**

Study showed that besides cash and bank, other variable of current assets and current liabilities also fluctuate moderately. Optimization of this variable is therefore recommended which would maintain a sound liquidity. Nepal Telecom, being a service-oriented organization, does not need so higher liquidity position. Thus it is recommended to stabilize its current ratio near 2:1. It is better for Nepal Telecom to invest such excess amount of current assets in fixed assets to increase its capacity rather than tying up large amount in current assets.

#### **2. Determine Optimum Level of Cash Balance to Hold Every Year Applying Cash Management Techniques**

The study also revealed that the large portion of current assets is being unproductive by lying in absolute liquid form in Nepal Telecom. This indicates the inefficiency of management of cash. The major portion of current assets is held by cash. Therefore, it is recommended to determine the optimum level of cash and bank balance to hold each year. It should invest its excess cash and cash equivalents in short term investments which would earn a return till the funds can be utilized in the firm.

#### **3. Forecast Current Assets and Current Liabilities Variables with reference to change in Sales and Profit**

One of the shortcomings of Nepal Telecom is that the variables of current assets and current liabilities held under different headings are rather a haphazard guesswork, without

any consideration on its impact on sales and profit of the organization. For instance, the current assets turnover ratio is in decline trend since the growth of net sales every year is very low in comparison to current assets which imply very low utilization of current assets. Hence, the suggestion is to plan current assets and current liabilities variables with respect to change in sales and profit.

#### **4. Collected Debts in Time**

The study revealed the fact that Nepal Telecom fails to collect debt in time. Among the total receivables of Nepal Telecom, the largest portion is held by sundry debtors which is nothing other than due amount on sale of service. Therefore, the recommendation is to collect debts in time to enhance liquidity position,

#### **5. Use Extensively Financial and Statistical Tools as per required**

Extensive knowledge and use of financial tools can enhance the situation of the organization. Likewise, use of statistical tools for forecasting purpose may be used wherever applicable.

##### **1. The Financial Experts should assess the Financial Performance Timely in Order to Evaluate the Financial Strengths and Weaknesses**

In order to maximize the sales and minimize the operating cost, long/mid planning and control system of account should be prepared and it can utilize its full installed capacity of fixed assets which also helps to improve the turnover position. It is recommended to carry out periodic research work on market possibility, consumer's capacity, and service reliability.

##### **2. Maintain Optimum Level of Working Capital**

From the analysis, it is revealed that Nepal Telecom has kept excess amount of working capital in comparison to sales since the amount of working capital is exceeding net sales every year. This cannot be considered as the sign of efficient working capital management. Hence it is recommended to Nepal Telecom to maintain optimum level of working capital.

##### **3. Manage Optimum Liquidity in the Firm**

The study revealed that the Nepal Telecom holding more enough liquid assets to meet their current payment which indicates mismanagement of liquid assets since an optimum liquidity is the necessity of a firm. There is inverse relation between profitability and liquidity since there is negative correlation between liquidity and profitability. Hence, it is recommended Nepal Telecom to maintain optimum liquid assets.

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**Appendix-1**  
**Standard Deviation and CV of GWC or CA to TA Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	60.66	0.36	0.13
2008/09	61.63	1.33	1.77
2009/10	64.09	3.79	14.36
2010/11	57.90	-2.40	5.76
2011/12	57.24	-3.06	9.36
Mean	60.30		

$$\begin{aligned}\sigma &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{31.38}{5}} = 2.51 \\ \text{C.V} &= \frac{\sigma}{\bar{X}} \times 100\% \\ &= \frac{2.51}{60.30} \times 100\% = 4.16\%\end{aligned}$$

**Appendix-2**  
**Standard Deviation and C.V. of NWC to TA Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	49.02	0.45	0.20
2008/09	49.34	0.77	0.59
2009/10	51.56	2.99	8.94
2010/11	47.06	-1.51	2.28
2011/12	45.87	-2.70	7.29
Mean	48.57		

$$\begin{aligned}\sigma &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{19.30}{5}} = 1.96 \\ \text{C.V} &= \frac{\sigma}{\bar{X}} \times 100\% \\ &= \frac{1.96}{48.57} \times 100\% = 4.04\%\end{aligned}$$

**Appendix-3**  
**Standard Deviation and C.V. of NWC to FA Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	181.18	-10.58	111.94
2008/09	193.87	2.11	4.45
2009/10	219.66	27.90	778.41
2010/11	185.16	-6.60	43.56
2011/12	178.93	-12.83	164.61
Mean	191.76		

$$\begin{aligned}\sigma &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{1102.97}{5}} && = 14.85 \\ \text{C.V} &= \frac{\sigma}{\bar{X}} \times 100\% \\ &= \frac{14.85}{191.76} \times 100\% && = 7.74\%\end{aligned}$$

**Appendix-4**  
**Standard Deviation and C.V. of Cash & Bank Balance to CA Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	53.78	0.78	0.61
2008/09	54.91	1.91	3.65
2009/10	56.38	3.38	11.42
2010/11	46.53	-6.47	41.86
2011/12	53.40	0.4	0.16
Mean	53.00		

$$\begin{aligned}\sigma &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{57.70}{5}} && = 3.40 \\ \text{C.V} &= \frac{\sigma}{\bar{X}} \times 100\% \\ &= \frac{3.40}{53.00} \times 100\% && = 6.42\%\end{aligned}$$

**Appendix-5**  
**Standard Deviation and C.V. of Debtors to CA Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	16.09	1.59	2.53
2008/09	16.45	1.95	3.80
2009/10	12.47	-2.03	4.12
2010/11	13.72	-0.78	0.61
2011/12	13.76	-0.74	0.55
Mean	14.50		

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

$$= \sqrt{\frac{11.61}{5}} = 1.52$$

$$\text{C.V} = \frac{\sigma}{\bar{X}} \times 100\%$$

$$= \frac{1.52}{14.50} \times 100\% = 10.48\%$$

**Appendix-6**  
**Standard Deviation and C.V. of Inventory to CA Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	3.15	1.20	1.45
2008/09	2.18	0.23	0.05
2009/10	1.44	-0.51	0.26
2010/11	1.50	-0.44	0.20
2011/12	1.46	-0.48	0.24
Mean	1.95		

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

$$= \sqrt{\frac{2.20}{5}} = 0.66$$

$$\text{C.V} = \frac{\sigma}{\bar{X}} \times 100\%$$

$$= \frac{0.66}{1.95} \times 100\% = 33.85\%$$

**Appendix-7**  
**Standard Deviation and C.V. of Current Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	5.21	0.07	0.0049
2008/09	5.01	-0.13	0.0169
2009/10	5.11	-0.03	0.0009
2010/11	5.34	0.20	0.0400
2011/12	5.03	-0.11	0.0121
Mean	5.14		

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

$$= \sqrt{\frac{0.0748}{5}} = 0.12$$

$$C.V = \frac{\sigma}{\bar{X}} \times 100\%$$

$$= \frac{0.12}{5.14} \times 100\% = 2.33\%$$

**Appendix-8**  
**Standard Deviation and C.V. of Quick Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	5.05	0.008	0.000060
2008/09	4.90	-0.142	0.020100
2009/10	5.04	-0.002	0.000004
2010/11	5.26	0.218	0.047520
2011/12	4.96	-0.082	0.006724
Mean	5.042		

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

$$= \sqrt{\frac{0.074408}{5}} = 0.12$$

$$C.V = \frac{\sigma}{\bar{X}} \times 100\%$$

$$= \frac{0.12}{5.042} \times 100\% = 2.38\%$$

**Appendix-9**  
**Standard Deviation and C.V. of Inventory Turnover Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	12.75	-9.26	86.30
2008/09	17.98	-4.06	16.48
2009/10	20.15	-1.89	3.57
2010/11	27.70	5.66	32.04
2011/12	31.62	9.58	91.78
Mean	22.04		

$$\begin{aligned} \sigma &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{230.17}{5}} && = 6.78 \\ \text{C.V} &= \frac{\sigma}{\bar{X}} \times 100\% \\ &= \frac{6.78}{22.04} \times 100\% && = 30.76\% \end{aligned}$$

**Appendix-10**  
**Standard Deviation and C.V. of Debtors/Receivable Turnover Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	2.50	-0.22	0.0484
2008/09	2.38	-0.34	0.1156
2009/10	2.34	-0.38	0.1444
2010/11	3.03	0.31	0.0961
2011/12	3.35	0.63	0.3969
Mean	2.72		

$$\begin{aligned} \sigma &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{0.8014}{5}} && = 0.40 \\ \text{C.V} &= \frac{\sigma}{\bar{X}} \times 100\% \\ &= \frac{0.40}{2.72} \times 100\% && = 14.71\% \end{aligned}$$

**Appendix-11**  
**Standard Deviation and C.V. of Current Assets Turnover Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	0.40	0.008	0.000064
2008/09	0.39	-0.002	0.000004
2009/10	0.29	-0.102	0.010404
2010/11	0.42	0.028	0.000784
2011/12	0.46	0.068	0.004624
Mean	0.39		

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

$$= \sqrt{\frac{0.01588}{5}} = 0.056$$

$$C.V = \frac{\sigma}{\bar{X}} \times 100\%$$

$$= \frac{0.056}{0.39} \times 100\% = 14.45\%$$

**Appendix-12**  
**Standard Deviation and C.V. of Cash Turnover Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	0.75	0.004	0.000016
2008/09	0.71	-0.036	0.001296
2009/10	0.51	-0.236	0.055696
2010/11	0.89	0.144	0.020736
2011/12	0.87	0.124	0.015376
Mean	0.746		

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

$$= \sqrt{\frac{0.093000}{5}} = 0.14$$

$$C.V = \frac{\sigma}{\bar{X}} \times 100\%$$

$$= \frac{0.14}{0.746} \times 100\% = 18.29\%$$

**Appendix-13**  
**Standard Deviation and C.V. of Net Working Capital**  
**Turnover Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	0.50	0.012	0.000144
2008/09	0.49	0.002	0.000004
2009/10	0.36	-0.128	0.016384
2010/11	0.51	0.022	0.000484
2011/12	0.58	0.092	0.008486
Mean	0.488		

$$\begin{aligned} \sigma &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{0.025000}{5}} && = 0.071 \\ \text{C.V} &= \frac{\sigma}{\bar{X}} \times 100\% \\ &= \frac{0.071}{0.488} \times 100\% && = 14.63\% \end{aligned}$$

**Appendix-14**  
**Standard Deviation and C.V. of Net Profit Margin Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	40.07	-1.652	2.729
2008/09	42.84	1.118	1.249
2009/10	37.02	-4.702	22.108
2010/11	41.27	-0.452	0.204
2011/12	47.41	5.688	32.353
Mean	41.72		

$$\begin{aligned} \sigma &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{58.643}{5}} && = 3.42 \\ \text{C.V} &= \frac{\sigma}{\bar{X}} \times 100\% \\ &= \frac{3.42}{41.72} \times 100\% && = 8.21\% \end{aligned}$$

**Appendix-15**  
**Standard Deviation and C.V. of Operating Ratio**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	52.54	3.16	9.96
2008/09	49.61	0.22	0.05
2009/10	54.51	5.12	26.28
2010/11	49.78	0.40	0.16
2011/12	40.48	-8.90	79.28
Mean	49.38		

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

$$= \sqrt{\frac{115.93}{5}} = 4.82$$

$$C.V = \frac{\sigma}{\bar{X}} \times 100\%$$

$$= \frac{4.82}{49.38} \times 100\% = 9.75\%$$

**Appendix-16**  
**Standard Deviation and C.V. of Return on Total Assets**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	9.76	-0.13	0.0169
2008/09	10.34	0.44	0.1936
2009/10	6.88	-3.02	9.1204
2010/11	9.96	0.06	0.0036
2011/12	12.55	2.65	7.0225
Mean	9.89		

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

$$= \sqrt{\frac{16.3570}{5}} = 1.81$$

$$C.V = \frac{\sigma}{\bar{X}} \times 100\%$$

$$= \frac{1.81}{9.89} \times 100\% = 18.35\%$$

**Appendix-17**  
**Standard Deviation and C.V. of Return on Net Worth**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	14.58	-1.236	1.52769
2008/09	15.82	0.004	0.00002
2009/10	10.83	-4.986	24.86002
2010/11	17.01	1.194	1.42563
2011/12	20.84	5.024	25.24058
Mean	15.81		

$$\begin{aligned} \sigma &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{53.05394}{5}} && = 3.257 \\ \text{C.V} &= \frac{\sigma}{\bar{X}} \times 100\% \\ &= \frac{3.257}{15.81} \times 100\% && = 20.596\% \end{aligned}$$

**Appendix-18**  
**Standard Deviation and C.V. of Return on Working Capital**

Fiscal Year	Ratio =X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	19.91	-0.632	0.399
2008/09	20.94	0.398	0.158
2009/10	13.35	-7.192	51.725
2010/11	21.16	0.618	0.382
2011/12	27.35	6.808	46.349
Mean	20.54		

$$\begin{aligned} \sigma &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{99.013}{5}} && = 4.45 \\ \text{C.V} &= \frac{\sigma}{\bar{X}} \times 100\% \\ &= \frac{4.45}{20.452} \times 100\% && = 21.76\% \end{aligned}$$

**Appendix-19**  
**Standard Deviation and C.V. of Inventory Conversion Period**

Fiscal Year	ICP=X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	28.67	10.31	106.29621
2008/09	20.30	1.94	3.7636
2009/10	18.11	-0.25	0.0625
2010/11	13.18	-5.18	26.8324
2011/12	11.54	-6.82	46.5124
Mean	18.36		

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

$$= \sqrt{\frac{183.47}{5}} = 6.06 \approx 6 \text{ days}$$

$$\text{C.V} = \frac{\sigma}{\bar{X}} \times 100\%$$

$$= \frac{6}{18.36} \times 100\% = 32.68\%$$

**Appendix-20**  
**Standard Deviation and C.V. of Receivable Conversion Period**

Fiscal Year	ICP=X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	146.00	9.058	82.047
2008/09	153.36	16.418	269.551
2009/10	156.65	19.708	388.405
2010/11	120.07	-16.872	284.664
2011/12	108.63	-28.312	801.569
Mean	136.942		

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

$$= \sqrt{\frac{1826.236}{5}} = 19.11 \approx 19 \text{ days}$$

$$\text{C.V} = \frac{\sigma}{\bar{X}} \times 100\%$$

$$= \frac{19}{136.942} \times 100\% = 13.87\%$$

**Appendix-21**  
**Standard Deviation and C.V. of Payable Deferred Period**

Fiscal Year	PDP=X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	31.30	-8.75	76.5625
2008/09	63.37	23.32	543.8224
2009/10	45.12	5.07	25.7049
2010/11	32.19	-7.86	61.7796
2011/12	28.27	-11.78	138.7684
Mean	40.05		

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{N}} = \sqrt{\frac{846.6378}{5}} = 13.01 \approx 13 \text{ days}$$

$$\text{C.V} = \frac{\sigma}{\bar{X}} \times 100\% = \frac{13}{40.05} \times 100\% = 32.46\%$$

**Appendix-22**  
**Calculation of CCC**

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
<b>ICP</b>	28.67	20.30	18.11	13.18	11.54
<b>Add: RCP</b>	146.00	153.36	156.65	120.07	108.63
<b>Less: PDP</b>	31.30	63.37	45.12	32.19	28.27
<b>CCC</b>	143.37	131.83	129.64	101.06	91.90

**Appendix-23**  
**Standard Deviation and C.V. of Cash Conversion Cycle**

Fiscal Year	CCC=X	(X- $\bar{X}$ )	(X- $\bar{X}$ ) <sup>2</sup>
2007/08	143.37	23.81	566.9161
2008/09	131.83	12.27	150.5529
2009/10	129.64	10.08	101.6064
2010/11	101.06	-18.50	342.2500
2011/12	91.90	-27.66	765.0756
Mean	119.56		

$$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{N}} = \sqrt{\frac{1926.401}{5}} = 19.63 \approx 20 \text{ days}$$

$$\text{C.V} = \frac{\sigma}{\bar{X}} \times 100\% = \frac{20}{119.56} \times 100\% = 16.73\%$$

**Appendix-24**  
**Relationship between Current Assets and Current Liabilities**

(In million)

Fiscal Year	Current Assets (X)	Current Liabilities (Y)	$X - (\bar{X})$	$Y - (\bar{Y})$	$(X - \bar{X})^2$	$(Y - \bar{Y})^2$	XY
2007/08	15.33	29.43	-4.22	-8.65	17.81	74.82	36.50
2008/09	18.42	36.75	-1.14	-1.33	1.30	1.77	1.52
2009/10	20.92	40.90	1.37	2.81	1.88	7.90	3.85
2010/11	20.59	38.58	1.03	0.50	1.06	0.25	0.52
2011/12	22.52	44.75	2.96	6.67	8.76	44.49	19.74
Total	97.75	190.41			$\sum(X - \bar{X})^2 = 30.81$	$\sum(Y - \bar{Y})^2 = 129.23$	$\sum(XY) = 62.13$

$$\text{Correlation Coefficient } r = \frac{\sum XY}{\sqrt{\sum X^2 \sum Y^2}} = \frac{62.13}{\sqrt{30.81 \times 129.23}} = 0.9846$$

$$\text{P.E.} = 0.7645 \frac{1 - r^2}{\sqrt{n}} = 0.7645 \frac{1 - 0.9846^2}{\sqrt{5}} = 0.0104$$

$$6 \text{ P.E.} = 0.0624$$

**Appendix-25**  
**Relationship between Sales and Net Profit**

(In million)

Fiscal year	Sales (X)	Net Profit (Y)	X= (X- $\bar{X}$ )	Y= (Y- $\bar{Y}$ )	X <sup>2</sup> = (X- $\bar{X}$ ) <sup>2</sup>	Y <sup>2</sup> = (Y- $\bar{Y}$ ) <sup>2</sup>	XY
2007/08	61.59	24.67	-15.28	-7.88	233.48	62.09	120.4
2008/09	72.08	30.87	-4.78	-1.69	22.85	2.86	8.08
2009/10	60.70	22.47	-16.17	-10.09	261.47	101.81	163.1
2010/11	85.84	35.42	8.97	2.86	80.46	8.18	25.6
2011/12	104.13	49.36	27.26	16.80	743.11	282.24	457.9
Total	384.34	162.79			$\sum(X - \bar{X})^2 = 341.37$	$\sum(Y - \bar{Y})^2 = 457.18$	$\sum(XY) =$
Mean	76.86	32.55					

$$\begin{aligned} \text{Correlation Coefficient } r &= \frac{\sum XY}{\sqrt{\sum X^2 \sum Y^2}} = \frac{775.27}{\sqrt{1341.37 \times 457.18}} = 0.9899 \\ \text{P.E.} &= 0.7645 \frac{1-r^2}{\sqrt{n}} = 0.7645 \frac{1-0.9899^2}{\sqrt{5}} = 0.0069 \\ 6 \text{ P.E.} &= 0.0412 \end{aligned}$$

**Appendix-26**  
**Relationship between Total Assets and Current Assets**

(In Million)

Fiscal year	Total Assets	Current Assets	X= (X- $\bar{X}$ )	Y= (Y- $\bar{Y}$ )	X <sup>2</sup> = (X- $\bar{X}$ ) <sup>2</sup>	Y <sup>2</sup> = (Y- $\bar{Y}$ ) <sup>2</sup>	XY
2007/08	25.28	15.33	-7.30	-4.22	53.29	17.81	30.81
2008/09	29.89	18.42	-2.69	-1.13	7.24	1.28	3.04
2009/10	32.65	20.92	0.07	1.36	0.01	1.85	0.10
2010/11	35.57	20.59	2.99	1.03	8.94	1.06	3.08
2011/12	39.51	22.52	6.93	2.96	48.02	8.76	20.51
	162.90	97.78			$\sum(X - \bar{X})^2 = 117.5$	$\sum(Y - \bar{Y})^2 = 30.76$	$\sum(XY) = 57.54$
Mean	32.58	19.55					

$$\begin{aligned} \text{Correlation Coefficient } r &= \frac{\sum XY}{\sqrt{\sum X^2 \sum Y^2}} = \frac{57.54}{\sqrt{117.5 \times 30.76}} = 0.9571 \\ \text{P.E.} &= 0.7645 \frac{1-r^2}{\sqrt{n}} = 0.7645 \frac{1-0.9571^2}{\sqrt{5}} = 0.0287 \\ 6 \text{ P.E.} &= 0.1722 \end{aligned}$$

**Appendix-27**

### Relationship between Sales and Debtors

(In Lakh)

Fiscal year	Sales (X)	Debtors	X= (X- $\bar{X}$ )	Y= (Y- $\bar{Y}$ )	$X^2 = (X-\bar{X})^2$	$Y^2 = (Y-\bar{Y})^2$	XY
2007/08	61.59	24.68	-15.28	-3.38	233.48	11.42	51.65
2008/09	72.08	30.30	-4.78	2.23	22.85	4.97	-10.66
2009/10	60.70	26.10	-16.17	-1.96	261.47	3.84	31.69
2010/11	85.84	28.25	8.97	0.18	80.46	0.03	1.61
2011/12	104.13	30.99	27.26	2.93	743.11	8.58	79.87
Total	384.34	140.32			$\sum(X-\bar{X})^2 = 1341.37$	$\sum(Y-\bar{Y})^2 = 28.79$	$\sum(XY) = 151.16$
Mean	76.86	28.06					

$$\text{Correlation Coefficient } r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = \frac{151.16}{\sqrt{1341.37 \times 28.79}}$$

$$= 0.7692$$

$$\text{P.E.} = 0.7645 \frac{1-r^2}{\sqrt{n}} = 0.7645 \frac{1-0.7692^2}{\sqrt{5}} =$$

$$0.1396$$

$$6 \text{ P.E.} = 0.8376$$

**Appendix-28**  
**Relationship between Sales and Inventory**

(In Lakh)

Fiscal year	Sales (X)	Inventory	X= (X- $\bar{X}$ )	Y= (Y- $\bar{Y}$ )	X <sup>2</sup> = (X- $\bar{X}$ ) <sup>2</sup>	Y <sup>2</sup> = (Y- $\bar{Y}$ ) <sup>2</sup>	XY
2007/08	61.59	4.83	-15.28	1.18	233.48	1.39	18.03
2008/09	72.08	4.00	-4.78	0.35	22.85	0.12	-1.67
2009/10	60.70	3.01	-16.17	-0.63	261.47	0.40	10.19
2010/11	85.84	3.09	8.97	-0.55	80.46	0.30	-4.93
2011/12	104.13	3.29	27.26	-0.35	743.11	0.12	-9.54
Total	384.34	18.22			$\sum(X - \bar{X})^2 = 1341.37$	$\sum(Y - \bar{Y})^2 = 2.33$	$\sum(XY) = 12.08$
Mean	76.86	3.64					

$$\text{Correlation Coefficient } r = \frac{\sum XY}{\sqrt{\sum X^2 \sum Y^2}} = \frac{12.08}{\sqrt{1341.37 \times 2.33}}$$

$$= 0.2161$$

$$\text{P.E.} = 0.7645 \frac{1-r^2}{\sqrt{n}} = 0.7645 \frac{1-0.2161^2}{\sqrt{5}} = 0.3259$$

$$6 \text{ P.E.} = 1.9556$$

**Appendix -29**  
**Consolidated Balance Sheet of Nepal Telecom**  
**In Thousands of Nepalese Rupees**

<b>Assets A.D.</b>	<b>FY 2007/08</b>	<b>FY 2008/09</b>	<b>FY 2009/10</b>	<b>2010/11</b>	<b>2011/12</b>
Fixed Assets	6,840,397	7,607,614	7,664,206	9,040,917	10,088,417
Capital W-I-P	1,857,819	1,922,705	1,734,251	2,452,578	2,443,061
Investments	1,080,816	1,770,166	2,183,883	3,338,734	4,156,941
Current Assets, Loans & Advances	15,336,626	18,424,147	20,925,639	20,598,353	22,526,511
Deferred Expenses	166,166	168,361	144,808	142,190	136,448
<b>Total</b>	<b>25,281,824</b>	<b>29,892,993</b>	<b>32,652,787</b>	<b>35,572,772</b>	<b>39,351,417</b>
<b>Capital &amp; Liabilities</b>					
Equity Capital	2,053,864	2,053,864	2,053,864	15,000,000	15,000,000
Reserve & Surplus	14,873,550	17,468,002	18,703,236	5,825,855	8,686,021
Loans from Govt. of Nepal	299,990	233,780	-	24,239	-
Current Liabilities	29,433,76	36,754,12	4,090,353	3,858,484	4,475,751
Provisions	5,111,044	6,461,935	7,805,334	10,864,194	11,189,621
<b>Total</b>	<b>25,281,824</b>	<b>29,892,993</b>	<b>32,652,787</b>	<b>35,572,772</b>	<b>39,351,417</b>

**Appendix - 30**  
**Income & Expenditure of Nepal Telecom**

**In Thousands of Nepalese Rupees**

<b>Income / A.D.</b>	<b>FY 2007/08</b>	<b>FY 2008/09</b>	<b>FY 2009/10</b>	<b>FY 2010/11</b>	<b>FY 2011/12</b>
<b>Operating</b>	6,159,520	7,208,087	6,070,423	8,584,144	10,123,456
Non-operating	396,472	461,197	334,192	610,153	789,123
Total Income	6,555,992	7,669,284	6,404,615	9,194,297	10,912,579
<b>Expenditure</b>					
Total Operating Expenses	3,235,929	3,576,165	3,308,767	4,272,768	4,891,234
Profit Before Tax	3,320,063	4,093,119	3,095,848	4,921,529	6,021,345
Profit After Tax	2,467,930	3,087,782	2,247,301	3,542,461	4,232,112
Profit After Dividend & S.Fund	1,972,550	2,588,223	1,230,092	3,230,469	3,891,234
<b>Retained Earnings Transferred to Balance Sheet</b>	<b>14,639,473</b>	<b>17,227,695</b>	<b>18,457,787</b>	<b>5,665,407</b>	<b>8,912,345</b>