CHAPTER ONE
INTRODUCTION

1.1 General Background

Revenue and cash management occupy an important place in financial management. All business work begin with the provision of sufficient cash to do business. Cash as a means and ends of business operation most be held in sufficient quantity. As the Nepalese enterprises lag behind the best practice seen elsewhere, the more complex cash management issues temporarily more from their rightful place at the top of the treasurer's priority list. Cash has become a very expensive as well as a very resource. Managing it effectively has become key to the profitability of companies and for some it may even be a question of their ultimate survival[1].

Van Horne[2] has categorized the various component of cash management. These are the function of cash management, managing collection transferring funds, concentration banking, lock-box system and other procedures, control of cash disbursements, zero compensation balance and fees, model for determining optimal cash inventory model and stochastic model.
Cash management is one of the key areas of working capital management. A part from this fact is the most liquid assets, cash is the common denominated to which all current assets can be reduced because the major liquid assets i.e. receivable and inventory get eventually converted in the cash.[3].

Cash is the basic input needed to the business running on continuous basic so the cash should be managed efficiently in order to keep the firm sufficient liquid and to use excess cash in some profitable way. The firm should held sufficient cash neither more nor less. Cash shortage will dispute the firm operation, while excessive cash will simply idle, without contributing anything towards the firm's profitability. Thus, a major funtion of the financial manager is to maintain a sound cash position. [4]

Cash flow management is the process of monitoring, analyzing, and adjusting business cash flows. For businesses, the most important aspect of cash flow management is avoiding extended cash shortages, caused by having too great a gap

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[1] Ernest & young .cash management cools off . US banker.1996
[2] van Horne. jaes C financial management and policy", New Delhi pp.31389
[3] MY Khan & PK jain. "financial." Tata Mc Graw-Hill publishing company Ltd. New Delhi .pp.664 -700
[4] Pandey, IM,, "financial management". Vikas house pvt.pp.839

between cash inflows and outflows. Business won't be able to say in market if it can't pay it's bills for any extended of time!

Therefore , business need to perform a cash flow analysis on a regular basis and use cash flow forecasting so they can take steps necessary to head off cash flow problems . Many software accounting programs have built - in reporting features that make cash flow analysis easy. One of the most useful strategies that used on small businesses is to shorten its cash flow conversion period so that business can bring in money faster .
Planning and controlling are the primary function of business .Businesses cannot success or live a minute in competitive global environment with out it. In most cases , revenue planning is not only the important also the must difficult to prepare .Revenue plan provides basis management decision about marketing and based on those decision , it is an organized approach for developing in a comprehensive sales plan.

Cash management is the key function of controlling . It is the heart of the business . A business can be run without proper planning but with in a minute by lack of little than little money . Cash cycle , is a ratio used in the financial analysis of a business. Keep a close eye on business cash flow, so , it can be easy to forecast potential cash flow problems and take steps to remedy them. So, the financial manager should observe the easiest ways to monitor business ' cash flow is to compare the total unpaid purchases to the total sales due , it'll need to spend more cash than its received in the next month , indicating a potential cash flow problem.

Liquidity is the lifeblood of a corporation and a want of cash is the only factor, which may free it out of business. Cash flow in corporation by direct cash sales of assets. It flows out in direct purchase and payment to creditors, wages and other costs. Cash also flows in the purchase of capital equipment . In the payment of takes and interest on borrowed money and in dividends to shareholders . The way corporation manage current assets has an important bearing on the overall liquidity position and failure of maintaining sufficient degree of liquidity may cause the interruption of regular operation besides making corporate manger unable to pay obligation in time. While each situation in unique , the one common thread that runs through all corporate in crises is a lack of liquidity. [5]

In any type of firm the financial manager should not only attain towards the aspect of profitability but he should also turn towards ensuring the liquidity of the corporation. Since every business is a constant debtor an enterprise borrows funds from financial institution and purchase merchandise on credit thereby is less obligation to the government. Thus every enterprise owns liabilities unless the obligation government. Thus every enterprise owns liability unless the

[5] Jedry E Goldress and Rogar w.Chiston," Management of Crisis management Review", American management Association

payment is made at the maturity of the particular debt the reputation of the firm is tarnished at worst the creditor may force the firm to terminate it's business [6]

The cash balance of the firm is influences by credit position of the firm , status of firms receivable , availability of short -term credit etc. Management should make every effort to speed up cash inflow and delay cash outflow. The cash management of corporation is significant enough to have the best use of idle cash balance. and to make advantage from the opportunity interest in cash velocity determined by sales volume and turnover of assets. So, corporate manager must be familiar with the cash cycle to undertake measure for improvement of collection and disbursement.

This is dissertation case of Nepal Telecom, one of the public utility enterprise in Nepal. If we look at the telecommunication history of Nepal, it's development began from a very few lines reaching to huge exchanges in Katmandu valley and other parts of the country. Telecommunication development and organization went hand in hand. Though rate of telecommunication growth is a bit higher than that urban population in recent years. After a stunning series of development. Nepal telecommunication was finally established in 2031 Ashad 1st under Telecommunication Act 2028 as a public enterprises to provide reliable and affordable telecommunication.

The main purpose of the establishment of NTC in Nepal was to strengthen the administrative efficiency of the government. It was the later expanded to serve the needs of development of various sectors as expansion of foreign trade. Tourism development and international integration. NTC was dissolved and converted to Nepal Doorsanchar company Limited (NEPAL TELECOM)from 1st Baisakh 2061 (13th April 2004). The new company was registered with the company Registrar office on 2060-10-11 under company act 2053. However, the company shall also be know to general public by the name NEPAL TELECOM as registered trademark. [7]

Nepal Telecom, as a progressive, public-spirited and consumer responsive entity, is committed to provide nationwide reliable telecommunication services to serve as an impetus to the social, political, and economic development of the country. Nepal Telecom's vision is to remain as a dominant player in the Telecommunication sector of the country while extending reliable and affordable Telecommunication services to all regions including the remotest area of the kingdom and at the same time retaining its present sound financial health event in the coming competitive environment. [8]

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[6] Solman. A Fling Donald Gursewald," Management Finance", New Work, 1964
[7] "Annual Report ",Nepal Telecom .2009-10.pp.3
[8] Ibid

Nepal Telecommunication corporation (NTC), renamed Nepal Telecom is a wholly government owned public sector entity, administered by a government appointed board of Directors, which includes a chairman and four voting members. The company is an inevitably accountable autonomous and organized institution.
The history of rural telecommunication begins from late 1980's and this service is playing the role of catalyst for the economics development. Many places getting mitial services of a single line VHF services were already passed to many phases like VHF-MARTS-CDOT 500 line change with in the period of less than 15 years before. The fast urbanization process is creating high demand of telephone lines throughout the country and all small exchanges are running to their fullest capacity with in a year of their installation. Globalizing has made it compulsory to mtegrate all domestic market with regional global markets and the fast growth of telecommunication is essential for such integration. [9]

The study mostly deals with the cash management of Nepal Telecom. Also the study briefly takes over the account of various methodologies of the implementation, current technologies used in the telecommunication and its future policy. The study also depicts the future of telecommunication in Nepal. Nepal telecom is one if the most prominent public enterprises that is earning relatively good profit and playing highest taxes to government exchequer. The main purpose of establishment of company in Nepal was to strengthen the administrative efficiency of the government. Nepal Telecom even with its present status of being a public sector enterprise, has the ambition of becoming a dominant player in the telecommunication sector, giving an affordable and the cheapest possible services to all regions including the remotest areas of kingdom retaining its present financial health even in the coming competitive environment. The national goal of Nepal Telecom is to provide affordable telecommunication services to all nooks and corners of the kingdom. It was later expanded to serve the needs of development of various sector as expansion of foreign trade tourism development and international integration.10

The other objectives adopted by Nepal Telecom are as follows

a) To provide high quality, reliable and economics services including for remotest area of the kingdom.
b) To exchange information for the preparation of fundamental for development of nation.
c) To establish telecommunication links among the country around the world.
d) To participate the public in telecommunication so as to up lift their living standard.
e) To provide prompt service to the places of demand.
f) To introduce new technologies and cope up with time and tradition.

[9] Ibid, p-17
[10] Annual Report -NTC.2009/10 Head office, Kathmandu. Bhadrakaliplaza

The beginning point for the evaluation of existing revenue planning is to analyze past trends of planned sales revenue and actual sales revenue. Sales plan is prepared on Nepal telecom on the basis of sales forecast. Sales forecasts have to be translated into a sales plan after adjustment of various factors associated with sales still; Nepal telecom is unable to meet the demand of the public. This may be due to lack of proper planning, financial resources and technical known how. To meet the demand of day-to day increment of around the telephone services, Nepal Telecom has installed more and more exchanges with country and expanded its network. Nepal Telecom has supplied with telephone line by CDOT Exchange, MARTS. UHF, VHF, JICA, Microwave station and HF exchange. The total telephone distribution (PSTN, GSM Mobile, CDMA Service &V-sat) up to Paush 2066 was 4916662 lines. Nepal Telecom is fully government owned and government controlled organization. As the leading sector of communication, and government has created a secure environment for the foreign investment and also provide required guarantee for the foreigners.

This shows the commitment of the government towards the company. for the development of this sector, government has requested the united Kingdom for establishing telex and earth station has played a major role in getting support from India, Denmark, Germany, World Bank UNDO. Similarly it also played a significant role in providing credit from France, UNDP, finida, Denmark, and Belgium government.

Nepal Telecom has been investing a large amount of in-productive activities, which never help it to generate the revenue. Therefore, the company is compelled to depend on donor agencies and foreign government. The operating expenses of Nepal Telecom also have been increasing in each fiscal year, which is the main cause of decrement of net profit. Similarly, the operation expenses have increase in Nepal Telecom due to increase in the volume of transaction.

Since, telecommunication is informative service, many fields such as agriculture, business, transportation and other socio-economic sector use these services heavily. Telephony has now plunged into the wide world of informative of technology world from traditional to modern system. It affered and provided its services to all possible parts all over the Country in affordable price and position. Nepal Telecom as far as possible has adopted the new technologies and inventions around the world. liberalization in telecommunication services is the result of globalization growth of markets, markets, new technological, changes and emergence of new services.

Since , the establishment of the Nepal Telecom, a number of services are being provided to the public. Infact, the motive services to the people. It has been Producing a number of service and facilities for transmission of writing message voice communication and a variety of communication. Following are the basis and brief introduction of the kinds of the service provide by Nepal Telecom.

a) Basic telephone service: It is continued effort to satisfy the never growing demand for line capacity for the best interest of its value added customers. As of MIS report of paush 2066 the total installed capacity and distributed telephone line of NTC has reached the 742000 and 570000 marks respectively.

b) National Trunk Telephone services.

c) Rural Telecom services.

d) Pay phone service: Catering to the customer's need who do not own telephone line for easy access to the telephone services anywhere. Anytime while on the move without having to carry coins to make phone calls. NTC launched payphone service using smart cards in Kathmandu since 2058 and other parts of the country such as pokhara, Bharatpur. Nepal gung and Dhangadhi later.

e) GSM mobile services: Nepal Telecom started GSM cellular mobile services in year 1999. In recent days this services has been expanded to various major cities through the valley.

f) Voice, Data and Telegraph leased circuits services .

g) International subscriber Trunk dialing service.

h) Email and Internet services.

i) In mart Mini - M services.

k) International Telegraph services.

l) International program TV services.

m) Telex services

n) VSAT and WLL services

o) Intelligent Network value Added services: Prepaid calling card (PCC) services, Prepaid Home country Direct (HCD) services. Advance free phone (AFS) services, Universal access number (UAN) services and PSTN credit limit (PCL) services.

p) CDMA &Fixed service. Nepal Telecom started CDMA cellular Mobile & Fixed service in year 2006. In recent days this service has been expanded to various district through the valley.

The growing presence of the private sector in business directly or indirectly related to telecommunication has forced Nepal Telecom to fine alternative strategies in talking the emerging competition. Revision of tariff, customer care and introduction of value added services have now become the top priority in this competitive telecommunication market introduced by the liberal policy of HMG,GSM mobile phone capacity has been increased and expanded to the far western region.

Recently , the company has introduction low tariff structure in PSTN, prepaid & post-Paid mobile has shown growing demand. The ongoing east west Highway optical fiber link project has established a reliable alternative backbone link in addition to the existing microwave radio network. This will play a major role in support of the development of the information technology in the country, aiding it's participation in the global economy and ultimately helping in the poverty alleviation.

Under the ongoing tenth national plan Nepal Telecom plans to launch rehabilitation and expansion program in its rural network .The program is aimed at replacing some of its exiting rural telecommunications network, which is now obsolete or damaged due to the recent political insurgency or with exhausted capacities. The company has plans to expand new network, there by will help in modernizing the overall national telecommunication infrastructure of Nepal.

Nepal Telecom generates its revenue by providing different type of service like basic fixed lined services, GSM mobile, Internet, lease line etc. Apart from these the source, which generates significance revenue for the company, is international settlements from international call. Nepal Telecom, due to its nature of business, has to transact with significant number of customers in addition to dealing with foreign carriers for its international sharing revenue.

Revenue collection is always a much-contemplated topic for companies and enterprises. If we revenue the following data related to annual revenue and annual cash collection of past few years, it is satisfying considering the defaults of in other business in our country. [11]

Nepal Telecom has different ways of revenue collection process.

(i) Collection through counters
In smaller exchanges collection being done manually but in almost 50 places collection of cash has been done through online cash collection process, which has far better efficiency than manual cash collection. For the sake of increasing efficiency Nepal Telecom is collection its revenue online its exchanges having lines more than 2000.

[11] Surya Pokhrel (CA) ," Revenue Collection in Nepal Telecom and Strengthing it future ",1st Anniversary Souvnier.2010.pp.65-66

(ii) collection through the banks

Now Nepal Telecom has stated collecting its revenue through the banks also. Like in Mobile's cash Nepal Investment Bank, Bank of Kathmandu, Kumari bank is collection revenue through their counters. As result subscriber are able to pay their dues at heir nearest bank's counters as per their convenience.Similarly also in PSTN;s case herein Kathmandu valley, already bank of kathmandu, Kumari Bank, Nepal Investment Bank, Nepal, Nepal Industrial and Commercial Bank, Machhapuchare Bank, Laxmi Bank, Banijay Bank are collecting the revenue for Nepal Telecom. And in near future few other banks will also participating in PSTN's revenue collection process

The wise in 50 places different banks visit company premises to collect the cash. And these banks are providing interest in the range of 2050 to 4.25 percent per annum. Few years, which deserve appreciation in our collection, strategy is establishment of advance payment facility, weekly bill payment facility for high paying subscribers, anywhere payment kathmandu valley introduction of token system at counters. Presently Nepal Telecom has made policy for disconnect telephone line for that customers who doesn't pay in time (3.5%fine) that generates excess cash to Company. This dissertation is case study of Nepal telecom, one of the public utilities enterprises of Nepal. The study mostly deals with the cash management the telecommunication. Also, the study briefly takes over the account of various methodologies of the implementation, current technologies used in the telecommunication and its future policy . The study also depicts the future of the telecommunication in Nepal.

A good communication system is a must for success of the socio-economic and political development of the country. Nepal Telecom is the largest company serving for the telecommunication sector in Nepal. Profitability is the major indicator of the financial performance of any enterprises. The net profit of company is too high. But the amount of any very low in comparison to the investment on total assets. This shows how the assets have not been utilized. Property and the resources just lying with out any significant use. All business works begin with the provision of sufficient cash to do business. Cash as a means and ends of business operations most be held in sufficient quantity. Holding of cash both in excess and insufficient in than requirement may lead a firm to problems. Shortage of cash put obstruction in the way of production where as excessive cash than requirements contribute nothing to the profitability of firm as idle cash earns nothing . Thus Nepal Telecom's, financial manager has to confront the problem of maintaining adequate or optimal level of cash, which passes risk and does not put negative impact of firm's profitability. Basically, efficient cash management is concerned with the management of cash inflow, outflow and cash within the firm and also includes the maintain relating to financing of deficit and investment of surplus cash so as to maintain optimum cash balance. The basic

issue of cash management is to enable a firm to maintain sufficient liquidity and also at the same time improve its profitability.

The general objective of Nepal telecom is to provide essential nationwide low cost, reliable, affordable and readily available telecommunication services to the general public for the overall improvement of integrity and economic development. in the age of information Technology, Nepal Telecom's Vast telecommunications networks play a key role in supporting the growth of business in the field. Since, Nepal Telecom's responsibility has been to provide reliable and affordable telecommunications services throughout the kingdom. Nepal Telecom fulfills this responsibility and contributes towards the overall socio- economic development of the nation. Since, Nepal Telecom is the role device and powerful instrument for the development of information system and has struggling hard to enter Nepal into modern arena of this changing world.

1.2 Statement of the research problem

The earlier studies on the demand of cash did not report unanimous findings. A lot of controversies exits with respect to the presence of economics of scale in cash holding and the effects costs on the demand for cash. Cash management is concerned with all decisions and acts that influence the determination of the appropriate level of cash and their efficient use as well as choice of the financing method, keeping in view of liquidity.

The cash and bank balance of an enterprise is that portion of its total current assets which is put to variable operative purpose and has characteristics of greater divisibility, liquidity and rapidity of turnover which influence the types and terms of financing.

Beginning with the work of Bajrachary (1990) [12], examined the cash management practices in public enterprises .Their view about the cash management indicates the poor cash management. However, the question exists as to what insight over the problem of cash management.

Cash management refers to the proper management of firm cash position. It is concerned with all decisions and that influence the determination of the appropriate level of cash and their efficient use as well as choice of the financing method, keeping in view of liquidity.

[12] subarnal Lal Bajracharya," Cash management in Nepalese public Enterprises" University if Delhi Oct. 1990.

The cash bank balance of an enterprise is that the portion of its total current asses which is put to variable operative purpose and has the characteristics of greater divisibility, Liquidity and rapidity of turnover which influence the types terms of financing.

Hence cash management is in itself a decision- making area within the framework of the overall current assets management. There is no unanimous finding as regards to the effects of interest rate on demand for cash. Among others, Selden (1961) [13] showed the cash statistically significant negative relationship between interest rates and demand for cash while Friedman (1959) [14] did not find the same. It all shows that there is no unanimous finding with respect to the economic of scale in cash holdings, and the interest cost effect on demand for cash. In order to validate one view or the other, little study has far been conducted in the context of Nepal. So, the research has attempts to test this model in Nepalese public utility enterprises, Nepal Telecom.

Cash management has been the most intricate and challenging area if modern corporate finance as much as the management always face a trade- off between the liquidity and profitability of the firm. Though most of the enterprises in Nepal have been well recognized the importance of proper cash management, they are still facing the problem of cash management. [15]

Cash management in the public utility of Nepal is primarily based on the traditional practices, lacking in a scientific approach. A more serious aspects of cash management has been the absence of any formalized system of planning and cash budgeting in many enterprises do face the practice if forecasting cash requirement or a form basis. [16]

Most enterprises had periodic accumulation of surplus cash and corresponding cash shortage from time to time. Most of the Nepalese pubic enterprises never thought of the source of current assets i.e. cash and usually on HMG for it. Thus the exiting problems in the area of finance are mostly directed towards the management of cash rather than in any other area. Nepal telecom has also suffered problem of efficient cash management. This study therefore, attempts to have an insight over the problem of cash management and revenue effectiveness.

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[13] Seldon, Richard T., The postwar Rise in Velocity of money:A Sectoral Analysis "
[14] The journal of Finance, December 1961, pp241-247
[15] Friedman, M, the Demand for money: some theoretical and Empirical Results", The journal of politacal Economic, August 1959.pp327
[15] Bajracharya, Subarna Lal." Cash management in Nepalese pubic Enterprises". University of Delhi. Oct. 1990,pp

The study mainly deals with the following issues:

1. Is there any gap between budgeted and actual revenue?
2. What steps should be taken for reducing the cash gap?
3. What else can be find out from operating, financing and investing activities ?
4. What steps should be taken to have control and security over cash balance and payment system?
5. Can Nepal Telecom make better utilization of excess cash amount by investing in marketable securities ?

1.3 Objective of this study

The general objective of this study is to examine the revenue planning and cash management of Nepal Telecom. Nepal Telecom is given the priority, as it is the top most enterprise if the nation serving the people since years on communication sector. To achieve these objectives the following specific have been set.

1. To analyze the gap between budgeted and actual revenue and its trend.
2. To examine cash collection and disbursement.
3. To review cash flow from operating, financing and investing activities.
4. To have information, control and security over cash balances and payment system
5. To suggest and recommend Nepal Telecom based on findings

1.4 Rationale/ Importance of the study

Nepal Telecom is one of the most prominent public enterprises that is earning relatively good profit and paying highest taxes to government exchequer. Nepal Telecom, even with its present status of being public sector enterprise, has the ambition of becoming a dominant player in the telecommunication sector, giving affordable and the cheapest possible services to all regions including the remotest areas of the kingdom retaining its present financial health even in the coming competitive environment.

This study is focused to analyzed cash management in Nepal Telecom. It has also focused on sales revenue and how to improve its financial situation in various environments such as the competition in a wide, growing and challenging market. Cash management contributes to improve the profitability as well as the overall financial performance of an organization of help best utilization of resource.
Accomplishment of objectives in every organization depends upon the application of resources. If the cash management process of an organization is effective and result oriented than the pace of development naturally forwards in a usual manner. Profit is the most important indicator for judging managerial efficiency. For this, every organization has to manage its profit. The need of this study is to examine and check whether the Nepal Telecom is applying optimal cash or not. And, the study also show whether there is consistency between planned sales and actual sales.

This study will be concise, brief, practical data based, usable and valuable to the major parties interested in maximization through cash management, this will also serve as a reference for the further study and data collection. This will be equally useful and beneficial to Nepal Telecom, His Majesty's Government, Board of Directors of Nepal telecom, personnel of Nepal telecom and other stakeholder. Lastly it will provide relevant and pertinent literature for further research on the filed of cash management. Thus, the study of cash management is rewarding.

1.5 Limitation of the study

The study is confined only to the revenue planning and cash management of Nepal Telecom. Following factors have limited the scope of this study.

(a) Revenue planning cash management study covers the analysis of current five years 2005/06 to F/Y 2009/10.

(b) The accuracy of this study is based on true response and the data available from management of Nepal telecom.

(c) The main focus of the study on revenue planning, cash management and other related subjects only.

(d) This study may not complete in sense because it does not cover the whole financial area of Nepal Telecom. Study period could not be extended due to the unavailability of data.

(e) Purposefully, this study does not conduct extensive interview with all financial officer and HOD of Nepal Telecom and the field survey is done at head office of Nepal Telecom.

(f) Due to limited time and resource constraint, this has limited the study.

1.6 Organization of the study

The study has been organization into fifth chapters. The first part concentrated with general background about cash & cash management, establishment, of Nepal Telecom, role of government in development of Nepal Telecom and nation, service provided by Nepal Telecom. The second part concentrated on problems arises on study and focus of study respectively. The third part examine on objectives of the projects study. The fourth should present importance terms used during study and fifth part describes rationale of the study.

The second chapter embark conceptual framework like revenue planning and controlling, cash & cash management, cash management models, cash conversion cycle, credit management policy, cash flow statement etc. Third chapter includes a theoretical outline and a short review of previous research work done in revenue collection, cash management strategies.

Third chapter describes the systematic way to solve about the research problem i.e. research methodology. In fourth chapter, data collection from various source have been presented and analyzed using various financial, statistical and mathematical tools. Finally, a summary and the conclusions and recommendations of the study, the major implications of the findings are presented in chapter V.

Chapter Two:
Review of Literature

During the last five decades a number of studies have been conducted to examine the cash management as well as revenue effectiveness. Over the years, professionals and experts have concerned with development and steps that have been taken for close the cash gap. The objectives of this chapter is to review some of the basic literature on the cash management concerning theories review of the empirical evidences of previous studies.

2.1 Conceptual Framework

2.1.1 Revenue planning and controlling

Planning and controlling are the primary function of businesses cannot success or live a minute in competitive or global environment with out it. In most cases, revenue planning is not only the most important also the most difficult to prepare. Revenue plan provides basic management decision about marketing and based on those decisions, it is an organized approach for developing in a comprehensive sales plan.

Cash management is the key function of controlling. It is the heart of the business. A business can be run without proper planning but with in a minute by lack of little than little money. We can say about cash in one sentence," Cash is the life blood of business." Cash is the most liquid assets; it is one major responsibility of managers are continually involved in organizing planning, staffing and controlling the operation of both large and small organization.
Planning means deciding in advance, what is to be done in future? It is a method of thinking out and purposes before and planning starts with forecast and complete with determination of future events. It is the first essence of management and all other function performed with in framework of planning.

" Planning means assessing of the future making provisions for it and assuming that establishing goals can be with in an acceptable time frame." [17] Planning is the basis of controlling and it itself is framed on forecasting in the sense of taking a careful look what is likely to be happen.

The revenue planning estimates are only a guide to the level of future revenues, not a guarantee. If the economy remains strong, the planning estimates are likely to underestimate future revenues. But, if the economy fails to perform at the high

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[17] Chorofas, D.N ' Hand book scientific and Technical personnel; TAB professional and reference book. First Edition,1990

levels anticipated in the control, the planning estimates will overstate future revenues.

Preparation of revenue planning: A planner should be completed the following steps for planning the revenue. They are follows:

Step 1: Develop management guidelines for revenue planning.

Step 2: Prepare forecast

Step 3: Assemble other relevant data

Step 4: Develop the strategic and tactical rates plan

Step 5: Securing managerial commitment to attain the goals in the comprehensive revenue plan. [18]

2.1.2. Cash

Cash is ready money in the bank or in the business. It is not inventory, it is not accounts receivable (what you are owed), and it is not property. These might be converted to cash at some point in time, but it takes cash on hand or in the bank to pay suppliers, to pay rent, and to meet the payroll. It is the difference between profit and cash. Profit is the amount of money, which will expect to make if all customers paid on time and if expenses were spread out evenly over the time period being measured. *Cash* is what you must have to keep the doors of your business open, while you are busy trying to make a *profit*. Over time, a company's profits are of little value if they are not accompanied by position net flow. You can't spend *profit*, you can only spend *cash*.

2.1.3 Meaning and Importance of Cash management

The term 'cash' has meaning according to the purpose for which it is used and persons with varying branches of knowledge convey various meaning have cash. However, our concern of the meaning of cash is to look from the viewpoint of financial management. Cash is an assets constituting the most liquid item among all assets. But to obtain cash involves cost because corporations have to rise through issue to shares or by borrowing with interest. Indeed cash which has a cost, whether received normally through generation of funds in operations or externally through money market procurement is a liability and a wasted opportunity unless it is not put to its optimal use. [19]

Efficient and optical cash flow management is important to all firms. " Cash is a non earning assets in the sense that although it is needed to pay for labor and raw materials to buy fixed assets to pay taxes, to services debt, to pay dividends and so on cash

[18] Welsch. Hilton & Gordon. 1998,' Budgeting profit planning and control ; New delhi: Prenticehall of India, Fifth Edition

[19] Sakesena, Ram prasad " Towards more Efficient Cash management", Nepal journal of management quarterly No.

management is to reduce cash holding to the minimum necessary to conduct business". [20]

Cash flow management is the process of monitoring, analyzing, and adjusting business' cash flows. For businesses, the most important aspect of cash flow management is avoiding extended cash shortages, caused by having too great a gap between cash inflows and outflows. We won't be able to stay in business if we can't pay our bills for any extended length of time!

Therefore, we need to perform a cash flow analysis on a regular basis, and use cash flow forecasting so you can take the steps necessary to head off cash problems. Many software accounting programs have built-in reporting features that make cash flow analysis easy. One of the most useful strategies for businesses is to shorten cash flow conversion period so that business can bring in money faster.

Good cash management means:

1. Knowing when, where, and how your cash needs will occur,
2. Knowing what the best sources are for meeting additional cash needs; and,
3. Being prepared to meet these needs when they occur, by keeping good relationships with bankers and other creditors.

Business is growing and marketing a good profit. However, it never seems to have enough money to pay. What is wrong with this picture? How many of you have had something similar happen to you? Business analysts report that poor management is the major reason why most businesses fail. It would probably be more accurate to say that business failure is due to poor cash management. So how can you manage your cash situation better? For this, financial manager should take a look at the cash flow process to find out. The starting point for avoiding a cash crisis is to develop a cash flow projection. Smart business owner know how to develop both short-term (weekly, monthly) cash flow projections to help them manage daily cash, and long-term (annual, 3-5 year) cash flow projections to help them develop the necessary capital strategy to meet their business needs. They also prepare and use historical cash flow statements to gain an understanding about where all the money went.

2.1.4 Cash Flow

Cash flow simply refers to the flow of cash into of a business over a period of time. Watching the cash inflows and outflows is one of the major management tasks of an owner. The outflow of cash is measured by those checks of transactions that will write every month to pay salaries, suppliers, and creditors. The inflows are the cash, which receive from customers, lenders, and investors.

Positive cash flow : If the cash coming "in" to the business is more than the cash going "out" of the business, the company has a positive cash flow. A positive cash

[20]Weston Fred J and Thomas E. Copeland, 1981; Managerial Finance ', The Dryden Press, Net work, p-428

flow is very good and only worry here is what to do with the excess cash. Like good health, a positive cash flow is something financial manager are most aware of if he have it.

Negative cash flow: If the cash going "out" of the business is more than the cash coming "in" to the business, the company has a negative cash flow. A negative cash flow can be caused by a number of reasons. For example: too much or obsolete inventory or poor collections on your accounts receivable (what your customers owe you) can cause you to be short of cash. If the company can't borrow additional cash at this point, the company may be in serious trouble.
A cash Flow statement is typically divided into three components. These components include internal external source.

Operating Cash Flow: Operating cash flow, often referred to as working capital, is the cash flow generated from internal operations. It is the cash generated from sales of the product or service of your business. It is the real lifeblood of your business, and because it is generated internally, it is under our control.
Investing Cash Flow: Investing cash flow is generated internally from non-operating activities. This components would include investments in plant and equipment or other fixed assets, nonrecurring gains or losses, or other source and uses of cash outline of normal operations.
Financial Cash Flow: Financial cash flow is the cash to and from external sources, such as lenders, investors and shareholders. A new loan, the repayment of a loan, the issuance of stock and the payment of divided are some of the activities that would be included in this section of the cash flow statement.

2.1.5Cash Management Models

Optimal balance of cash is determined by the cost-benefit trade off between interest, income, transaction costs if no compensating balance were required. However with the existence of conversion delays and position transaction costs, the firm would prefers to the hold some cash balance. There are different types of analytical models for cash management.

Baumol Models
Miller- Orr Model
Orgler's Model

Baumol Model[21]
Baumol's model, also known as Inventory model, is one of the simplest models to determine optimal cash under the condition of certainty. According, to this model

[21]Baumol, WJ., " The Transaction for cash: An Inventory Theoretical Approach"

the carrying cost of holding cash is balance against the fixed costs of transferring marketable securities into cash or cash into marketable securities.

The purpose of this model is to determine the minimum cost amount of cash that a financial manager can obtain by converting securities to cash considering the cost of conversion and the counter- balancing cost of keeping idle cash balances which otherwise could have been invested in marketable securities. The total cash associated with cash management securities into cash and (ii) The lost opportunity cost.
The conversion costs are incurred cash time marketable securities are converted into cash symbolically, total conversion cost per period.

= Tb/C..... (i)
Where,
b= Cost per conversion assumed to be independent of size of transaction
T= Total transaction cash needs for the period
C= Value of marketable securities sold at cash conversion

The opportunity cost is derived from the lost/ forfeited rate that could have been earned on the investment of cash balance. The total opportunity cost is the interest rate times the average cash balance kept by the firm. Symbolically, the average lost opportunity cost-
=I (C/2)..... (ii)
Where,
I= Interest rate that could have been earned
C/2= The average cash balance i.e. the beginning cash plus the ending cash balance of the period divided by 2

The total cost associated with cash management compromising total conversion cost plus opportunity cost of not investing cash until it is needed in interest- bearing instruments can be symbolically expressed as= **I(c/2+Tb/c)**..... (iii)

To, minimize the cost, therefore the model attempts to determine the optimal conversion amount i.e the cash withdrawal that costs the least. Symbolically, the optimal conversion (c*) amount-
C* =√ 2b T/i..... (iv)

The models in terms of equation (iv) has important implications. First as the total cash needs for transaction rises because of expansion/diversification etc., the optimal withdrawal increases less than proportionately. This is the result of economy of scale in cash management. Each project does not need its own additional cash balance. It only needs enough added to the general cash balance of the firm to facilitate expanded operations. Secondly, as the opportunity interest rate increase the optimal cash withdrawal decreases. This is to because as increases it is more costly to forfeit the

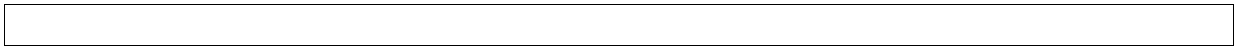
investment opportunity and financial managers want to keep as much cash invested in securities for as long as possible. They can afford to do this as the higher interest rates because at those rates higher rates any shortfall costs caused by a lower withdrawal are offset.

In sum, the model of cash management is very simplistic. Further its assumption of certainly and regularly of withdrawal of cash do not realistically reflect the actual situation of any firm. Also the model is concern only with transaction balances and not with precautionary balances. In addition the assumed fixed nature of the cash withdrawals is also not realistic.

Nevertheless, the models does clearly and concisely demonstrate the economics of scale and the counteracting nature of the conversion and opportunity costs which are undoubtedly major considerations in any financial manager's cash management strategy.

The point on minimum cost will be justified by the following figure -

Diagram-1
Baumol's model showing minimum cost of holding cash



Total cost = Holding cost +Transaction cost
= (Average cash balance * opportunity cost) + (cost per transaction * No. of transaction)
or, Total cost = b(T/C) + I (c/2)

Miller- Orr Model [22]

When cash balance fluctuates unpredictably, we use control theory to determine optimal behavior regarding cash holdings. Stochastic model/ Miller-Orr Model assume that cash flows are uncertainly and unknown in advance. Theoretically, there are number of approaches to control theory. Among them, Miller-Orr model, which specifies two control limit i.e. upper and lower limit.

[22] Miller, M.H. and Orr., " A model of the Demand in firms", Quarterly journal of Economics, LXX (Aug, 1966),p[21]p. 413-435

The objectives of cash management according to Miller-Orr, is to determine the optimum cash balance level which minimizes the cost of cash management Symbolically,

$C= bE(N)/t + jE(M)$ ..... (i)

Where,

b= the fixed cost per conversion

E= (M) = the expected average daily cash balances

E= (N) = the expected number of conversions

t= the number of days in the period

j= the lost opportunity costs

C= total cash management costs

The Miller-Orr, Model is in fact an attempt to make the Baumol model more realistic as regard the pattern of cash flows. As against the assumption of uniform and certain levels of cash balances randomly fluctuate between an upper bound (h) and a lower bound (o). When the cash balances hit the upper bound (h), the firm has too much cash and should buy enough marketable securities to bring the cash balance financial manager must return them to the optimum bound (z) by selling converting securities in to cash. According to the Miller-Orr model, as in Baumol Model, the optimal cash balance (z) can be expressed symbolically as-

$Z = 3\sqrt{(3b^2)}/4i + L$ .....(ii)

Where, Q^2 = the variance of the daily changes in cash balances

Thus, as in Baumol model, there are economies of scale management and the two basic costs of conversion and the lost interest that have to be minimized.

Miller-Orr model also specifies the optimum upper boundary (h) as three the optimal cash balance level such that-

Upper Limit (h)= 3Z - 2L..... (iii)

Average cash balance= (h+Z)/3

further, the financial manager could consider the of less liquid, potentially more profitable securities as investments for the cash balances in excess of h.

Orgler's Model[23]

According to this model, an optimal cash management strategy can be determined through the use of a multiple linear programming model. The constriction of the model comprise three sections-

[23] Orgler, Y.E," Cash Management: Method and Models" Wands worth publishing company, Balmont. Californa, 1970

(i) Selection of the appropriate planning horizon

(ii) Selection of the appropriate decision variables

(iii) Formulating of the cash management strategy itself

The advantages of linear programming models is that it enables coordination of the optimal cash management strategy with the other operations of the firm such as production with less restrictions on working capital balances. The model basically uses one-year planning horizon with twelve monthly periods because of its simplicity. It has four basic sets of decision variables which influence cash management of a firm and must be incorporated into the linear programming ,model of the firm . These are: (i) payment schedule, (ii)short term financial, (iii) purchase and sale of marketable securities and (iv) cash balance itself.

The formulation of the model requires that the financial manager first specify an objective and then specify a set of constraints. Orgler's objective function is to minimize the horizon value of the net revenues from the cash budget over the entire planning period. Using the assumption that all revenue generated is immediately re-invested and that any cost is immediately financed, the objective function represents the value of the net income from the cash budget at the horizon by adding the net returns over the planning period. Thus the objectives function recognizes each operation of the firm that generates cash inflow or cash outflows as adding or subtracting profit opportunities for the firm it cash management operations. In the objective function, decision variable which cause inflows, such as payment on receivables have position coefficient, while decision variables which generate cash inflows, such as interest on short-term borrowing have negative co-efficient. The purchase of marketable securities would, for example produce revenue and thus have a positive co-efficient while the sale of those securities would incur conversion costs and have a negative co-efficient. A very important feature of this model is that it allows the financial managers to generate cash management with production and other aspects of the firm.

2.1.6 Cash conversion cycle

Cycle conversion cycle, also known as assets conversion cycle, net operating cycle or just cash cycle, is a ratio used in the financial analysis of a business. The higher the unavailable for other activities such as investing. The cash conversion cycle is the number of days between purchasing raw materials and receiving the cash from the sale of the goods made from that raw material.

Cash Conversion Cycle = Average Stockholding period (in days) + Average Receivables processing period (in days)- Average payables processing period (in days)

Where,

Average stockholding period (in days) = Closing stock/Average Daily purchases.

Average Receivables processing period (in days)= Accounts Receivables/ Average Daily Credit sales.
Average payable processing period (in days) = Accounts Payables/ Average Daily Credit Purchases.

The duration between the purchases of a firm's inventory and the collection of accounts receivable for the sale of that inventory. Also known as cash cycle.

cash conversion= cycle	Inventory processing period	+	days to collect Receivables

Usually a company acquires inventory on credit, which results in account payable. The company will then sell the inventory on credit, which result in accounts receivable. Cash is therefore not involved until the company pays the accounts payable and collects account receivables. So the cash conversion cycle measures the time between outlay of cash recovery.

Diagram - 2
Cash Conversion cycle

This cycle is extremely important for companies whose focus is the retail sector. This measure illustrates how quickly a company can converts its products into cash through sales. The shorter the cycle, the more working capital a business generates, and the less it has to borrow.

Steps To Shorten Cash Flow Conversion Period

A cash flow gap occurs when your cash inflow and cash outflow don't keep pace with each other, leaving your business short of cash. This is an especially common problem for businesses, where copious cash outflows may repeatedly precede cash inflows all kinds of expenses, from purchasing materials necessary to do the work through licensing or permit fees, may have to be paid out before business gets paid for the work completed.

How do close cash flow gap and keep business solvent? For this, keep a close eye on cash flow, so we can forecast potential cash flow problems and take steps to remedy them. One of the easiest ways to monitor business cash flow is to compare the total unpaid purchases to the total sales due at the end of each month. If the total unpaid purchases are greater than the total sales due, we'll need to spend to more cash than you receive in the next month, indicating a potential cash flow problem.
Take steps to shorten cash flow conversion period, so business can bring in money faster. These steps may include :
1) preparing customers invoices immediately upon delivery of goods service to the customers. If we wait prepare invoices at the end of the month, for example, we may be adding as many as 30 extra days to cash conversion period!
2) Monitoring customers' use of credit and adjusting their limits accordingly.

3) Offering customers a discount for paying their invoices early. for instance, if business has usual policy is to have payments due in 30 days, offer a small discount such as 2 percent to customers who pay within 14 days.
4) Establishing a deposit policy for works in progress. For example, If we deliver a service, such as software development, home repairs, or landscaping, we can adopt a policy that customers pay a certain percentage of the total up front before the job begins.
5) Tracking your past-due account and actively pursuing collections. Most accounting software programs let we easily track past-due accounts, but we also need to have a clear process for pursuing collections. Such a process might involve sending out a series of letter letting your know that his or her account is past due and what steps will follow if he or she does not pay, such as turning the account over to a collection agency.
We have to have money coming in regularly to maintain an adequate cash flow for business, not just endlessly streaming out. Monitoring cash taking steps to shorten cash conversion period will go a long ways towards eliminating those dangerous cash flow gaps.

2.1.7 Credit Management

Credit policy can have significant influences on sales on sales. In theory, the firm should lower its quality standard for accounts accepted as long the profitability of sales generated exceeds the added costs of receivable is determined by the volume of credit sales and the average period between sales and collection.

firm's objective of credit management is not only to collect receivable promptly, but also to give an outlook to the benefit cost trade off involve in various aspects of accounts receivable management. The important criteria to maintain benefit cost trade off of the firm's receivable management are to set up credit policies. a form's policy provides guidelines for determining whether to expand credit to a customer and how much credit and collection policies decision includes three dimensions:

I. Credit standards
   a) Sales revenue
   b) Investment in accounts receivable
   c) Bad debt expenses
II. Credit terms
   a) Cash discounts
   b) Cash discount period
   c) Credit period
III. Collection policies
   a) Correspondence
   b) Legal action
   c) Telephone calls

d) Persona; visits
e) Legal action

2.1.8 Cash flow projection

A cash flow projection is a forecast of the difference between cash coming "in" the business and cash going "out" of the business. The estimation or projection of cash flow is a powerful management tool for business. If we were to choose one financial management tool that we use on a routine basis, the cash flow projection and cash flow analysis would be the one to choose.

By knowing your cash position now and in the future, you can:

a) Make sure businesses have enough cash to purchase sufficient inventors for seasonal cycles;
b) Take advantage of discounts and special purchases;
c) Properly plan equipment purchase for replacement or expansion
d) Prepare for adequate futures financing and determine the types of financing (short term credit line, permanent working capital, or long - term debt).
e) Impress lenders with ability to plan and repay financing.

Moreover, it just makes good business sense to know where you are and where you are going with your company. A cash flow projection can help you do this.
For a new or growing business, the cash flow projection can make the difference between success and failure. For an ongoing business, it can make the difference between growth and stagnation.

The cash flow projection shows how cash will flow in and out of the business and enables firms to budget the cash needs of the business over a period of time. The ability to predict and plan cash outlays means that firms won't be forced to resorts to unexpected borrowing to meet your cash needs. At a minimum, this can be more costly (as an example, using your credit card to pay unexpected bills generally costs firms' more in interest than say a working capitals line of credit).

The lack of liquidity can be a killer-- even for profitable businesses. Lack of profits won't kill a business nearly as quickly as the lack of cash to pay your trade creditors. Remember. Non-cash expenses such as depreciation can make your profits look negative, while your cash flow is positive. And you could also be showing a profit but have negative cash flow. That's why it is essential that we understand how to use a cash flow statement, and use it on a regular basis.

Preparing a cash flow projection is a something like preparing budget and balancing checkbook at the same time. Unlike the income statement, a cash flow statement deals only with actual cash transactions. Depreciation, a non-cash transaction, doesn't

appear on a cash flow statement. Loan payments (both principal and interest) will appear on your cash flow statement since they require the outlay of cash.
cash is generated primarily by sales. but in most businesses, not all sales are cash sales. even if firms have a retail business and a large percentage of sales are cash. it is likely that firm offer credit (charge accounts, term payments, lay-away, trade credit) to customers. thus, we need to have a means of estimating when those credit sales will turn into cash-in-hand. Cash flow projections should be prepared for short-term (weekly, monthly),and long-term (annual, 3-5years) planning purposes. They are used for different purpose and thus are generally prepared differently.

2.1.9 Cash flow statement

The cash flow statement is used to analyze the cash inflows (where the money went) during a designated time period. Result from the introduction that there are three major components of cash flow: operations, investing and financing. if we regularly do a monthly profit and loss statement, we will be aware that there are certain items, which may not affect profit and loss statement for some time, such as:

a) Substantial increase in inventory purchases;
b) Increase in accounts receivable (money owed to you by customers);
c) Reduction of credit by suppliers;
d) Purchase of equipment;
e) Unrecognized obsolescence of inventory (stale items);
f) Banks refusal to renew or extend loan; and
g) Lump sun payment of debt.

A cash flow statement will highlight these activities in a way that an income statement will not. And certainly your banker will want to see a cash flow statement showing how we have used the funds from a previous loan before they approve an extension or a new one. Without the cash flow statement, we will have an incomplete picture of our business.

to determine operating cash flow, firm starts from net income and add back expense, which didn't result in inflows or outflows of cash. The most common non-cash expense is depreciation. When working with historical figures, adjusting net income with depreciation and other non-cash expenses is much simpler than determining all the revenues and expenses which require or provide funds.

next, the firm identifies all the balance sheet accounts that are associated with operation and determine the *change* in the account from the end of the last period to the end of the current period. What balance sheet accounts are we referring to? let's take another look at the cycle to see what accounts to include.

Balance sheet accounts to be referred for Cash flow statement

operating cash flow will include all the balance sheet accounts that are a part of normal operations . trade receivables and payables as well as accrued expenses, prepaid expenses and other current assets that are a part of day-to-day operations ate included in operating cash flow as we'll show in above diagram.

The remaining balance sheet accounts will either be investing activities or financing activities. Once again , the firm has determined the change in each balance sheet account from the beginning of the period to the end of the period, tally them up, and there you have it-- a complete picture of cash flow for company.

2.2 A Review of major studies in General

The interest in the study if the behavior of the transaction demand for cash by corporations has been stimulated by Baumol (1952), [24] Tobin (1956), [25] Baumol and Tobin suggested that there are economies of scale in cash holdings and transactions elasticity of cash balances is 0.5 .among others, Frazer (1964), Nadiri (1969) and Coats(1976) supported Baumol and Tobin. those who supported Baumol and Tobin found that under moderately restrictive assumptions optimal transactions cash balance very less than in proportion to sales.

Friedman's (1959) [26]reported empirical results shoed a permanent income elasticity of 1.8 . while Meltzer (1963 June, 1963 August) , whalen (1965) ,de allessi (1966) ,and Vogal and Maddala (1967) supported Friedman. they suggested that the elasticity of cash with respect to sales is about or more than unity.
the well known professors Weston and Brigham[27] have given some theoretical insights into current management (cash management) after their various research studies on ii. the conceptual findings of their studies provides sound knowledge and guidance for the future studies on the field of cash management . they explain in the beginning the motives for holding cash specific advantage of adequate cash , synchronization of cash flows , expending collection and check clearing. using float, cost of cash management determining the minimum cash balance , compensating balances,. overdraft system of cash management , marketable securities substitute of cash criteria for selecting securities investment alternatives.

[24]Baumol ,W.(1952), "The Transactions Demand fir cash: An Inventory Theoretic Approach", The Quarterly Journal of Economics, November, pp.545- 566
[25]Tobin J. (1956) "The Interest Elasticity of Transactions Demand for cash" The review of economics and statisics, Augist, pp.2451-247
[26]friedman M> "the demand for money: some theoretical and empirical results" the journal of political economy August .pp. 327-351
[27]weston j ftie f and but "management finance pp. 365-392

For the cash management a well known Indian Professor I.M. Pandy[28] has described some conceptual ingredients, which are based on his various research studies we can learn frame it and also helpful for this study indeed. He had described various aspect of for the cash management motives for holding cash cash planning forecasting and budgeting managing the cash flows controlling disbursement determining the optimum cash balance.

For instance Electric Utility Immediately Increases Payments with Interactive communications Solutions. A Case Study On Eielson Company,[29] describing ways to increase collection efficiency and effectiveness particularly on accounts over 60 days past due The major finding to revenue management efforts through customize messages that align with internal customer profiles creating a personalized conservation appropriate to each individual. By providing automated account services, the company should able to reach out to more customers, increase payments rates and better utilized of agent resources, with the added benefit of reducing operational cost.

A study on cash management - more bang for your buck (1995)[30] describe, how can charities put their money to work for the short and the long term? By using practical cash management strategies, they offered these five tips for improved financial performance:

1 **Plan ahead.** Does the budget incorporate strategic cash management? Can timing of cash disbursements be determined in advance? If firm won't need some funds immediately, the money can be put to work for higher return. Remember that investment yield normally increases with maturity term.

2. **Minimized bank account "float''.** Remember that banks are in the "spread" business -----they'll benefit if firm don't plan or manager effectively.

3. **Whenever possible, maximize use of high -quality ''marketable'' investment vehicles.** Your organization's investment return will benefit.

4. **Invest operating cash surplus, if any. Longer maturity instruments usually yield higher return.** Could firm allocate surplus to an endowment or investment portfolio to take advantages of this?

5**. Process and operating discipline is vital.** Does your organization have a "cash management policy"? Who's responsible for managing cash flow currently? If you don't have a policy, develop one. Make sure that guidelines are appropriate and clear, and make someone accountable for implementation.

There are many empirical studies on cash management. In 2000[31,] Keith Allen reported cash management study of Coca-Cola. Coca-Cola Amatol (CCA) is one of

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[28] I.M Panda,"Financial Management", New Delhi .PP 839-869

[29] WWW.PAR3.com, "Electric Utility Immediately Increases Payments with interactive communication solutions". A case study of Exeoh Company, Power Chicago & Northern lions

[30] Canadian Fund Raiser," Cash Management -more bang for your buck ". Feb. 27, 1995

[31] Keith Allan." Cash management case study ". Coca-Cola Amatol Limited, 06 Nov 2000

The largest bottlers of the trademarked products of the Coca-Cola Company in the world.
Keith has pointed out the key objectives for the treasuries are to:

1. Ensure availability of funding for the group's activities world wide
2. provide funding, foreign exchange (FX) and financial advice to its business operations
3. manage CCA 's FX and commodity price risk as well as interest expense
4. Ensure compliance with the board-approved treasury policy throughout the CCA group.
5. the construction of individual cash management system may differ between locations but should reflect the same core objectives:
6. To ensure the availability of funds at the right time, in the right place, in the right currency at the least cost.
7. to reduce the cost of cash collection and disbursements
8. to improve the net interest outcome
9. To have information, control and security over cash balances and payment systems.

CCA's treasury utilizes two main cash management tools for the funding of timing mismatches in attempting to zero balance CCA's overdraft account. The Over night Money Market (OMM) and Euro Commercial Paper (ECP) cash management tools has been used. Understanding cash management is vital to corporate survival. Liquidity can either be an enemy or an ally, with the only determinant being the timing of cash flow and liquidity needs of the operating business under management .

In another study, G Ananthram (2000)[32] analyzed, USA, through its subsidiary Parke - Dives & Co, USA holds 40% of the share capital. PDI is in the pharmaceutical business and it's operations are largely divided in to the pharmaceutical Product Division (PPD), which focuses on prescription product and the Consumer Health Products Division (CHOD), Which focuses on product of an over the counter (OTC) or a quasi -OTC nature . PDI has a centralized treasury function located in Mumbai.
He concluded key objectives of the treasury are :

I. To ensure the availability of funds at the right time, in the right place and the least cost
II. To reduce the cost of collections and disbursement
III. To reduce interest incidence costs, including active monitoring of the effective interest rate cost
IV. To monitor foreign exchange transactions / exposures of the corporation
V. To ensure compliance with the broad-based treasury policy of Warner Lambert, USA.

[32] G. Ananthram ," cash management case study : Parke devis(India) Limited ",2000

The study shows the following important areas of the treasure operation on collections, Payment services, bills accounted for third- party purchase ,. Zero balancing account / predetermined target balance, at - per cheques, temporary cash surplus and future outlook.

A cash study on cash flow gap[33] result reveal that the cash flow gap creates the need for effective cash flow management can help reduce the amount of time between cash outflows. Thus in turn, Will help reduce or close cash flows gaps.

Peter Stogaard (2003)[34] investigated the cash management solution for the Nordic Countries manufacturing enterprises. In this article, he reported that an international manufacturing group went through when setting up a cash management structure in the Nordic countries. He examine the different solutions that were considered and focus on how the solution work for the individual companies and for the group as a whole. He maintained some of the most important reasons for choosing a particular bank as a group's Nordic bank are:

I) One bank- one system
II) One electronic banking solution
III) Multi bank - Systems
IV) Interest and liquidity
V) Competitive prices
VI) Centralized solution
VII) Efficiency implementing cash process- Does the bank have comprehensive experience in implementing cash management solution for international corporate groups?

In general, all solution offered should be tailor - made to fit the groups specific need in the various countries and an in-depth analysis of banking requirements is made for each participating entity. In a simplified from, has explained a typical implementation plan normally includes the following main tasks:

i) Opening of bank accounts according to the agreed account structure;
ii) Establishment of the mandate structure regarding account enquiries, payment instructions and the use of the installed office banking system;
iii) The customer must provide the bank with valid identification for each authorized person , an official list of persons authorized to bind the company and an extract from the corporate register;
iv) Installation of the bank's office banking system;
v) Interface between the office banking system and the customers ERP system (possible contact to the supplier of the accounting software);
vi) Education and training of the users of the office banking system;

[33]": CCH Business Owner 's Tool Kit| Case Study Flow Gap", www.toolkit.ch.com pp. 06
[34]"selecting a Cash Management Sokution for the Nordic Countries", Peter Stogaard. Dan ski bank. 16Sep 2003

vii. Specification of the customer's uses of different types of payments including, for example, the handling of payrolls;
viii. Derived accommodations\change regarding local clearing system/ set-up links to the bank;
ix. Sending of test payment files from the customer to the bank and evaluation of the test;
x. Informing the customer's debtors about the change of bank (put the new account number on invoices);
xi. Conversion of payment transaction from the current to the current to the new bank;
xii. Establishment of agreed liquidity and interest management tools;
xiii. Information regarding possible internal interest rates and credit limits (cash pooling); and
xiv. Establishment of agreed credit facilities.

As the group had grown, one of the aims of the treasury department was to maximize the efficiency of banking and liquidity management by appointing one single bank to supply the services in all of Europe. As this was an objective that couldn't be achieved, the group treasury had decided that the group should use one bank in the Nordic region and one bank in other European countries.

Cash management departments continue to process a rapidly rising number of automated clearing house payments, but revenue from these payments is growing at about half its pace of five years ago. That observation comes from the latest cash management survey done by Ernst & Young [35], which has study this business since the early 1980s. According to Larry Forman, a manager at the Big Six firm, there is still a glut of banks competing for corporate cash management accounts, despite the banking industry's drastic consolidation of the last decade. That's led to price-cutting in products like ACH transactions, which are mostly direct deposit of payroll checks and direct payment of insurance premiums. While the variety of ACH payments continues to grow, the market's overall revenue growth slid from 13%. That's a steep drop from 1991, when banks' ACH revenue grew 20.5%.

In 1999, [36]conducted simultaneous tests by Damian Glen dinning about IBM's worldwide cash management strategy who had pointed out seek to optimize cash management by first centralizing all the company's cash within each country. Study results to optimize across national boundaries by using cross-border loans to balance cash and borrowing. External funding is arranged on a regional basis to take advantage of the cheapest sources. This strategy has always been very difficult to implement in Asia pacific. The problems encountered, and the changes resulting

[35] Earnest & "Cash Management as the Top of the Agenda?" IBM 04 Feb. .1999
[36] Damain Glendinning ,"IBN : case study : management as the Agenda?." IBN_ 04 Feb, 1999 (www.grnews.com)

from the crisis , reveal a lot about the region. The role and future of local banks is obviously a key issue, and one of the areas in which we can expect to see most change. The local bank that survive will have to become more focused on providing customers services, as opposed to simple leading facilities. The research indicates that IBM will not be able to reduce significant hidden cost completely on present scenario that makes intervention to efficient cash management.

Flemming survey (2003)[37], results reveal that increased idle of cash flow forecasting, which is an excellent way to improve the efficiency of cash investment and potentially further boost returns.

Corporate treasury survey (2004)[38], indicates nearly 90% of the corporate treasures said they had responsibility for developing accurate and timely projections of future liquidity. However many treasurers remain frustrated with their cash flow forecast process. Forecast variances are large and difficult to explain to senior management. Receipts and disbursement projection are often not adequately reconciled to accounting-based revenue and expenses forecasts. The study explained gap between budgeted and actual revenue.

Lufthansa has operating 328 commercial aircraft of Lufthansa German Airlines generates revenue about Euro 1509 billion. A study on Lufthansa Cash management, 2004[39] was mainly the following purposes:

(i) Cash pooling with the Lufthansa
Balance of liquidity between Lufthansa organizations
(ii) Cash disposition
Disposition of different foreign exchange balance
(iii)Transfer from countries with blocked funds
Minimization of foreign exchange
(iv) Controlling of liquidity
Risk optimized investment of surplus
(v) Bank relationship management
Cost reduction of payment transaction

A study has pointed out the following facts and figures which should to be control:

(i) Liquidity on all accounts
(ii) Reduction of balances
(iii) Control of service charges
(iv) Interest effect of transfers from problem countries
(v) Observation of problem countries (no. and potential)

[37] JP Morgab Flemming "International Cash Management Survey", 2003, pp. 3
[38] International Cash Management News Letter." Corporate Treasury Survey (2004). Nov 2004, Issue 4,pp. 2
[39] Lufthansa Treasury, "A Cash Management case Study", Vancouver, October 11th - 12th, 2004

Lufthansa Treasury had developed a standard guideline for its group cash management , which describes processes and responsibilities in business relations relating to banks.

The review of above - mentioned studies carried studies carried out in western countries shows many interesting finding on cash management. However, question arises as to what extent these finding are pertinent for Nepal.

2.3 A review of major Nepalese studies

Cash management is have been less subjected to investment research than their counterparts elsewhere. Most of the researcher that are concerned with the investigation of cash management with certain financing indicators and variables. For instance, Mr. Pradhan (2004) research, "A study in cash management of Salt trading corporation ltd" where the sources of data used was secondary data. The -specific objectives of this study are as follows:
(i) To study the overall scenario of STCL.
(ii) To study the existing cash management system in STML
(iii) To access the credit policy adopted in STML.
(iv) To expand few suggestions the basis of above analysis to improve the cash management for future.

Mr. Pradhan[40] has pointed out some major finding on analyzing data and available information.

I. The corporation (STCL) could not make the best use of available cash balance prudently and the cash collection efficiency in this corporation is very low.
II. Management has taken liberal credit policy to sales of goods. Hence the cash and bank balance of the study period is minimum of AR.
III. The collection of tread credit is low during the study period .
IV. No, optimum cash balance is maintained. The cash and bank balance with respect to current assets has been fluctuating trend.

However, the available studies using mostly secondary data. However, since their studies did not adjust necessary information in the cash forecasting their findings should be used with caution.

Mr.Acharya's (2006)[41] research,' Profit planning in Nepal telecom ' was mainly centered with analyze the various functional budget and their evaluation . The data and other necessary information were collected by using as well as primary sources of data. Mr. Acharya has pointed out various finding and recommendations in his research. Some unforgettable finding were as follows-

[40]Pradhaan, Bijaya. (2004). "A study on cash Management of STCL ltd." T.U.
[41]Acharya , suman , (2006) ," Profit planning in public utility Undertaking of Nepal (NTC and NEA)," Unpublished thesis of TU, Kritipur

a) In NTC, there is a system of management information systems report.
b) There is no concept of profit planning system.
c) Financing positions of NTC is satisfactory.
d) NTC has practiced to follow the budget principal strictly because the actual overhead is out of budgeted limit.
e) NTC is suffering from high fixed cost.
The study didn't give any information about cash and its management.

Mr. Sharma's (2006)[42] research "A study in the revenue collection of NEA was mainly centered with the revenue collection strategies and financial position in different sectors of NEA

The data and other necessary information's were collected by using primary as well as secondary sources of data. The major findings of his research are-

a) Industrial sector is most importance in the revenue point of view. There has been a fluctuation in the revenue collection of NEA.
b) Positive relationship between the revenue and profitability of NEA. So to improve the profit operating as well as other cost should be controlled.
c) There is low debtors turnover receivables and high average collection period
d) There is no improvement period in the revenue collection of NEA despite the government effort in this field.
e) To improve revenue collection of NEA, the government should issue circular to all offices to pay their outstanding bill in time.

However, the study is related with revenue and collection process at NEA.

Mr. Goet's (2007)[43] research "Revenue planning and management in Nepal. A case study of NEA" was mainly centered with the revenue management aspects of NEA.H e has pointed out some major finding and recommendation based on analysis of data and available information, which are as follows:

1. No plan and program has been made about possible consumption of electricity in agriculture sector.
2. The revenue plans prepaid by the branches and sub branches are not used to prepare central revenue plan.
3. NEA has to practice to increase 10% in past year's figure to forecast next year's figures as a basis for forecast
4. Planning sales units and sales revenue is highly and positively correlated the correlation actual sales unit and revenue is also positive and high.
5. The analysis of category-wise revenue plan show that achievements in domestic, non-commercial, commercial, and industrial categories are fluctuating._

[42] Sharma Dilli Raj,"(2006) "A study in the Revenue Collection of NEA" , Ramshhpath : Shanker Dev Campus (MBA)
[43] Goet , joginder, (2007) "Revenue Planning and Management in Nepal : A case study of NEA", Ramshahpath:Sanker Dev Campus (MBA)

The study conducted by Mr. Prem Lal Adhikari, 2008[44] on the title of "an evaluation of financial of NTC " was subject to time. Which concludes that the corporation has various problems differ in their importance. Some of the problems are affecting to a greater extent and some of them are affect to a lower extent to its financial position. The major problems are summarized in this study. such as

- No effective utilization of assets.
- Serious matter of outstanding debt collection.
- Profit earned by NTC is not sufficient to make the corporation self-reliance.
- Increasing in cost continuously due to not adopting the cost control tools and techniques.
- Utilizing huge amount of loan to expand its service and the corporation is incapable to meet the competition with the private sector.

After analyzing the above weakness in the corporation, the researcher has provided the following recommendation, which are very practical and theoretical, why to improve the financial position of NTC.

- NTC should utilize full installed capacity.
- Operating as well as non-operating expenses should be minimized to increase the net profit.
- Corporation should prepare the highly qualified, dynamic and energetic personnel.
- It is necessary to identify where the delay originate and adequate incentive and reward should be made to raise the morale of the staff.
- The financial position of the corporation should be timely evaluated.
- The government should provide more autonomy to the management of NTC and make them more responsible and accountable according to their work.

Vishwa Raj Panday, 2008[45] ,in his thesis entitled "Development of Telecommunication in Nepal" was submitted to institute of Humanities and social Sciences, T.U. in 2009 seek to explore the existing policy of telecommunication development in Nepal. This study evaluates the financial as well as physical development position by the help of target set and achievement performed. In this study, the data are collected from the secondary sources. But the data are not analyzed by using proper research methodology. The study deduces the following conclusions:

1) Taking into account of the plan targets and achievements of all the five development plans, altogether 55.98 percent achievement is recorded. This result is not so appreciable.

2) NTC seems to be financially sound by improving the revenue earning each year.

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[44] Adhikari, Prem Lalj, (2008) "An evalution of financial position of NTC" Unpublished degree thesis, Business Administration and Commerce TU.

[45]Pandey Vishwaraj, (2008) "Development of Telecommunication in Nepal" Unpublished degree thesis, Institute of Humanities and Social Sciences TU.

In this study, the researcher had provided the following recommendations for the further improvements of the corporation:

a) The service of the corporation should be prompt, fast,impartial and cheap.
b) The plan targets should be set in a realistic way so that implementation would be better followed.
c) The improvements in managerial and technical operation seem to be required.
d) The services of the corporation should expand to far remote places.

An article by R.B. Rai discusses on "Nepal Telecom in struggle for existence" on 34th Anniversary souvenir (2009) [46]. Today's competitive and complex situation, Nepal Telecom and all its staffs should focus more towards customers care. They have to be providing prompt and quality services because "Customers are king in case of Nepal Telecom also as is the case of any services oriented organization. Now Telecom technologies have been changing in the blink of an eye. Choices of customers are also changing in accordance with the changing technologies.

Therefore Nepal telecom needs to continue the diversification of value added services and expansion of basic telephone lines and mobile services; otherwise it is very difficult to exit in this "Cut throat competition" of the 21st century. Strategic plan for seventh phase of Nepal Telecom (2002/03-2006/07) Tenth five- year national plan of HMG - Nepal mentioned financial analysis of the company . Financial indicators of Nepal Telecom for the past few years could be considered as satisfactory with average return on investment of more than 20% manpower per connected lines grew by 17% annually in the same period.

Nepal Telecom has strong financial base although it is not utilizing financial capacity properly. It has strong base for investment from internal fund and can obtain external funding without any different as it has strong capacity to pay its exiting obligations and also the future obligations. There is need of proper allocation of resources in various productive projects. Nepal Telecom concludes its finding investments environment as:

a) Total income is increasing
b) Liquidity of the organization is also increasing
e) Nepal Telecom has got sufficiently good fund for investment
d) There is high possibility for external finding of Nepal Telecom as it has strong base to pay the loans back on due time.

AS such whatever cash a corporation has must be utilized efficiently to meet obligation of interest payment i cash is obtained from borrowing and it is received through issue of shares the corporation has responsibility to owners in assuring them to pay favorable rate of return. Since cash is not easy to obtain, the available cash must be prudently spent without incurring loss." Although it is impossible to formulate a set of assets management policy of universal applicability, one policy or rule that appears to be unanimously accepted is that cash must be conserved."[47]

[46]NTC, "34th Anniversary Souvenir, 2009", Katmandu.
[47]Sakesna, Ram M., "Towards more efficient Cash Management", Nepal Journal of Management, Quarterly No.5, Kathmandu.

The article published on Anniversary Sovenier, 2010[48] shows Nepal Telecom, standard cash collection/ revenue ratio has been taken as 98% through some portion of cash collection during the year may pertain to previous years. But the result shows the actual cash/ revenue fluctuated from the standard.

Since the above-mentioned studies of Nepalese public utility sectors cash management & revenue planning offer limited findings adjustment of necessary variables and testing measures are needed in order to more conclusive about the efficient management of cash. Mr. Pradhan study has now become old since it was based on secondary data. Most of the past studies conducted in the context of Nepal are based on secondary sources of information. There is a need to conduct a survey of financial executives in order to find out more subjective facts on how to manage optimal cash through the use of relevant sources of information and methodology. This is the first endeavor that studies to ensure the availability of funds at the right time, at the right place, at the least cost which reduces the cost of cash collection and disbursements.

Similarly, the earlier studies were conducted when the Nepal Telecom (public utility organization) was at the initial stage while the present study is based on current data and adjusted necessary information. So the study is an attempt to have information, control and security over cash balances and payment systems.

2.4 Research Gap

Many public company or private enterprises are not practicing various accounting tools and techniques to measure its performance in Nepal. Researcher should face problem for analyzing financial statement. Though there is significant gab between present researcher work and the previous research works Most of the researches, financing tools are analyzed in one way or the other but impacts are rarely explained. Especially comparative Revenue Planning and Cash Management Analyses in Public Company or Private Enterprises have not been done yet by other researcher. The study supports in addition to fulfill the lack of previous dissertations conducted in NTC's financial performances. For this purpose practice of Revenue Planning and Cash Management in NTC is studied. It will also clear the contribution of public company and private enterprises to build strong economic condition of the Nation.

[48] Surya pokhrel(CA), "Revenue Collection in Nepal Telecom and Strengthining it in future", 1st Anniversary Souvenier 2010,pp. 65-66

CHAPTER THREE:

RESEARCH METHODOLOGY

Research Methodology is the guideline of research. Data & information are lifeblood of any research. Research methodology is a plan to obtain the answers of research questions through analysis of data.

3.1 Research design

Research design provides the glue that holds the research project together. A design is used to structure the research, to show hoe all of major parts of the research project ---the samples or groups, measures , treatments or program, and methods of assignment ---work together to try to address the central research question. It is major job of the study . The research design of this study shows the relationship between the various functional budget their achievement and their effective application with in the conceptual framework of revenue planning and cash management for solving the problems that has accursed in Nepal Telecom .

To fulfill the objectives of this study primary as well as secondary sources of information is used. The research is based on recent historical data. It covers the 5 years period from F/Y 2005/06 to F/Y 2009/10. Study data willbe descriptive as well as analytical. Then data are used to describe the solution and evaluate the cash management of Nepal Telecom.

3.2 Nature and source of data

Any type of study having small or large for that study data is necessary . Data shouldn't be hypothetical but it should have quality of accuracy and per feasibility. Thus, for any study information is the oxygen, Thus it is the fundamental task together the information and data collection, to fulfill the objectives of this study primary data as well as secondary data has been used. The data used in study are basically secondary in nature.

Primary data are collected through questionnaire, interviews and surveys with concerned employed of Nepal Telecom. Besides this the researcher have discussed informally with different level of officials of Nepal Telecom to achieve various types of required information. So both primary and secondary data are used in this study.

Secondary have been taken mainly from Nepal Telecom's publication (Nepal Telecom Anniversary Souvenirs, Shramik Spandhan, Monthly MIS Report, Budget

Book, By-Month Bulletin etc) , Annual Report , Strategic plan for Seventh phase of Nepal Telecom , Previous thesis relating to Nepal Telecom. Similarly, other necessary data are collected from the publication of National Planning Commission, Economic survey brought out by the Ministry of Finance, MG/N, Central Bureau of Statistics, Documents& magazines of Nepal Telecom, and other publication. The data on cash balances and sales have been collected from profit &loss account and balance sheets as presented in the Annual report of Nepal Telecom published by Nepal Telecom. (www.ntc.net.np)

3.3 Population and Sampling

Among, existing public utility and enterprises in Nepal, researcher selected Nepal Telecom as sample for the study. So, Nepal Telecom is a sample and population itself. This study is based on revenue effectiveness and cash management of central office and branches-sub branches of Nepal Telecom . It is not a centered with one branch .It is not possible to meet with all customers personally. For this, telephone subscribers were selected for this using a stratified random sampling method.

3.4 Research Variables

Sales revenue, production (telephone line capacity installation) capacity utilization, profit & loss total assets, profit margin, total capital employed, account receivable (debtor), cash flows, capital expenditures relating to long term and short term period of Nepal Telecom are the research variables of this present study.

3.5 Tools of Analysis

Collected data must be explained and analyzed to clear objectives of the study.
Basically, following two techniques are used to explain the collected data.

3.5.1 Descriptive Techniques

These techniques were used to simplify the research report for better understanding as well as analysis and interpretation of collected data in theoretical form.

3.5.2 Quantitative Techniques

Descriptive techniques would not be enough to prepare excellent research report. To fulfill the gap, or make the research report attractive and for better understanding the following financial and statistical tools were used.
To evaluate the financial condition and performances of NTC, following selected tools are used.

1) Net fixed assets turnover ratio = $\frac{\text{Net Sales Revenue}}{\text{Net Fixed Assets}}$

2) Net total assets turnover ratio = $\frac{\text{Net sales Revenue}}{\text{Net Total assets}}$

3) Debtor's turnover ratio = $\frac{\text{Sales}}{\text{Receivable}}$

4) Average collection period = $\frac{\text{Receviables}}{\text{Net Sales}}$ X 365 days

5) Total collection% = $\frac{\text{Net Revenue from sundry debtors sales}}{\text{Net Revenue from sales}}$

6) Sale to capital employed ratio = $\frac{\text{Net sales revenue}}{\text{Capital employee}}$

7) Sales to working capital ratio = $\frac{\text{Net sales revenue}}{\text{Net working capital}}$

8) Capital employed = Equity capital + Reserve and surplus + long.

9) Revenue per employee ratio = $\frac{\text{Total sales revenue}}{\text{Number of employees}}$

10) Operating expenses ratio = $\frac{\text{Total operating expenses}}{\text{Net sales}}$ X100%

11) Operating profit ratio = $\frac{\text{Operating profit}}{\text{Net sales}}$

12) Net profit ratio = $\frac{\text{Net profit after tax}}{\text{Net sales}}$ X100

13) Return on investment = $\frac{\text{Net Earning}}{\text{Total Assets}}$

14) Current ratio = $\frac{\text{Current Assets}}{\text{Current liabilities}}$

15)Return on total Assets ratio = $\frac{\text{Net profit after tax}}{\text{Total equity}}$

16) Return on equity ratio = $\frac{\text{Net profit after tax}}{\text{Total equity}}$

17) Working capital = Current Assets - Current liabilities

3.6 Statistical Tools

The Statistical tools were included the following techniques to examine the relationship between the variables; and analysis:

(a) Mean, Standard Deviation and Coefficient of Variation (C.V.).
(b) Time Series Analysis (Trend Analysis).
(c) Correlation Analysis.

(a) Mean, Standard Deviation and C.V.

Mean $\bar{X} = \frac{X}{N}$

Standard Deviation ($\exists$) = $\sqrt{\frac{U^2}{N} Z \frac{U}{N}^2}$

C.V. = $\frac{\exists}{\bar{X}} | 100$

(b) Time Series Analysis (Trend Analysis)

Trend analysis is also one of the most useful statistical tools. It is used for studying forecasting. A widely and most commonly used method to describe the trend is the method of least square.

The straight-line trend is given by the following formula:

$Y = a + bx$

Where,

Y =Values of dependent variables
a = y intercept
b= slope of the trend line
x = values of independent variable (Time)

$$a = \frac{\phi y}{n} \qquad b = \frac{\phi xy}{\phi x^2}$$

Where,

y = Sum of the observation in serious Y

xy = Sum of the observation in serious X & Y

x^2 = Sum of square of the observation in serious X

The straight line trend implies that irrespective of the seasonal and cyclical swings and irregular fluctuations, the trend value increase or decrease by a constant absolute amount 'b' per unit of time. Hence, the liner trend values from a series in arithmetic progression, the common difference being 'b' the slope of the trend line

(c) Correlation Analysis

Coefficient of Correlation (r) = $\frac{N.\ UV\ Z\ U.\ V}{\sqrt{N.\ U^2\ Z f\ U\text{Å}^2}\ \sqrt{N.\ V^2\ Z f\ V\text{Å}^2}}$

Probable Error of r (P.E.) = $0.6745 \times \frac{1 Z r^2}{\sqrt{N}}$

Where, X = distribution

N = No. of distribution

U = X – assumed Mean

V = Y – assumed Mean

CHAPTER FOUR :

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

The main purpose of this project work-study is to example the revenue effectiveness and optimal cash management in public utility sector and Nepal telecom has been selected for this purpose. Efficient and cash floe management is important to all firms. Mostly, revenue planning and cash management depends upon the objectives of the organization. Plans should achieve the goals of the organization. If embarks on forecasting the environment in which objectives most be achieved.

revenue (sales planning) is an inherent part of the management process. Revenue planning helps the organization for development and acceptance of objectives and goals and moving organization efficiently to achieve the objectives and goals. Revenue planning and cash management is an important technique of management. Which can be used in private, public as well as government organization. Each and every public enterprise or firm or government corporation is established with an objective of public service. Hence, protection of genuine interest becomes the vital factor in revenue planning and control system, to evaluate the performance of public enterprises, profit as social well are is considered as crucial factors in Nepalese public enterprises. In case of fulfilling the social obligation in this case, the company should earn certain profit also

Although the PEs in Neal have achieved the objectives of creating employment opportunities to some extend, increasing production in the country and providing basic services, they are not functioning in an efficient manner. Despite the long term protection given to these PEs, they have not been able to achieve finances capability and work efficiently and are still dependent upon governmental grants. Almost of the PEs are suffering from huge and their financial condition is in very poor shape

Nepal telecom is a wholly government owned public sector entity, administrated by a government appointed Board of Directors. However, more autonomy to the entity has offered from 1st Baisakh 2061 by the government as a part of deregulation and liberalization policy in the telecommunication sector Nepal telecom has functioning as company act from autonomy.

Revenue planning in Nepal telecom is most important for the best utilization of exchange capacity and effective accomplishment of the goals and objectives in sales planning, production planning, overhead expenses, capital budgeting, cash flow and manpower planning. Thus, in this parts efforts has made to analyze how far the objective of creating public enterprises for animating the internal resources needed for the economic development as envisaged in the second plan, has been realized. For this

purpose, Nepal telecom is taken for study. Various functional budget, cash flows, statistical procedures are analyzed and examined in the context of manufacturing company, Nepal telecom. In research, result of Nepal telecom is compared with targeted.

To accomplish this objectives, this chapter of study paper will analyze the various aspect of revenue planning, cash flow form operating, financing and activities, their achievement, and their related variance of the authority and also deals with the effectiveness of units and revenue separately. The study also presented and analyze the overall economic and financial trend and to estiment the future possible trend of Nepal telecom.

4.1.1 Revenue Budget of Nepal Telecom

Revenue plan is prepaid on the basis of sales forecast. Revenue plan formulation is the primary step in developing the overall plan procedure. Revenue is the primary source of cash and other functional plans are prepaid on the basis of revenue budget.

Revenue budget is the primary and important steps as well as the primary source pf information, which can be used, in functional budgets. The additional capital, manpower requirements, materials requirements and cash requirements are based on sales budget. The sales plan is the basic step, which opens the door of financial plan. Efficiency of planner or planning expert can be evaluated from the comparison between actual and planned sales.

The sales unit determines the volume or final produced. Labour, production and other expenses budgets are prepared on the basis of production volume. So, it can be said that the sales plan is the backbone of the cash management and profit plan. Sales are the major sources of revenue and profit is the amount that all business operation are directly linked with the sales budget. The revenue budget should be as realistic as possible. If the revenue plans are unrealistic then the all other elements of profit plans will be out of reality.

Revenue plans will be the basis of revenue forecast. Revenue forecast have to be translated into a revenue plan after adjustment of various factors associated with sales. Revenue plan preparation involves the following four interrelated step (i) the sales forecast (i) the marketing plan (iii) the promotional expenses budget and (iv) the selling marketing expenses budget. The overall responsibility of preparing sales budget lines on the manager, although chief executives should also be involved in such activities.

There is no realistic revenue plan in Nepalese manufacturing PEs and company. Nepal telecom has prepaid its revenue budget for coming fiscal year and it also forecast the strategic plan for coming national plan. Nepal telecom has prepared its revenue budget by line, capacity and services Nepal telecom has not the problems of selling its lines but the problems are about line generation.

The financial management & planning department and Revenue departments of Nepal telecom has the overall responsibility of revenue budget. Revenue budget is preparation by co-ordination with revenue section billing section. Revenue management section. Like as other manufacturing concerns, it does not have distribution channels. Consumers contact themselves to get telephone services. There is no competition of Nepal telecom expect UTL and it enjoying absolute monopoly in communication sector.

Table -1

Budgeted and Actual Sales Treads of Nepal Telecom

F/Y	In units (no of lines)				Rs (In 000)			
	Budgeted	Actual	Increase/Decrease%		Budgeted	Actual	Increase/Decrease%	
			Budgeted	Actual			Budgeted	Actual
2061/62	704233	680791	25.40%	30.43%	9542568	9194297	30.58%	19.02%
2062/63	1263544	1152478	79.42%	69.29%	10957845	11058915	14.83%	20.28%
2063/64	1670634	1580511	32.22%	37.14%	13323135	14751624	21.59%	33.39%
2064/65	2524357	2729637	51.10%	72.71%	16986954	17889310	50.02%	21.27%
2065/66	4540876	4293442	79.88%	57.29%	22106035	22147582	30.14%	23.80%

source: Annual Report 2008/09and budgeted book of each fiscal year

The table-1 shows that all the FLY budgeted and actual sales unit are increased. It shows that the actual sales unit increase by 30.43%,69.29%37.14%72.71% and 57.29% for 2061/62,2062/63,2063/64,2064/65and 2065/66respectively. When, we analyzed this increment, we can easily say that the demand of telephone is too high in Nepal due to the increase in population and it became communication age. So, Nepal telecom objectives must be targeted of fulfills the customer demand.

In the fiscal year 2061/62 to 2065/66 budgeted and actual sales revenue are increasing. The about table-1shows that F/Y2061/62 increased in budget and actual sales revenue by 30.58% and that19.02% respectively. Similarly, it also shows that FIY 2061/62 to 2065/66 sales revenue is increased by 19.02%,20.28% 33.39% 21.27% and 23.80% respectively. The higher increase in actual revenue in FLY 2063/64 was the result of lines distribution of PSTN and mobile phone.
The actual sales revenue was on increasing with compare to previous year. But actual sales revenue was not increased in same ratio to number of line increased. It shows that collection policy of Nepal telecom was not effectively implemented. There is no

consistent between budgeted and actual sales unit due to lack of proper planning and management.

4.1.2 Revenue Trends of Nepal Telecom

The beginning point for the evaluating of exiting revenue effectiveness of to analyze parts trends of planned rules revenue and sales revenue. Based upon the data made available by Nepal telecom following table shows the budget sales and actual sales trend.

Table -2

budgeted and actual sales achievement **(**Rs in 000)

F/Y	In units (no of lines)			In Rs		
	Budgeted	**Actual**	**Achievement**	**Budgeted**	**Actual**	**Achievement**
2061/62	704233	680791	96.67%	9542563	9194297	96.35%
2062/63	1263544	1152478	91.21%	10957845	11058915	100.92%
2063/64	1670634	1580511	94.61%	13323135	14751624	110.72%
2064/65	2524357	2729637	108.13%	16986954	17889310	105.31%
2065/66	4540876	4293442	94.55%	22106035	22147582	100.19%

source: Annual Report 2008/09and budgeted book of each fiscal year

The analysis of about table shows the satisfaction sales performance of Nepal telecom. In units basis, sales achievements are above 97% in average. The above table also shows that unit sales are highly consistent of FLY 2061/62,2063/64 and 2064/65. The sales of FLY 2065/66 is 4293442 lines, which is higher compare with other fiscal year. The sales revenue is more than the targeted revenue except in FLY 2061/62 . But here also actual revenue is very near to the targeted. It can be said that target are on historical data or previous year's sales performance. FLY 2062/63,2063/64 2064/65 and 2065/66 sales revenue % are higher than budgeted sales revenue. And FLY 2061/62 are under hundred percentage. Lunching GSM mobile & CDMA service in the FLY 2063/64 increase achievements of sales revenue. In F/Y 2062/63,2063/64,2064/65 & 2065/66 sales revenue achievement was satisfactory in total. But in F/Y 2061/62 sales achievement was low. It shows that Nepal telecom has not clear guidelines for selling and revenue collection.

In order to find the nature of variability of planned sales, actual sales and their achievement of different years, calculation of the arithmetic mean, standard deviation and coefficient of variation of planned and actual sales their achievement of Nepal telecom should be done.

The detail calculation of these statistical tools are presented in appendix-1. Now, summarizing their results for appendix-1, we have:

Table -3

Calculation of mean, standard deviation and CV performance of Nepal telecom for the fiscal year 2061/62 to 2065/66

	sales budget in units (lines) 'x'		**sales achievement in units (lines) 'y'**	
	Budget sales (X)	Actual sales (Y)	Budget sales (X)	Actual sales (Y)
Mean (x)	2140000	2087000	14583300	15008300
SD	1338620	1295340	4527900	4663400
CV	62.55%	62.07%	31.05%	31.07%

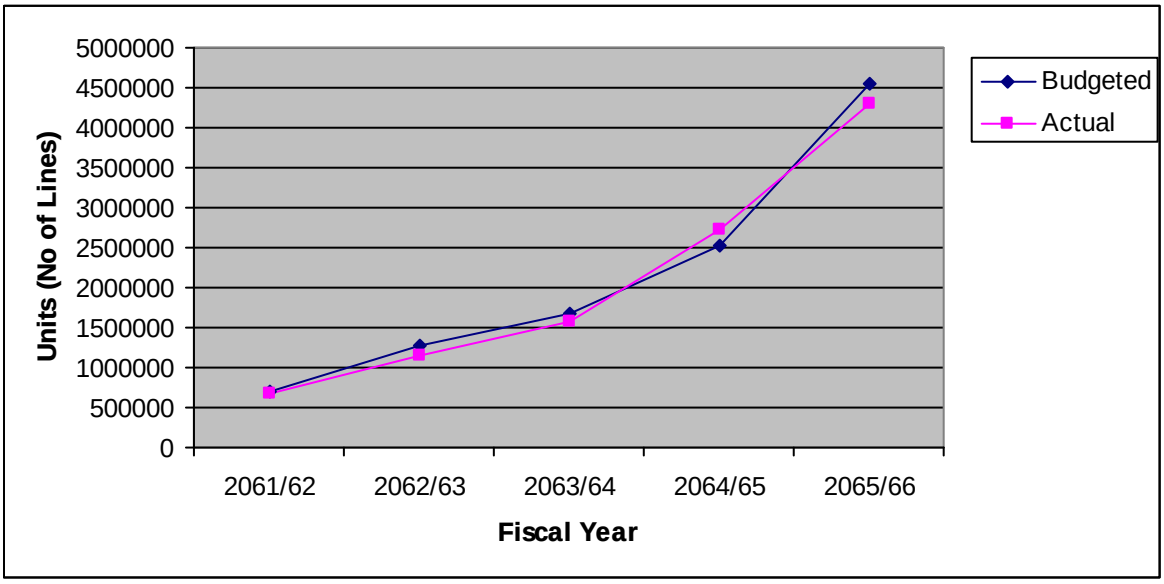
Unit (line) case

The above results shows that mean of actual sales are lower than budgeted, and standard deviation and coefficient of variations is also lower than budgeted sales unit. Through analysis it shows that budget sales are more variable than actual sales. Actual sales are more homogenous or more stable than budgeted sales. Hence the coefficient of variation of actual unit than the coefficient of variation of plan sales unit. Lower CV is the indication of high consistent or less variable in the nature of data. Therefore, actual sales (in lines) are less variable than planned sales.

We can present the actual and budgeted sales unit by the help of graphical presentation.

Diagram - 1

Budgeted and actual sales of Nepal telecom.



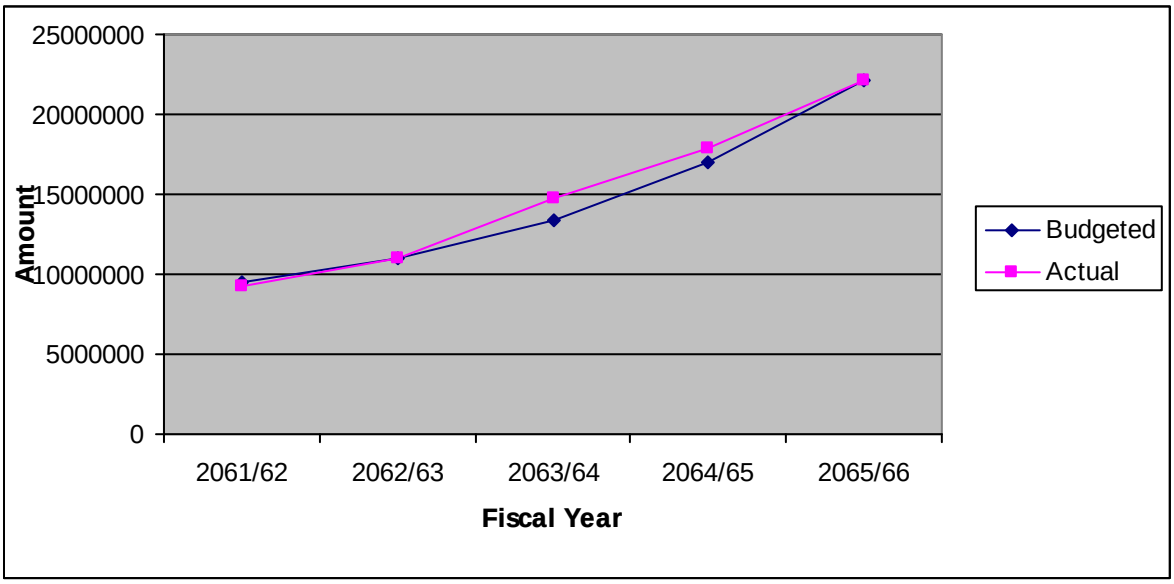
This diagram shows that planned sales are more than actual sales. There is increase trend of gap between planned and actual unit. There is a large gap in the F|Y 2065/66 than the other F|Y, which is not a good sing for the Nepal telecom.

Sales revenue case (Rs.)

Average of actual sales revenue is higher than budgeted, and standard deviation and coefficient of various are also higher. It means actual sales are more variable than budgeted sales. It is clear that the with greater CV represents more heterogeneous or more variable than the other.

We can present the actual & budget sales revenue by the help of graphical presentation

Diagram-2
Trend of budgeted and actual sales revenue of Nepal telecom



The diagram-2 shows a gap between budgeted sales revenue and sales revenue. The actual sales revenue higher is the F|Y 2062/63,F|Y 2063/64, 2064/65 &2065/66 and lower in the F|Y 2061/62 . The actual sales revenue in the F|Y 2063/64 is too much higher than budgets which shows a positive to the company.

Another statistical tool coefficient is used to analyze to the relationship between budgeted and actual sales. There should be positive correlation between these. In other words the sales achievement should increase as the budget in crease or vice-versa. To find to the correlation between budgeted figures and actual figures, Karl person's correlation, denoted by(r) is used. By calculating 'r' we can examine, whether there is positive correlation between budgeted and actual sale or not. In other words, whether or not actual sales will be changed in the same direction of the change in budgeted sales. For the purpose of calculating 'r' budget figures denoted by 'x' are assumed to be independent variable and actual figures denoted by 'y' are assumed to be dependent variable. Later, significant of 'r' is tested with probable error (P.E). The details calculation of this statistical tools is presented in appendix-2 , Now, summarizing these result are given below on table.

Table-4

correlation coefficient and P.E. between actual and budgeted sales of Nepal telecom

Particular	**Units (lines)**	**Rupees**
correlation coefficient of total sales (r)	0.9945	0.9906
Probable error of total sales (P.E)	0.0033	0.0056

The above table shows that the overall calculated value of r is 0.9945 in units and 0.9906 in Rupees, which are calculated and presented in appendix-2. The value of 'r' shows that there are positive correlation between the budgeted and actual sales unit and Rs. We may therefore, conclude that the actual sales will change in the same direction as budgeted sales changes. The significance of 'r' can be tested by the probable error of 'r'.

From appendix-2 we have probable error of 'r'=0.0033 in units and 0.0056 in Rs. hence, all correlation coefficient (r)> P.E. so, it can be said that the value of r are significant these are perfect correlation between budgeted and actual sales.

A Regression line can also be fitted to show the degree of relation between budgeted and actual sales and to forecast possible actual sales with given budget figures. For this purpose actual sales achievement been assumed to be dependent upon budgets. As, we assumed actual sales as 'y' and budgeted sales as 'x'.
The regression line of actual sales on budgeted sales or y on x, is as follows:

$$(y-\bar{y}) = \frac{\text{SD of y}}{\text{SD of x}} (x-\bar{x}) * r_{xy}$$

The detail calculation of this statistical tool presented in appendix-3 now, summarizing is given results is given below on table-5.

Table-5

Regression equation of sales achievement 'y' on budgeted sales 'x' of Nepal telecom

Particulars	Units (lines)	Rupees
Regression equation of total sales	Y=(0.9624x +27511.83)	Y=(1.0202x+130141.13)

By, the regression equation, it id clear that the actual sale in units is in decreasing trend with compare to budgeted sale and 0.9624 units decrease it. But, the actual sales

revenue is in increase trend and it represent the small increment in the value of dependent variables (actual sales revenues Rs. or (y) 1.0202
By this help the regression equation, we can estiment the expected sales achievement with given value of budgeted sales (x). We have the budged sales (x) for the f/Y 2066/67 is as follows:

Table-6

Budgeted sale of Nepal Telecom for the F/Y 2066/67

(Rs. in 000)

Particulars	In Units (lines)	Rupees
budgeted sale	520122	28858173

source: Budget book of Nepal telecom 2066/67

The regression equation uses to ascertain the expected sales achievements for F/Y 2066/67 and the following results come-

Table-7

Expected sales achievement of Nepal telecom

Case	**Regression**	**Expected actual sales for F|Y 2066/67**
Units(lines)	**Y**=(0.9624x+27511.83) =(0.9624* 520122+27511.83	528077.22 lines
Rupees (Revenue)	**Y=**(1.0202x+130141.13) =(1.0202*28858173+130141.13)	Rs. 29571249

If the relationship between budgeted sales and achievement sales in unit decrease same as previous year then the expected actual sales for F/Y 2066/67 will be 528077.22

lines as started by the above regression equation. On the other hand, future expected achievement of sales in Rs. will be Rs. 29571249.

Past time is also one factor for the calculation of actual sales, which can be expressed by the component of time series. Least square method can also be used to analyze the trend of actual sales (y) to estimates possible future sales for a given period of time. A straight-line trend method shows the relationship between actual sales & years (time period). In this method if is assumed that the sales is constantly changing (increase/decrease) with the change in the time. To fit the straight-line trend, the time factor is considered as independent variable (x) and actual sales are considered as dependent variable (y).
Here, the straight-line trend by the least square method for actual sales upon time is expressed by-

$$Yc = a + bx$$ (where, x is the time factor and y is the actual sales)

The detail calculation of these statistical tools is presented in appendix-4. Now, summarizing these results are given below:

Table-8

Straight-line trend equation by least square method of actual sales

(Rs in 000)

Case	**Straight line trend**
Line (unit)	Y=2086800+880300x
Rupees	Y=15008300+3273700x

The above trend line shows the positive sales figure for future. Sales will increase by 880300 units and Rs. 3273700 thousand every year if the sales trend of the past years continues in the future.

By the help of the straight-line equation, this study can estimate the actual sales for F/Y 2066/67. The value of x is the equation will be 3 because base year in 2064/65. If we use equation, the estimated actual sales are presented on table-9.

Table-9

Estimated actual sale for the F\Y 2065/66 (Rs in 000)

Case	**Straight line equation**	**Estimated actual sale for F\Y 2065/66**
Units (lines)	Y=2086800+880300x =2086800+880300*3	4727700 lines
Rupees	Y=15008300+3273700x =15008300+3273700*3	Rs.24829400

If the past sales trend does not change then the possible future actual sales for 2065/66 will be 4727700 units and Rs.24829400 thousand rupees. By the help of the least square trend of actual sales will be in slightly increasing trend.

4.1.3 Categories- wise Actual and forecast of revenue & Each contribution

After analyzing the past trend of Nepal telecom, the annual sales budget of Nepal Telecom F/Y 2061/62 to 2065/66 is analyzed. Nepal telecom has the practice of preparing short-range budget for coming fiscal year. This Budget is manifestly prepared by classifing various sales revenue sector of Nepal telecom in each fiscal year. The detail studies about contribution of each category with unit (line) sales, revenue contribution in each category from F/Y 2061/62 to 2065/66 presented on given table-10(a), 10(b),10(c),10(d), and 10(e).

Table -10 (a)

Actual and forecast of Revenue for fiscal year 2061/62 (In Rs. 000)

Description	Budgeted	Actual	Contribution of each categories from actual (In%)
Operating income			
Local telephone	2340683	2320197	25.24%
STD	1679116	1658630	18.04%
ISTD	1255775	1235289	13.44%
Telex/Telegraph	54823	34337	0.37%
Fax, PCC card & pay phone	61538	41052	0.45%
Leased circuit & Other service	1750	961	0.01%
Internal administrate income	1684346	1663860	18.10%
Internet	-	-	
Vsat/WII/ satellite phone	-	-	
Revenue of GSM mobile	1417615	1234030	13.4%
sale of materials and others	416266	395789	4.30%
Sub Total	8911912	8584145	
Non operating income	630656	610152	6.64%
Net Operating income	9542568	9194297	**100.00**
sales in unit	704233	680791	
sales in Rs.	9542568	9194297	

Source: Budgeted book for fiscal year 2061/62

Table 10(b)

Actual and forecast of revenue for fiscal year 2062/63 (In Rs 000)

description	**Budgeted**	**Actual**	**Contribution of each categories from actual (In %)**
Operation income			
Local telephone	2693930	2653070	23.99
STD	1803225	1762365	15.94
ISTD	1510224	1469364	13.29
Telex/Telegraph	45768	4908	0.044
Fax, PCC card & pay phone	130605	89745	0.81
Leases circuit & other services	65732	24872	0.22
Internal administrate income	1934159	1893299	17.12
Revenue of GSM mobile	2242177	1915300	17.32
Vsat/Wll/satellite phone	-	-	0.00
Revenue of CDMA service	214736	50524	0.46
sale of materials and other	591085	550205	4.98
Sub total	11231641	10413652	
Non operating income	726204	645263	5.83
Net Operating income	11957845	11058915	**100.00**
sales in units	1263544	1152478	
sales in Rs	11957845	11058915	

Source: Budgeted book for fiscal year 2062/63

Table -10(c)

Actual and forecast of revenue for fiscal year 2063/64

Description	**Budgeted**	**Actual**	**contribution of each categories from actual (In %)**
Operating income			
Local Telephone	3311221	3387747	22.97
STD	1556925	1607942	10.90
ISTD	1255116	1306133	8.85
Telex/Telegraph	5985	6985	0.047
Fax, PCC card & pay phone	70262	82016	0.56
Leased circuit & other services	23083	35837	0.24
Revenue of GSM mobile	3384151	3843309	26.05
Revenue of CDMA services	720848	1027355	6.96
Revenue of goods sales	576773	678807	4.6
Internal administrate income	1869799	1971833	13.37
Email internet income	18851	19351	0.13
Sub Total	12608175	13967315	
Non operating income	530121	784309	5.32
Net operating income	13323135	14751624	**99.997**
sales in units	1670634	1580511	
sales in Rs	13323135	14751624	

Source: Budgeted book for fiscal year 2063/64

Table -10 (d)

Actual and forecast of revenue for fiscal year 2064/65 (In Rs 000)

Description	Budgeted	Actual	Contribution of each from actual (In %)
Operating income			
Local telephone	3394059	3430153	19.17
STD	1289911	1326005	7.41
ISTD	949590	985684	5.51
Telex/Telegraph	1862	1962	0.011
Fax, PCC card & other services	238359	274653	1.54
leased circuit	4366	40460	0.23
ADSL	12547	17547	0.098
Internet income	20743	22743	0.13
Revenue of GSM mobile	5535240	5890885	32.93
Revenue of CDMA services	2092337	2344997	13.11
Internal administrate	2383084	2453263	13.71
Sub Total	15922098	16788360	
Non operating income	1064856	1100950	6.15
Net Operating income	16986954	17889310	99.99
Sales in units	2524357	2729637	
sales in Rs.	16986954	17889310	

Source : Budgeted book for fiscal year 2064/65

Table -10 (e)

Actual and forecast of revenue for fiscal year 2065/66 (In Rs 000)

Description	Budgeted	Actual	Contribution of each from actual (In %)
Operating income			
Local telephone	3388774	3390372	15.31
STD	958340	959938	4.33
ISTD	650557	652155	2.94
Telex/Telegraph	105	189	0.0009
IN services	75865	77463	0.35
leased circuit & other Services	249834	253030	1.14
ADSL	158985	160583	0.73
Internet income	20878	22476	0.10
Revenue of GSM mobile	8927559	8938747	40.36
Revenue of CDMA services	2631667	2642857	11.93
Internal administrate income	3545616	3548812	16.02
Sub Total	20608180	20646629	
Non operating income	1497855	1500953	6.78
Net Operating income	**22106035**	**22147582**	**99.99**
Sales in units	4540876	4293442	
sales in Rs.	22106035	22147582	

Source: Budgeted book for fiscal year 2065/66

Table 10 (a),(b),(c),(d) and (e)show the actual and forecast of revenue and each categories contribution. The revenue for 2065/66 is Rs .22147582 thousand, which is about 100.19% more than budgeted. By the analysis , it is found than mean average of Local telephone , STD ,ISTD ,Telex ,Fax IN services .Leased circuits , internet income, Internet, GSM mobile, sale of materials and ADSL, CDMA services, Internal administrate revenue Non-operating income are 15.31%, 4.33%, 2.94% 0.0009%,0.35%, 1.14%, 0.10%, 40.36%, 0.73%,11.93%,16.02%&6.78% of total revenue respectively.

GSM mobile services sectors contributed more revenue and more than 40.36% of total revenues are come from these sector.

Thus, this categories has been playing a vital role in comparison to whole revenue. PSTN sectors given second highest contributions in sales revenue. Average contributions of the category is 22.58% of total sales revenue. Like that ,CDMA services contributed third positions in total revenue. Internal Administrate income contributes 16.02% of total operating income.

Telex, Fax, Leased lines, PSTN services STD ISD, internet, ADSL, CDMA services are not higher contributor in sales revenue up to fiscal year 2065/66.

4.1.4 Sales Variance of Nepal Telecom

In any control process , the comparison of actual results with planned or budget goals. Comparison is assisted by the performances report. Variance is the deviations between budgeted or planned goals and actual results obtained. Variance analysis is the determinations of the reasons for a reported variance weather it is favorable or unfavorable. If the variances is unfavorable then the company management should lead to remedies through appropriate corrective actions by the efficient management . Now ,the following sales variance of Nepal telecom are analyzed for last five fiscal years .

Sales variance (In lines)

When actual sales are higher than budgeted sales, it is know as favorable variance and such a variance is usually a right of efficiency. On the other hand, when the actual sales are lower than budgeted sale. It is called unfavorable variance and usually indicates inefficiency. The following table shows the sales variance in lines of Nepal telecom of last five fiscal years.

Table-11

Sales Variance of Telephone Lines

F\L	Budgeted (Lines)	Actual sales (Lines)	Variance (+or-)	Remarks
2061/62	704233	680791	23442	Unfavorable
2062/63	1263544	1152478	111066	Unfavorable
2063/64	1670634	1580511	90123	Unfavorable
2064/65	2524357	2729637	-205280	-Favorable
2065/66	4540876	4293442	247434	Unfavorable

The above table shows that actual sales are lower than budgeted sales except F/Y 2064/65 thus all fiscal years' various except 2064/65 are unfavorable. If shows that Nepal telecom does not have well developed scientific system of predetermining standard.

Sales revenue variance (Rs)

The analysis of the sales revenue variances along with calculation of actual sales revenue is the sales variance. The following table shows the sales revenue variance of Nepal Telecom for last five fiscal years from 2061/62 to 2065/66.

Table -12

Revenue Variance of Nepal Telecom (Rs in thousand)

Fiscal year	Budgeted revenue	Actual revenue	Variance (+or-)	Remarks
2061/62	9542563	9194297	348266	Favorable
2062/63	10957845	11058915	-101070	Unfavorable
2063/64	13323135	14751624	-1428489	Unfavorable
2064/65	16986954	17889310	-902356	Unfavorable
2065/66	22106035	22147582	-41547	Unfavorable

source: Annual Report 2008-09,Nepal Telecom and budget Book of different F/Y

The Table-12 shows the sales revenue variances of Nepal telecom from 2061/62 to 2065/66. According to table, F/Y 2062/63 and 2065/66 sales revenue is negative, which means unfavorable and other remaining years sales revenue variances are positive, it means favorable. It can be said that Nepal telecom is operating efficiently because one fiscal years, variances are favorable.

4.1.5 Analysis of Exchange Capacity, Distribution Line and spare of Nepal Telecom

In the case of utility of capacity, telecom has long-rum of expansion capacity and generating revenue through it. Exchange capacity represent the total production for a given period and production budget means telephone point generation budget. to prepare the production plan, existing projects and projects near about of completion are taken consideration and government's policy in this regard will play vital while preparing it. The total capacity are generated in each year but it is not possible to distribute all lines. Due to inefficient management and other exiting problems few lines became spare. Nepal telecom is facing server customer complain in the area of telephone sales. There is complicated process of sales of telephone services and need

procedural amendments. There is need of behavioral changes and high alertness to provide quick and quality services to the customers keeping in view the future competitions. Virtually Nepal telecom has no marketing services at all, which shows its true of monopoly. Marketing has become cumbersome in the today's competitive world. We need to let the customers know about our facilities. Our rules and regulations and our services marketing of services will naturally provide information to the customers and bring proper feed back for the improvement.

The following table presents the exchange capacity distribution and spare line of Nepal telecom for fiscal year 2061/62 to 2065/66.

Table -13

Exchange capacity and Distribution Line of Nepal Telecom

Actual Capacity					**Distributed Actual Line**				
FY	Oridinary PSTN Line	GSM Mobile	CDMA Service	Total	Oridinary PSTN Line	GSM Mobile	CDMA Service	Total	Spare line
2061/62	552057	205345	-	7574002	453475	227316	-	680791	76611
2062/63	602252	602140	23579	1227971	485997	622737	23579	1132313	95658
2063/64	656070	853460	161155	1670685	509873	909483	161155	1580511	90174
2064/65	684942	1618412	480016	2783370	532391	1717230	480016	2729637	53733
2065/66	726980	3500000	721318	4948298	562162	3009962	721318	4293442	654856

source: MIS Report of Nepal Telecom

The table-13 shows the actual capacity and distributed line of PSTN, Mobile GSM, CDMA service. Among the distribution &capacity of different lines, PSTN (ordinary line) had good market among customers. On average 100% CDMA service lines were distributed of total lines. The total capacities of F/Y 2061/62 to 2065/66 are 7574002, 1227971,1670685, 2783370, & 4948298 lines respectively. The table also shows the actual line distributed for F/Y 2061/62 to 2065/66 are 680791, 1132313, 1580511, 2729637 & 4293442 lines respectively and 654856 lines were spared (not distributed) up to 2065/66. It is due to the lack of proper planning. At present there is huge gab between demand and supply of telephone lines average time gap in demand and supply is 7 years. The big challenge to the Nepal telecom is how to cover and cater or to provide telephone services for the scattered demand in the remote and for remote rural areas.

To conclude the revenue trend of Nepal telecom depends upon the following major factors:

i. Governance
ii. Electricity/power condition
iii. Trunk/ channel availability
iv. Weather condition
v. Failure disruption of exchange and trunk lines
vi. Condition of economic activities: industry, business, tourism, services, primary production etc.
vii International condition
viii. Demand supply ratio
ix. Conflict problem
x. Location
xi. Billing system of Nepal telecom
xii. Competitors
xiii. Terminating calls also should be taken into account

In recent days illegal operation in ISD services is taking place. The service change is decreasing world wide, this also affects the Nepal telecom revenue.
By analyzing the revenue trend of Nepal telecom, following points can be pointed out:

1. Actual sales lines achievement are fluctuating and less than budgeted lines but achievement in revenue are above than budgeted revenue except F/Y 2061/62.
2. Sales performance of Nepal telecom is satisfactory. In lines, Sales achievements are above 97% in average.
3. The budgeted sales (lines) are more variable than actual line sales. On the other hand actual revenue are more variable than budgeted revenue.

4. The value of correlation shows that are positive correlation between the budged and actual sales unit and Rs.
5. By the regression equation, it is clear the actual sales line is in decreasing trend with compare to budgeted. But, revenue side it is increase with compare to budgeted. Thus, future actual line sales will decreasing and future revenue will increasing with compare to budgeted, if other things reaming same.
6. The straight-line trend shows the positive sales figure for future.
7. The revenue per line declination is due to bad governance and slow economic growth, not due to increase of number of lines.
8. Nepal telecom must increase its trunk channel capacity and system reliability to improve its revenue condition.
9. Nepal telecom can't sell telephone lines according to the demand of customers, it is because of inefficient management, lack of proper planning and resource.
10. The revenue condition of small exchanges in rural areas exhibits strong support for the need of such exchanges in various economic zones.
11. The local calls are increasing at this stage.

Nepal telecom was a monopolistic company of Nepal 5 year ago but it unable to achieve its objectives well. Nowadays the monopoly status of organization will not remain and it has to complete with other service providers (Ncell,Smart,STM,UTL, NSPTL) . Thus, Nepal telecom needs to improve its quality of services through proper standardization.

4.2 Analysis of financial Ratio

Financial analysis is the most essential factor to know the performance and accessing the strength of an organization, which presents actual situation of the Organization. The term ratio refers to the numerical of quantitative relationship between two item variables. Management should be particularly interested its knowing the financial strengths of the firm to make their best use and to be able to spot out the analysis

weaknesses of the firm to take suitable corrective actins. The present ratio analysis is done on those activities, which have direct improve with sales revenue.

4.2.1 Analysis of account Receivables Management of Nepal telecom

Receivable management is one of the major challenges of Nepal telecom at present. Average collection period provides the information on the liquidly of the receivable, the shorter period of collection has higher debtors turnover ratio. Higher the duration of collection periods express over liberal and inefficient credit policy. To analyze the receivable of Nepal telecom, mainly debtors turnover and average collection periods are useful to measure the relationship between receivables and net revenue from sales. So, debtor's turnover ratios are presented from the period F/Y 2061/62 to 2065/66.
The ratio is calculated as follows and the details of these analysis are presented in given below on table-

Average collection period (ACP) = Receivables *365 Days
Net sales

Debtor's turnover ratio (DTR) = Sales
Receivable

Total collection % = Net Revenue from - Sunday DebtorsSales
Net Revenue from sales

Table - 14

Calculation of ACP and DTR for the F/Y 2061/62 to 2065/66

Fiscal year	Sundry debtors (Receivables)	Net revenue from sales	Collection period in days	Changes in days	Debtors turnover ratio
2061/62	2825943	9194297	112	12	3.25
2062/63	3099495	11058915	102	-10	3.57
2063/64	3455511	14751624	85	-17	4.27
2064/65	3482610	17889310	71	-14	5.14
2065/66	3593205	22147582	59	-12	6.16
Average	**3291353**	**15008346**	**80**	**21**	**4.56**

Source: Annual Report 2008-09 Nepal Telecom

From the above table shows efficiency of trade credit management. The receivables are in increasing trend till F/Y 2061/62 and have decreasing in F/Y 2065/66. Then after receivable are increasing on remaining years. The revenue from sale of telecommunication services is in increasing trend over the five years study period.

The collection period is in decreasing trend up to year 2061/62 and it is increasing for fiscal year 2065/66 . The collection period for the year 2061/62 is 112 days and it has reached 59 days for the year 2065/66. There is no any particular trend of collection period. In an average, the collection of period of Nepal telecom is 80 days in the study period. The company fixed up 3 month billing system, by which 90 days average collection period fixed by it. But the table shows that Nepal telecom couldn't successes to achieve that policy in practice. The causes behind the increase in ACP may be ineffectiveness in revenue collection and lack of proper planning in collection. But presently, the company gives focus to collect revenue from service holder as well as give more attention for bad debt collection by publication of defaulter's list etc that will reduce ACP in future.

There is low level of debtor's turnover ratio due to long collection period for sundry debtors. The debtors turnover ratio is sealed up by 6.16 times at a maximum level in F/Y 2065/66, while the outstanding debt collection period is minimum. And it dropped to 3.25 times at minimum level in F/Y 2061/62, while the debt collection period is higher. There, the higher the turnover ratio and shorter the average collection period. In average, the collection period is 80 days and turnover of debt into cash takes place 4.56 times a year. In the words, the debtors pay the debt only in 80 days.

From the above analysis of receivables, it can be known that Nepal telecom has adopted the liberal credit policy. It shows that low turnover of sundry debtors or longer debt collection period has greatly blocked the amount required for working capital and reflects that payment by debtors are delayed. An excessively long collection period implies a too liberal and inefficient credit and the collection. In general, therefore short collection period or high turnover ratio is profitable.

4.2.2 Analysis of Turnover Ratio

There ratio are very important for a concern to indicate how effectively a firm is using its resources. By comparing revenue with the resources used to generate them, it is possible to establish on efficiency of operation.

(i) Net fixed assets and total asserts turnover ratio

Asserts turnover ratio provides the information on the revenue effectiveness. The ratio shows how well the fixed assets are being used in business it also expresses the number of times the fixed assets are being turn the stated period. The ratio is important in case of Nepal telecom because sales are produced not only by used of current assets but also by amount invested in fixed assets. The higher is the ratio, then the better is the performance and on the other hand, a lower ratio indicates that fixed assets are not being efficiently utilized.

The detail result of this analysis are presented in given below on table by applying these formulas:

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

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

Table -15

computation of Net Fixed Assets and Total Assets Turnover Ratio of Nepal Telecom for the 2061/62 to 2065/66

(In Rs 000)

F/Y	**Net sales revenue**	**Net fixed assets**		**Total assets**	
		RS.	**Turnover ratio**	**RS.**	**Turnover ratio**
2061/62	9194297	14832228	0.1699or61.99%	35430580	0.2595or25.95%
2062/63	11058915	16688435	0.6627or66.27%	39214957	0.2820or28.20%
2063/64	14751624	20009543	0.7372or73.72%	43529296	0.3389or33.89%
2064/65	17889310	24190584	0.7395or73.95%	49371222	0.3623or36.23%
2065/66	22147582	29849392	0.7420or74.20%	58686687	0.3774or37.74%
Average	15008346	21114036	0.7108or71.08%	45246548	0.3317or33.17%

Source : annual Report 2008 -09Nepal Telecom

From the table -15, it can be seen that the fixed assets was increasing trend over the study period. It increase from 4832228 thousands to 29849392 thousands from the year 2061/62 to 2065/66. Similarly, total assets were also in increasing trend from the F/Y 2061/62 to 2065/66. Total assets covered the value of net fixed assets, capital work in progress, investment, current assets and differed expenditure.

The above calculations show that net fixed assets turnover ratio is in increasing trend up to F/Y 2065/66.The ratio increased from 61.99% to 71.08% from the F/Y 2061/62 to 2065/66 similarly, total assets turnover ratio, which is on the average of 33.17%

On the basis of this analysis it may be concluded that the higher position of net fixed assets and total assets turnover ratio means the company has better performance by utilize the assets for generate revenue.

(ii) Capital employment and working capital turnover ratio

Sales to capital employed ratio are an indicator of earning capacity of the capital employed in the business. capital employed is the value of all resources available to the company, typically comprising share capital, retained profits' and reserves, long-term loans deferred taxation. The higher ratio shows the greater profit and a low capital turnover ratio should be taken to mean that sufficient sales not being made and profits are lower. By capital employed, it means not only the share capital, but also various fixed liabilities representing borrowed amount and also capital reserves, revenue reserves, undistributed profit as reduced by the fictions assets.

Sales to working capital ratio show the number of times working capital is turned over in the stated period. The higher is the ratio, the lower is the investment in working capital and the greater are the profits. However, a very high turnover of working capital is a sign of over trading and may put the concern into financial difficulties. On the other hand a low working capital turnover ratio indicates that working capital is not efficiently utilized. The detail results of these analyses are presented in given below on table, by applying these formulas:

$$\text{Sales to capital employed ratio} = \frac{\text{Net Sales Revenue}}{\text{Capital employee}}$$

Where,
Capital employed = Equity capital + Reserve & Surplus + long

$$\text{Sales to working capital ratio} = \frac{\text{Net Sales Revenue}}{\text{Net working Capital (i.e.cn.cl)}}$$

Table -16

Capital Employed and Working Capital Turnover Ratio of Nepal Telecom for the F.Y 2061/62 to 2065/66

F.Y	Net sales revenue	Capital employed	Net working capital (CA-CL)	Capital employed ratio %	Working capital ratio %
2061/62	9574500	20850093	16739868	45.92%	57.20%
2062/63	12021624	23686026	18050769	50.75%	66.60%
2063/64	14746337	27985960	17807458	52.69%	82.81%
2064/65	16134516	35343894	17265138	45.65%	93.45%
2065/66	18191058	41629022	22119241	43.70%	82.24%

Source: Annual Report 2008-09, Nepal Telecom

The above calculation shows that capital employed ratio is in increasing trend with in the study period. In the F/Y 2061/62, the capital employed ratio is 45.92% which represent the sales revenue of capital employed. Similarly, 50.75%, 52.69%, 45.65%, 43.70% for the F/Y 2062/63 to 2065/66. It indicates that the profit is slowly increased due to the sales revenue.

The capital employed of Nepal telecom has increases year by year, but its utilization is not satisfactory. As a result, huge around of capital is in idle and cost of capital has increased day by day. On the basis of this, it may be conduced that the lower position of capital employed means the Nepal telecom could not efficiently utilize the capital to generate revenue. So, through the study we can suggest that the Nepal telecom has sufficient its own capital, thus the company must realize to minimize the long-term loan. Further more, Nepal telecom should maximum utilizes its capital employed to generate sales revenue in future from available capital & resources.

But, the working capital ratio is fluctuated with in study periods. IN the F/Y 2061/62, the working capital ratio is 57.20% which indicates that the higher is the investment in working capital lower is the profit. Similarly, 66.60%, 82.81% 93.45% & 82.24% for the F/Y2062/63 to 2065/66. it indicates that the Nepal telecom could not succeed the efficient management of current assets and current liabilities. So, Nepal telecom must manage the current assets and current liabilities properly at optimum level for achieving targets sales revenue.

4.2.3 Analysis of Revenue Per Employee Ratio

Revenue per employee ratio is an indicator of the earning capital of per employee in Nepal telecom. This ratio is important from shareholders point of view. Nepal telecom has used its employee for generating revenue for future growth and expansion purpose. In other word, an investor, who is more interested in capital appreciation, must work for the Nepal telecom having revenue per employee ratio. The below table presents revenue per employee of Nepal telecom for five fiscal years, from 2055/56 to 2059/60

$$\text{Revenue per employee ratio} = \frac{\text{Total Sales Revenue}}{\text{Number of Employees}}$$

Table -17

Computation of Revenue per Employee Ratio for the F/Y 2061/62 to 2065/66

F/Y	Total sales revenue (Rs)	No.of employees	Revenue per Employee	Increased
2061/62	9194297	5709	1610.49	15.06%
2062/63	11058915	5717	1934.39	20.11%
2063/64	14751624	5699	2588.46	33.81%
2064/65	17889310	5592	3199.09	23.59%
2065/66	22147582	5876	3769.16	17.82%

source: Annual Report 2008-09, Telecom

This table -17, shows the revenue per employee is in increasing trend over the study period it increased from Rs. 1610.49 thousands to Rs. 3769.16 thousands. In 2061/62, the revenue per employee is Rs. 1610.49 thousands, which is increased by 15.06%over the last year figure. Then after revenue per manpower is increased by 20.11%, 33.81%,23.59% and 17.82% respectively. In a F/Y 2063/64, the number of employees decreased by 18 persons. As a result per employee revenue of Nepal telecom increase by 33.81% in Rs. 2588.46 thousands for that year. By the analysis, it also shows that human resources are increased by167 persons over the last five-year's figure and reached to 5876 employee, but the sales revenue couldn't increase satisfactory.

From this above analysis, Nepal telecom has a huge bank of human resources. It seems that there is lack of proper exercise in recruitment process. The supply of

manpower and their needs in many cases do not match exactly. In many place over supply of manpower is clearly visible. Another one remarkable fact of this analysis is sales revenue of Nepal telecom is increasing trend but it is not satisfactory in comparison with increasing manpower. Thus, there is need of skilled manpower to plan, implement, operate and maintain a reliable and efficient telecommunication services throughout the kingdom.

4.2.4 Analysis of profitability Ratio

Profitability is the net result of a large number of policies and decisions chosen by an organization's management. Profitability ratios indicate how effectively the total firm is managed. The relation of the return of the firm to either is sales or equity of its assets is known as profitability ratios. The following are the profitability ratios.

(i) Operating Expenses Ratio

Operation expenses ratio shows the relationship between operating express and sales. It indicates the percent of sales that the company is expending for operation in the five-year study period. Except interest on loan, loans on foreign exchange and income tax provisions, all other items of expenses are included in operating expenses. Generally, it is accepted that operating expenses should not be more than 85% of sales. Higher the percentage of the operating expenses lesser amount of profit or increase in the amount of losses.

$$\text{Operating Expenses Ratio} = \frac{\text{Total Operating Expenses}}{\text{Net Sales}} \quad X\ 100$$

(ii) Operating profit Ratio

The ratio established the relationship operation profit and sales in calculated as follows:

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Net Sales}}$$

(iii) Net Profit Ratio

The ratio is very useful to the companies & proprietors as well as investors because it reveals the overall profitability of the concern. This ratio shows the relationship between not profit alter taxes and sales revenue and it is calculated as follows:

$$\text{Net profit Ratio} = \frac{\text{Net profit After Tax}}{\text{Net Sales}} \quad X100$$

(iv) Return on Investment (ROI)

This ratio is calculated to measure net profit tax against the amount investment in total assets to ascertain whether assets are being utilized properly or not. It is calculated as under:

$$\text{Return on Investment} = \frac{\text{Net Earning}}{\text{Total Assets}}$$

The detail result of above analysis is presented in given below on table -

Table -18

Calculation of Operating Expenses, Operating profit, Return on Investment and Net profit Ratio

F/Y	Net sales revenue	Operating expenses	Total assets	Operating profit	Net profit	Operating exp.Rate%	Operating profit rate	Returnon Investment	Net profit ratio
2061/62	9194297	2646806	35430580	4827497	5665406	28.79%	52.51%	15.99%	61.62
2062/63	11058915	2919610	39214957	6722360	8602368	26.40%	60.79%	21.94%	77.79
2063/64	14751624	4332980	43529296	8052325	11710622	29.37%	54.59%	26.90%	79.39
2064/65	17889310	4829435	49371222	9799160	7942901	27%	54.78%	16.09%	44.40
2065/66	22147582	5319524	58686687	10716850	10178024	24.02%	48.39%	17.34%	45.96

Source: Annual Report 2008/09, Nepal Telecom

Table-18 shows that the operation expenses are high on the given study period. It increased from Rs.9194297 thousands to 22147582 thousands in stated period. On an average Nepal telecom has about 29% operating expenses ratio. A higher operating expenses ratio is unfavorable since it leaves a small amount of operating income to meet interest, dividend etc. If 65% is the standard operating expenses ratio, these enterprises can be taken as successful enterprises. The operating expenses ratio of Nepal telecom is below 65% over the five-year study period. It means non-operating expenses should be very low in proportion, but it is not applicable everywhere. Therefore it can be said that the operating profit of Nepal telecom is very high but the

overall profit is not so high due to huge amount of non-operating expenses. In Nepal telecom, there is incurring some unnecessary and wasteful expenses such as heavy addition of plants resulted heavy expenses. Thus, the management of Nepal telecom becomes more careful in cost factor. Nepal telecom therefore more formulates a concrete and sustainable policy to add plants and to utilize them because idle plants are also not reasonable for the institution. Nepal Telecom shall reduce the cost of bad debts written off, repair and maintenance expenses, meeting fees, traveling expenses, legal and professional fees, management and committee fees and to take rational decision for long-term investment on plants & equipments.

The Operating profit ratio of telecom is calculated in the above table to find out the trend of least five of the operating ratio. The table shows that operating profit is increasing order. In F/Y 2061/62 operating profit is Rs. 4827497 (thousand). It is raised by Rs. 5889353 (thousand) and reached Rs. 10716850 (thousands) to F/Y 2065/66. The table shows the operating profits to net sales are all over the 52.51% in every fiscal year 2061/62 to 2065/66. By this figures, it is proved that Nepal telecom has been succeeded to adjust the operating cost at optimum level. To increase operating profit ratio, Nepal telecom should reduce its cost and getting an effort to increase revenue.

The table shows, that return on total assets varies from 15.99% to 17.34% from the fiscal year 2061/62 to 2065/66. But the return on investment has not increased properly as increase in the investment on total assets. Hence, Nepal telecom has fulfilled the government target and return is satisfactory.

Similarly, the above table indicates that Nepal telecom is operating under the net profit over the five year. The net profit is in increasing trend from F/Y 2061/62 to 2065/66. The profit on F/Y 2061/62 is Rs. 5665406 (thousand) and in F/Y 2065/66 it is reached to Rs. 10178024 thousands. The net profit ratio for Nepal telecom is 2:5. There, in Nepal telecom sales is increasing each year. High net profit is a sign of good financial position and the better for the enterprises because it gives idea of improved efficiency of the concern. In comparison with sales revenue, net profit ratio is also in increasing trend. Net profit ratio is around 62% in the research stated period. Therefore, it indicates that, Nepal telecom has managed operation and success to provide affordable and quality communication. Through it, the company is succeed to earn more profit till now.

4.3 Cash Management of Nepal Telecom

The basis objectives of this study as stated in chapter I is to true insight in to 'Cash management' of Nepal telecom. One of the major responsibilities of Two management is to plan, control and self guard the resources of the enterprises. Two kinds of resources flow through many business i.e. cash and non cash assets. Cash is ready money in the business and it is the important current assets for the operating of the enterprises. Cash is the basic input needed to keep the enterprises running smoothly. It would probably be more to say that business failure is due to poor cash management. Do how can we manage our cash situation better? How, in this study the effort has been made to assess and analysis the cash management to disclose the actual position of cash management in Nepal telecom.

4.3.1 Analysis of Cash Balance

Management of cash plays a light cant role for knowing when, where and how your cash needs will occur what the resources are for meeting additional cash needs. It plays a positive role in current assets of company. The total cash includes cash in hand, cash at bank and cash transit. Cash is what we must make a profit if. Thus, it is said that we can't spend profit, we can only spend cash.
Cash turnover ratio represents how quickly the cash is received from its sale be formulates to find out. Higher turnover of cash is the signal of liquidity and Vice versa . The table below shows the cash position & turnover of the company during the period under study.

Table - 19

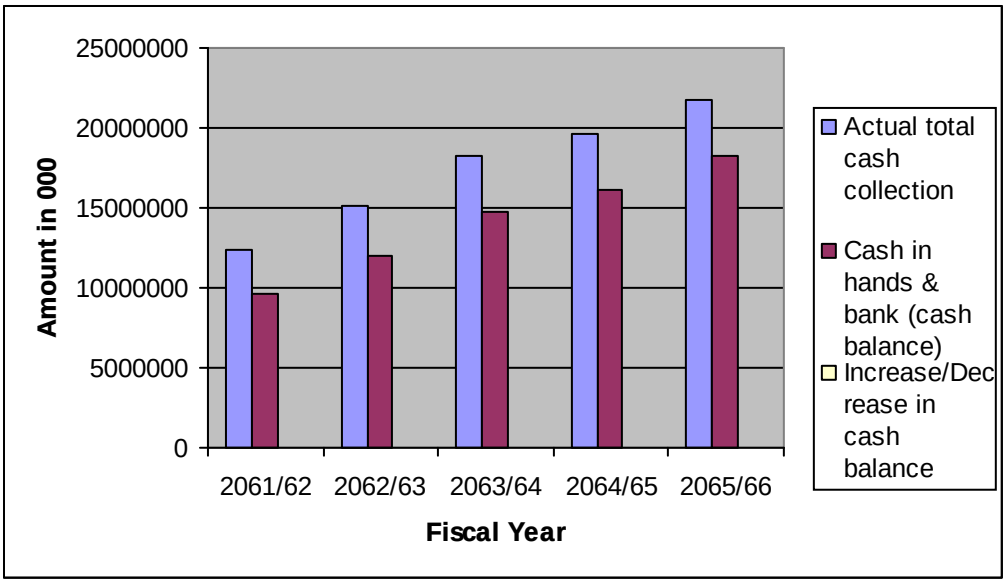
Calculation of Actual Total Cash Collection, Closing Cash Balance Cash Turnover

Fiscal year	Actual total cash collection	Cash in hands & bank (cash balance)	Increase/Decrease in cash balance	Sales revenue	Cash turn time
2061/62	12400443	9574500	19.21%	9194297	0.96
2062/63	15121119	12021624	25.56%	11058915	0.92
2063/64	18201848	14746337	22.67%	14751624	1.00
2064/65	19617126	16134516	9.41%	17889310	1.11
2065/66	21784263	18191058	12.75%	22147582	1.22
Average	**17424960**	**14133607**	**17.92%**	**15008346**	**2.605**

Source: Budget book and Annual Report 2008-09. Nepal Telecom

Diagram -3

Actual total cash collection and closing cash balance



The Table 19, shows that actual cash collection is increasing trend over the five-year period. In F/Y 2061/62 it is Rs 12400443 collected, Total cash collected in 2065/66 is Rs. 21784263. The cash balance of the company is also increasing trend. As it increased by 19.21% in 2061/62 as compared to previous year. As it is increased by 25.56%, 22.67%, 9.41% and 12.75% in 2062/63, 2063/64, 2064/65 & 2065/66 respectively. Cash balance in 2061/62 is Rs. 9574500 and it is increased by Rs. 8616558 and reached the cash balance Rs. 18191058 in 2065/66. Cash balance in F/Y 2061/62, 2062/63, 2063/64, 2064/65 & 2065/66 are higher than the actual total cash collection. In fact, this visualizes of the company show that the company has little success on the best use of the available cash balance. There is too much increase cash balance in F/Y 2062/63 i.e. 25.56%. On the whole these figures show that the company has no any define policy of cash management. Cash balance is higher to compared with sales revenue while in some years it has excessive maintenance of cash balance.

The above table shows that cash turnover time is creasing order. The lowest turnover ratio is 0.92 times in the year 2062/63. Cash turnovers are 0.96, 1.00, 1.11 & 1.22 times in F/Y 2061/62, 2063/64,2064/65 & 2065/66 respectively and the average being 2.605 times. Lower turnover is the single of shortage of liquidity. This shows that cash turnover is poor in the company. It indicates that the company is unable to collect cash from its credit rate timely. From, the analysis it is concluded that the collection efficiency in Nepal telecom is better.

4.3.2 Analysis of Account Receivable to Cash Balance and Cash Collection

A positive cash flow is very good and the only worry here in what you do with excess cash. Cash balance measures the relationship between level of cash and bank to account receivable over a period of time greater the account receivable the better the cash turnover would be provided that, cash and bank balance can be maintained at a desirable level. The following tables show the relationship of account receivable to cash and bank balance.

Table - 20

Account Receivable to Cash & Bank Balance of Nepal Telecom (In Rs 000)

Fiscal Year	**Account receivable (Debtors)**	**Cash and bank balance**	**% of account receivable**
2061/62	2825943	9574500	29.52%
2062/63	3099495	12021624	25.78%
2063/64	3455511	14746337	23.43%
2064/65	3482610	16134516	21.58%
2065/66	3593205	18191058	19.75%

Source: Annual Report 2008-09, Telecom

The table -20 indicates that cash balance is higher than account receivable over the five years, which shows that management of telecom is more concerned to speed up of collections of debtors. The percentage of account receivable to cash and bank balance is 29.52%, 25.78%, 23.43%, 21.58% and 19.75% for the year 2061/62 to 2065/66 respectively. It shows the company has sufficient cash balance to meet its current liabilities and the management so the company has adopted optimum credit policy to collect revenue from sale of services. Through which the company should success to maintain desire of cash balance.

The table below shows the statement of cash collection from debtors and balance of debtors of Nepal telecom.

Table -21

Statement of Cash Collection and Debtors (In Rs. 000)

F/Y	Debtors Balance		Cash Collection from debtors		
	Budgeted	**Actual**	**Budgeted**	**Actual**	**Achievement %**
2061/62	2489961	2825943	5423038	4400430	81.14%
2062/63	3200997	3099495	6463522	4782961	74%
2063/64	3250815	3455511	7264833	6775016	93.26%
2064/65	3585490	3482610	5667257	5798062	102.31%
2065/66	3650285	3593205	6256191	7000102	111.89%

Source: Annual Report 2008-09, Nepal Telecom

Table -22 (a)

Actual and Forecast of Cash Collection and Debtors for F/Y 2061/62 to 2063/64

Description	**F/Y 2061/62**		**F/Y 2062/63**		**F/Y 2063/64**	
	Budget.	**Actual**	**Budget**	**Actual**	**Budget**	**Actual**
A. Cash collection						
Collection from local debtors	3167763	3405766	3705753	3930438	4437459	4498406
Collection	1000000	921381	1250000	852523	1250000	2276610
International	215275	207568	287470	225603	189100	206343
Sale of materials and other income	-	-	-	-	-	-
Vat service charge & ownership	740000	666303	840000	829451	962960	894554
Maturity of financial investment	-	-	30299	164107	65314	43727
Non-operating income	300000	311918	350000	359692	360000	366979
Total cash collection with non operating income	**5423038**	**5512936**	**6463522**	**6361814**	**7264833**	**8286624**
B. Debtors						
Opening debtors	2135333	2449038	3025374	3010754	3387870	3391798
Inter administration	1456071	1660884	1997713	1982040	2112457	2215779
Local	679262	788154	1027661	1028714	1275413	1176019
Adjustment for local debtors	-	332254	-	122732	-	103250
Add. Operating income for the yr	5777666	4629892	6639145	4956376	7127778	5487308
Gross debtors	7912999	7411184	9664519	8089862	10515648	8982356
Less: Cash collection during the year from debtors	5423038	4400430	6463522	4782961	7264833	6775016
Sundry debtors (Gross)	**2489961**	**301075**	**3200997**	**3306901**	**3250815**	**2207340**
Less: Prevision for doubtful debt		239322		198464		446569
Closing debtors		**2771432**		**3108437**		**1760771**

Source: Budget Book for F/Y 2061/62 and F/Y 2063/64

Table -22(b)

Actual and forecast of cash collections and Debtors for

F/Y 2064/65 & 2065 /66

Description	F/Y 2064/65		F/Y 2065/66	
	budget	Actual	budget	Actual
A cash collection				
Collection from local debtors	5167257	5308073	5589791	5347262
International sharing	950000	489989	666400	1231780
Subscriber deposit	355185	171160	313412	314821
Sale of materials and other income -	-	-	33913	421060
Vat , service charge & ownership	1177366	1011535	1924788	1404780
Maturity of financial investment	119984	24269	423543	508905
Non-operating income	300000	0	600000	411198
Total cash collection with non operating income	7569792	7005026	9011847	9639806
B. debtors				
Opening debtors	2560234	2199980	2622607	2875131
Inter administration	724000	1023961	814332	1426116
Local	1736234	1176019	1808275	1449015
Adjustment for local debtors	167884	317118	-	375285
Add: Operating income for the yr	5724629	6156095	6383869	7208087
Gross debtors	8352747	8673193	8706476	10458503
Less: Cash Collection during the year from debtors	5667257	5798062	6256191	7000102
Sundry debtors (Gross)	**3585490**	**2875131**	**3650285**	**3458401**
Less: provision for doubtful debt		407051		428124
Closing debtors		**2468080**		**3030277**

Source: Budget Book for F/Y 2064/65 and 2065/66

Table 21, shows Nepal telecom budgeted and actual cash collection and debtors balance from F/Y 2061/62 to 2065/66. Actual debtors balance is lower then budgeted

in F/Y 2062/63, 2063/64, and 2065/66. If indicates that most of years Nepal telecom has debtors balance below its budgeted. Lower debtors balance has the single of more collection during the year. On the other side cash collection from debtors are in increasing trend. Actual cash collection is lower than budgeted in F/Y 2061/62 to 2064/65. By which, we can say that Nepal telecom can't succeeded to achieve its targeted collection. But, on F/Y 2065/66 and 2066/67actual debtors are higher than budgeted. It shows, Nepal telecom has improved its strategy and management for cash collection from debtors. At this period, debtors balance is increasing in comparison with previous year. It is due to the increasing trend of sales revenue with in study period.

4.3.3 Analysis of Investment in cash and Bank Balance on Current Assets and Total Assets

Current assets is cash anything that is expected to be converted into cash with in period of the balance sheet data. Assets is anything owned by the company having a monetary value; e.g. 'fixed' assets like buildings, plan & machinery, vehicles and potentially including like trade marks and brand names, and 'current' assets, such as stock, debtors and cash the detail calculation of this relation is calculated below on table -

Table -23

Analysis of Investment in cash & Bank Balance on Current Assets and Total Assets

Particulars	**2061/62**	**2062/63**	**2063/64**	**2064/65**	**2065/66**
Cash and Bank balance	9574500	12021624	14746337	16134516	18191058
Current assets (CA)	20598352	22526522	23519753	25180638	28837295
% of cash and bank balance on current assets	46.48%	53.37%	62.70%	64.08%	63.08%
Fixed assets (FA)	14832228	16688435	20009543	24190584	29849392
Total assets (TA)=CA+ FA	35430580	39214957	43529296	49371222	58686687
% of cash and bank balance on T.A. = Cash & bank balance/ TA	27.02%	30.66%	33.88%	32.68%	31%

source: Annual Report 2008-09, Nepal Telecom

The table-23indicates that the cash and bank balance is around half with respect to current assets. During the period it is lowest 46.48% for the year 2061/62,highest, 64.08% for the year 2064/65. Percentage of cash balance on current assets are 53.37%, 62.70% and 63.08% for the year 2062/63, 2063/64 and 2065/66 respectively. On an average, it is around 60% while comparing with the average it is found that the percentage of cash and bank balance to current assets for the years expect 2061/62

and 2062/63 are higher. Thus, can be said that the cash position of Nepal telecom is satisfactory.

The cash and bank balance with respect to total assets has fluctuating trend. During the study period, it is lowest 27.02% for the year 2061/62, highest 33.88% for the year 2063/64 of cash balance are 30.66%, 32.68% and 31% for the year 2062/63, 2064/65 and 2065/66 respectively. It is fluctuating because cash and FA are also fluctuating. While, on the bank balance has lower on total assets with comparison to current assets. Through analysis, it is also clear that investment in current assets are higher than investment in fixed assets. Proportion of current assets higher means the company has enough cash for day-to day operation. This should benefit the company for investment opportunity but ideal cash decrease net profit. Thus, the company should maintain optional cash.

4.3.4 Analysis of Cash to current liabilities

Among the technique to measuring corporate liquidity the ratio of cash to current liabilities may also be used an index of cash management. This ratio indicates the amount of cash in (percentage) available to pay the current obligation of the firm. In general a low percentage of cash to current liabilities may be regarded as a favorable indicates because sufficient use of cash help to increase profit. However, a very low ratio is also not desirable as it may lead to corporate insolvency.

The table below presents the level of cash in relation to current liabilities of Nepal telecom for five fiscal years, from 2055/56 to 2059/60.

Table -24

Analysis of Cash to Current Liabilities of Nepal Telecom (In Rs.000)

Year	Cash & bank	Current liabilities	percentage
2061/62	9574500	3858484	248.14%
2062/63	12021624	4475753	268.59%
2063/64	14746337	5712295	258.15%
2064/65	16134516	7915500	203.83%
2065/66	18191058	6718054	270.78%

Source: Annual Report 2008-09, Nepal Telecom

From the table - 24 indicates that cash & bank balance are higher than current liabilities. The level of cash in relation to current liabilities are increasing trend i.e. 248.14%, 268.59%, 258.15% ,203.83%, and 270.78% for the year 2061/62 to 2065/66 respectively. Cash to current liabilities is around 5:2 ratio. From this analysis, it can be said that the company has enough cash to pay the current obligation of the firm but

it also shows, Nepal telecom has not manage its cash obligation of the firm Nepal telecom has face the problem of cash management.

Least square method can be used to analyze the trend of cash balance (y) to estimate possible future cash balance. For a given period of time. A straight-line trend line method shows the relationship between cash balance (y) and time period (x). To fit the straight-line trend, the fiscal year is considered as independent variable (x) and cash balance are considered as dependent variables(y).

Now, Fitting the straight-line trend by least squares for variation in cash balance

Fiscal year (x)	**Cash balance (y)**	**X**	**Y2**	**Xy**
2061/62	9574500	-2	4	-19149000
2062/63	12021624	-1	1	-12021624
2063/64	14746337	0	0	0
2064/65	16134516	1	1	16134516
2065/66	18191058	2	4	36382116
	∑y=70668035	∑x=0	∑y2= 10	∑xy= 21346008

F/Y 2063/64 is assumed as based year

$$a = \frac{\sum Y}{N} = \frac{70668035}{5} = 6780605.20$$

$$b = \frac{\sum Y}{\sum y2} = \frac{21346008}{10} = 2134600.8$$

straight - line trend (y) a +bx

∴ y =14133607 +2134600.8 X

The above trend line shows the positive figure of cash balance for future. The annual rate of increment of cash balance is to be Rs.2134600.8 thousands.

By the help of the straight -line equations' we can estimates the future cash balance for F/Y 2066/67

Estimated cash balance for F/Y 2066/67 =14133607 + 2134600.8 *3
Rs.= 20537407 thousands

By the help of straight-line trend, Cash balance will be in slightly increasing trend. S ales to cash flow ratio measure of whether or not a company's sales are high in comparison to its cash flow. To find out the correlation between sales and cash balance Karl Pearson's co-efficient of correlation (r) is determined. By calculating (r) between sales and cash 'r' we can examine, whether or not cash balance will be change in the same direction of the change in actual sales. For this purpose actual sales (x) are assumed to be dependent variable and cash balance (y) are assumed to be independent variables. It is assumed that actual sales will increase as cash balance will increase or vice -versa. It means there should be positive correlation between cash balance and actual sales. Later, significance of correlation (r) is tested with probable error (PE). The detail calculation of this statistical tool is presented in appendix-5 Now, summarizing these results are given below:

Correlation coefficient between cash balance an actual sales (rxy) =0.9807

The value of 'r' shows that there are highly positive correlation between cash and sales. The significance of 'r' can tested by the probable error of 'r' .

From appendix -5, we have probable error of 'r' = 0.0115 since, r> P.E. (r), the value of r is highly significant so it is no doubt whether cash balance will increase, actual sales will also increase or vice-versa.

A regression line can also be fitted to show the degree of relationship between the cash balance and sales revenue. Cash balance can be forecasted by the value of actual sales.
The regression line of sales revenue (x) on cash balance (y) is

$$(y-\bar{y}) = r(x,y) * \frac{\sigma y}{\sigma x} (x-\bar{x})$$

$$(y-141335.8) = 0.9807 * \frac{30360.31}{46633.84} (x-150083)$$

$\therefore$ Y = 0.6385x + 45508.01
This equation shows sales will be increase by 0.6385 lines if increase in cash balance.
The regression line of cash balance (y) on sales revenue is -

$$(x-\bar{x}) = (x,y) * \frac{\sigma x}{\sigma y} (y-\bar{y})$$

$$(x-150083) = 0.9807 * \frac{46633.84}{30360.31} (x - 141335.8)$$

∴ X = (1.5064y- 62825.25)

Thus, by the analysis cash balance is the function of sale and cash balance will be increased by increase in revenue.

Time element is also an important factor with the passage of time the sales achievements and account receivable changes, which can be expressed by the component of time service. By fitting the straight-line trend shows the relationship between fiscal year (time) and A/R ratio in time.

Fitting the straight-line trend by least square for showing the relationship between years and account receivable turnover in time.

Fiscal Year	Ratio in time y	x	x2	Xy
2061/62	3.25	-2	4	-6.5
2062/63	3.57	-1	1	-3.57
2063/64	4.27	0	0	0
2064/65	5.14	1	1	5.14
2065/66	6.16	2	4	12.32
	∑y = 22.39	∑x = 0	∑x2 = 10	∑xy = 7.39

Straight line trend (y) = a + bx

$$a = \frac{\sum y}{N} = \frac{22.39}{5} = 4.478$$

$$b = \frac{\sum xy}{\sum x2} = \frac{7.39}{10} \quad 0.739$$

∴ Y = 4.478 + 0.739x

This trend lines shows that account receivable ratio will increase in coming year. The ratio indicates that sales is directly affected to account receivable. Increase sales causes same effect on account receivable and other account receivable turnover in time also increase.

Statistical tool, correlation is used to analyze the relationship between receivable and cash balance. There should be negative correlation between these. In other words, the cash balance should increase as the decrease in receivable or vice-versa.
Correlation coefficient between receivable and cash balance is presented in appendix -6

$$\text{correlation coefficient } (rxy) = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

Hence,
rxy=0.9766
Probable of Error (PE) =0.01397
Since, r>P.E(r), so, it ca be said that the value of rise significant at all. That is there is not evidence of correlation.

Sales and receivable are interrelated economic variables. It is assumed that sales will increase as receivable increase or vice - versa . It means that there should be positives relations ship between sales and receivable. To find out the correlations between sales and account receivable, Karl Pearson's co - efficient of correlations (r)is determined . For the purpose of calculating correction receivables denoted by x are dependent variables and sales (y) are independent variables . Now , summarizing Appendix - 7 results are given below :

$$\text{Correlation coefficient between cash balance \& actual sales } (rxy) = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

The value of r (1.41298) shows that there is positive correlation between sales and receivable .The test of signification of the value of 'r' is tested by P.E., which declared or confirmed whether there is significant positives relationship between the sales and receivable or not .
P.E = 0.30058
Since r >P.E.(r); thus the value of r is highly significant . So ,that it is no doubt that if sales will increases, receivable will decreases or vice - versa in Nepal telecom .
A regression line can be fitted to check the degree of relations between sales and account receivables . for this purpose receivables (x) have been assumed to dependent upon sales (y).

So, the regression line of receivable (x) on sales (y) is as follow ;

$$(x-\bar{x}) = (x-y) * \frac{\sigma y}{\sigma x} (y-\bar{y})$$

$$\text{or, } x-(32913.2) = 1.4130 * \frac{2857}{30360.31} (y- 150083)$$

$$\therefore\ x = 0.1330y + 12952.16$$

Thus the regression equation, it is clear that the receivable will decrease, if sales will increase. for unit increases in the sales, the amount of receivable decreases by 0.1330 units.

4.3.5 Cash flow projects and Actual cash budget of Nepal Telecom

Cash flow management is the process of monitorizing, and adjusting business' cash flows. The most important aspects of cash flow management is avoiding extended cash shortages, cause by having too great a gap between cash inflows and out flow. Therefore, business need to perform a cash flow analysis on a regular basis, and use cash flow forecasting so the business can taken the steps necessary to head off cash flow problems. For managing and improving cash flow Nepal telecom has prepared estimated and actual cash budget for each fiscal year.

The cash flow projection shows how cash is expected to flow in and out of your business. It is an important tools for cash flow management, when a business expenditure are too high or when we might want to arrange short-term investments to deal with a cash flow surplus. Budgeted cash flow is a plan of cash flow and shows the cash that is anticipated to be generated or expended over a chosen period of time in the future. On the other hand, actual cash describes the cash flow that has occurred in the past. Nepal telecom estimated and actual cash budget are presented on table.

Table - 25(a)

Estimated and Actual Cash Budget for F/Y 2061/62 to 2063/64 (Rs. in 000)

Description	**F/Y 2061/62**		**F/Y 2062/63**		**F/Y 2063/64**	
	Budget	**Actual**	**Budget**	**Actual**	**Budget**	**Actual**
A) Internal sources						
Collection of revenue	3167763	3405766	3705753	5905753	4437459	4498406
Inter administration	11000000	921381	1250000	852523	1250000	2276710
Subscribers deposit	921381	207568	287470	225603	189100	206343
sale of sets & other materials	0	0	0	0	0	0
Vat, service charge % own. tax	740000	666303	840000	829451	962960	854559
maturity of investment	0	0	30299	164107	65314	43727
Other income	300000	311918	350000	359692	360000	366979
Total internal sources	5423038	5512936	6463522	6361814	7264833	8266624
External sources word ban & danish grant/loan	834253	327636	578716	147612	325041	93551
Total external sources	834253	327636	578716	147612	325041	93551
Total sources	**6257291**	**5840572**	**7042238**	**6509426**	**7589874**	**8380175**

B) Applications						
Construction/ purchase (internal)	2621000	1228006	3119361	1043553	3190268	1904522
Purchase (external source)	834253	327636	578716	147612	325041	93551
Total const. & purchases	3455235	1555642	3698077	1191165	3515309	1998073
Operating expenses	908804	715463	1051726	846950	1137023	1135237
Repayment of liabilities	1953900	2307093	2659750	2597276	2695505	2951381
Vat, service charge & own. Tax	740000	666303	840000	829451	900000	894559
Investment	80000	374412	280000	105000	230000	30000
Total applications	**7137957**	**5618910**	**8529553**	**5569842**	**8477837**	**7009250**
c) Cash position						
opening balance of cash & bank	8834444	5462990	10942164	5992287	11983921	7168827
Surplus/ (deficit)	-880666	2111974	-1487315	3414522	-887363	3932108
Cash not incurred	0	1999536	0	2614815	0	3645402
Closing balance of cash & bank	**7953778**	**9574500**	**9454849**	**12021624**	**7683549**	**14746337**

Source: Budget Book for F/Y 2061/62 to 2063/64, Nepal telecom

Table - 25 (b)

Estimated and Actual Cash Budget for F/Y 2064/65 to 2065/66

Description	F/Y 2064/65		F/Y 2065/66	
	Budget	**Actual**	**Budget**	**Actual**
A)Internal Sources				
Collection of revenue	4967257	5308073	5589791	5347262
Inter administration	70000	489989	666400	1231780
Subscribers deposit	355185	171160	313412	314821
Sales of sets & other materials	0	0	33913	421060
Vat, service charge & own. tax	1177366	1011535	1624788	1404780
Maturity of investment	119984	24269	423543	408905
Other income	250000	0	360000	411198
Total internal sources	7569792	7005026	9011847	9639806
External sources-word bank Korean, Belgium Loan & Grant	169300	28655	460000	187450
Total external	169300	28655	460000	187450
Total Sources	**7739092**	**7033681**	**9471847**	**9827256**
B) Applications				
Construction/ purchase (internal)	2798854	1706227	3639291	2012321
Purchase (external source)	169300	28655	460000	187450
Total const. & purchases	2968154	1739882	4099291	2199771
Operating expenses	1488851	1234729	1560394	1439418
Repayment of liabilities	2748800	2113036	3070861	2920852
Vat, service charge & own. Tax	1177366	1011535	1524788	1404780
Investment	300000	343543	550000	1033202
Total applications	**8683171**	**6437725**	**10805334**	**8998023**
c) Cash position				
opening balance of cash & bank	14402182	9693580	14603125	10939913
Surplus/ (deficit)	-944079	3226748	-1333487	3527006
Cash not incurred	0	3214188	0	3724139
Closing balance of cash & bank	**13458103**	**16134516**	**13269638**	**18191058**

Source: Budget Book for F/Y 2064/65 & 2065/66 Nepal telecom

Above table shows the budgeted and actual cash budget of Nepal telecom. It is found that the budgeted total receipts (total sources) are less than the actual receipts. But, budgeted payments (application) are more them the actual applications. The main sources of cash generation is from revenue income and the major payment is in the repayment of liabilities and construction & purchases. Closing cash balance of Nepal telecom is also positive and it is higher than projected cash on the study period. Closing cash balance is in increasing order.

The estimation or projection of cash flow is powerful management tools in Nepal telecom. By knowing its cash position now and future, Nepal telecom can get benefit

to purchase sufficient inventory for seasonal cycle, to take advantage of discount & special purchases, for adequate future financing and properly of equipment purchases for replacement or expansion. It is said that lack of liquidity can be a killer even for profitable business. After analyzing the budgeted and actual cash position, there is huge differ on budgeted and actual cash balance. Thus, Nepal telecom should get an effort to minimize the difference.

If the cash coming 'in' to the business is more than going 'out' of the business, the company has a positive cash flow. Nepal telecom has also positive cash flow i.e. good for company sometimes it is worry about what to do with the excess cash. The main danger when putting together a cash-flow projection is being over optimistic about the projected sales. Nepal telecom has succeed for avoiding a cash crisis by the develop cash flow projection.

4.3.6 Analysis of cash Flow statement

Nepal telecom prepares cash flow statement and it is used to analyze the cash inflows and out flow (where the money went) during a designated time period and estimates the probable future deficits or surplus. The most important aspects of cash flow management is avoiding cash shortages, caused by having too great a gap between cash inflows and out flow. In Nepal, many entrepreneur is making profit then why doesn't have enough/any cash ? This is the major problem of today's entrepreneur. Therefore business manager should need to perform a cash-flow analysis and then second step of cash flow management is to develop and use strategies that will maintain an adequate cash flow for your business. And, other most useful strategies for business are to shorten its cash flow conversion period, so, that business can bring in money faster. The actual cash flow statement is typically divided on the headings of cash flow from operating activities; cash flow from financing activities and cash flow from investing activities for the F/Y 2061/62 to 2065/66.
Cash flow from operating activities is presented on table -

Table -26 (a)

Calculation of Cash Flow from Operating Activities for the Year ended Ashad 32, 2061/62 to 2065/66

calculation of cash flow from operating activities
for the year ended Ashad 32, 2065 to 2066

Particulars	Amount in Rs. Year ended Ashad 32,2062	Amount in Rs year ended Ashad 32,2063	Amount in Rs Year ended Ashad 20,2064	Amount in Rs Year ended Ashad 30,2065	Amount in Rs Year ended Ashad 30,2066
Cash flow from Operating Activities	4921528	6843726	7983321	10871456	13633989
Net operating profit before tax	- 1050485	- 1196136	- 1366504	- 1486129	- 1681293
adjustment	696	1107	-	10303	-
Deprecation	(463827)	(596837)	(701827)	(903773)	(1375736)
Interest on loan	450000	591807	869836	71161	41079
Interest from investment & bank deposit	929026 (1631745)	1006267 (1926120)	1208707 (1804050)	1183534 (2491821)	2250589 (4382459)
Liaisons charge liabilities	- (21017)	(40029) (22011)	(563687) (21694)	- (28156)	(189000) (38643)
Increase/decrease on working capital	(23611) (384038)	(30048) (301638)	(35997) (248788)	(47308) (352364)	(64368) (839893)
Increase liaisons					
Payment agains earned					
Payment of peasant & gratuity					
Payment of bonus & incentive					
Net cash flow operating Activities (A)	4827497	6722360	8052325	9799161	10716905

Source : Annual Report 2008-09, Nepal Telecom

Table -26, represent the trend of net cash flow from operating major items. Operating cash flow, often referred to as working capital, is the cash flow generated from internal operations. In Nepal telecom, cash from operating activities are generated from sales of the product services. Operating profit before working capital includes adjustment, depreciation, foreign exchange gain or loss provision for staff bonus, incentive, gratuity & pen, provision for Income tax, fixed assets written off, income from investment and bank deposit & expenses on loss of goods. Net operating profit before tax is in increasing trend i.e. Rs. 4921528, 6843726, 7983321, 10871456 & 13633989 thousands for F/Y 2061/62 to 2065/66 respectively.

.Adjustment of working capital includes increase in A/R, increase in stock, increase/ decrease in interact accrues, increase in advance, branch account (Adj), increase in payables & payment of last year dividend, bonus, incentive, tax items in Nepal telecom, working capital changes are in fluctuating during the F/Y 2061/62 to 2065/66. Working capital changes are Rs. (1631745), (1926120), (1804050),(2491821) and (4382459) thousands for F/Y 2061/62 to 2065/66.

By adjusting net operating profit before tax, operating profit before working capital changes and working capital changes, we can get net cash flow is operating activities. After the analysis, we can conclude that the operating cash flow is in increasing trend, which is good sign for Nepal telecom. It increases from Rs. 4827497 thousands to Rs. 10716905 thousands. It is the real lifeblood of Nepal telecom because it is generated internally and it is under control of management. Further more, Nepal telecom should monitoring, analyzing and adjusting its cash flows.

Similarly, the results of cash flow investing activities are presented in given below on table.

Table -26 (b)

Calculation of Cash Flow From Investing Activities for the year ended Ashad, 32 2061/62 to 2065/66

Calculation of Cash flow from Investing activities
for the ended Ashad 32, 2062 to 2066

Particulars	Amount in Rs year ended Ashad 32,2062	Amount in Rs year ended Ashad 32,2063	Amount in Rs year ended Ashad 32,2064	Amount in Rs year ended Ashad 32,2065	Amount in Rs year ended Ashad 32,2066
Cash flow from					
Investing Activities	(1997745)	(2243645)	(1667711)	(3047176)	(4150841)
Purchase of Assets	55824	(852501)	(917084)	(3486326)	(2794063)
Purchase of Investment	(1117436)	15787	(1443449)	(79787)	613804
Sale of Investment					
Income from Investment and Bank deposit	463827	596837	701827	903773	1375736
Net cash from Investing Activities (B)	(2595530)	(2483522)	(3326417)	(5709496)	(4955364)

source: Annual Report 2008-09, Nepal telecom

Investing cash flow is generated internally from non-operating activities. This components world included investments is plant and equipment or other fixed assets, non-recurring gains or losses, or other sources and uses outside of normal operations.
The table 26 (b), purchases of fixed assets is in fluctuating trend over the last five years In the F/Y 2065/66 it is too high but on 2063/64 it is low. Purchase of fixed assets is Rs. 4150841 thousands in 2066/67 and it is higher to compare with previous year. It means more fixed assets are necessary to install new exchange & capacity. By which, Nepal telecom sales revenue is being increases. Similarly, purchase of new investment has been decreasing order up to 2061/62 and there after it is increasing. On F/Y 2066/67, purchase of investment is reached to Rs. 2794063 thousands. It shows that Nepal telecom is generating more profit and it has utilized by new investment. It also indicates that old investments were sold and late of investment generates cash in Nepal telecom.

After adjustment of all items of investment activities, we can conclude that the cash from investing activities has highly increased on F/Y 2065/66 and then after it is decreasing up to F/Y2061/62.

Table 26 (c)
Calculation of cash flow financial Activities for the year ended Ashad, 32, 2061/62 to 2065/66
Calculation of cash flow from financing activities
for the year ended Ashad 32,2062 to 2066

Particulars	Amount in Rs ended Ashad 32, 2062	Amount in Rs ended Ashad 32, 2063	Amount in Rs ended Ashad 32, 2064	Amount in Rs ended Ashad 32, 2065	Amount in Rs ended Ashad 32, 2066
Cash flow from financial Activities					
Long term borrowing Repayment of long term loan Payment of bonus Payment agains earned	24238 (11249) (300000) (2900000)	- (24238) (433510) (1613969)	- - (1475161)) -	(1191680) (10303)) (1499500) -	 (3704945) -
Net cash flow financial activities (c)	(3187010)	(2071717)	(1475161)	(2701483)	(3704945)

Source : Annual Report 2008-09, Nepal Telecom

The table 26 (c), show financial cash flow and it is the cash to from external source such as after as lenders, investors and stakeholders. Long term borrowing it in fluctuation trend over the study period. It is decreased to Rs. 1191680 for the year 2064/65. It shows that Nepal telecom has been bearing cost of long term borrowing,

through which its operating cost also increased. So, Nepal telecom should applied the policy of cut off unnecessary expenses, otherwise will be swimming on huge amount of loan and at the end, Nepal telecom will be going to suffering of cash in a today's competitive environment and it will be possibility of liquidation.

The table represents that the amount of repayment of long-term loan is in increasing trend. The figures indicated that Nepal telecom has been applying the tied policy on long-term borrowing. Now, we say that Nepal telecom has been trying to stand on self-income.

After the adjustment of financial items, we can conclude the Nepal telecom financial position is in decreasing trend over the study period because, Nepal telecom has repayment of huge amount of loan.

Now, we are able to indicates the cash position of Nepal telecom, after above all adjustment. The results of cash position are presented on given below table.

Table 26 (d)
Calculation of Cash position Changes for the year ended Ashad, 32, 2061/62 to 2065/66
Calculation of cash position of Nepal Telecom
for the year ended Ashad 30, 2062 to 2066

(In Rs 000)

Particulars	Amount in Rs ended Ashad 32, 2062	Amount in Rs ended Ashad 32, 2063	Amount in Rs ended Ashad 32, 2064	Amount in Rs ended Ashad 32, 2065	Amount in Rs ended Ashad 32, 2066
Net cash flow from O. A. (A)	4827497	6722360	8052325	9799161	10716905
Net cash flow from I. A. (B)	(2595530)	(2483522)	(3326417)	(5709496)	(4955364)
Net cash flow from F. A. (C)	(3187010)	(2071717)	(1475161)	2701483)	(3704945)
Net INT. in cash A+B+C	(955043)	2167121	3250747	1388182	2056596
Cash at beginning	10780669	9574500	12021624	14746337	16134516
Foreign Ex. Adj. Gain/ Loss	(251124)	280005	(526031)	-	-
Cash at the end	9574502	12021626	14746340	16134519	18191112

Source: Annual Report 2008-09, Nepal telecom

The table 26(d), indicates that net cash flow operating activities is in increasing trend except 2062/63 and 2065/66. Investing cash flows is also in increasing trend in

comparison with F/Y 2061/62. But , at the study period financial cash flow is in decreasing order. By adding operating, investing and financial cash.
We can get net increment in cash. After adjustment of beginning cash and foreign exchange gain or loss with net increment in cash, we can reach on the closing cash balance, which is the cash position of Nepal telecom. Cash at the end of each study year are in increasing trend. Closing balance of cash in F/Y 2061/62 is 9574502 thousands and it reached to 18191112 thousands in F/Y 2065/66. The closing cash balance indicates weather Nepal telecom has sufficient cash or not. The analysis shows that Nepal telecom has sufficient cash for its operating but Nepal telecom didn't perfectly followed cash flow management of avoiding extended cash shortages.

4.4 Major Finding of the Study

The following are the major finding derived from the study.

1.) Actual sales lines achievements are fluctuating and less than budgeted lines but achievements in revenue are above the budgeted revenue expect F/Y 2061/62.
2.) Sales performance of Nepal telecom is satisfactory. In lines, sales achievements are above 97% in average.
3.) The budget sales (lines) are more variable than actual line sales. On the other hand actual revenue are more variable than budget revenue.
4.) The value of correlation shows that there are positive correlation between the budgeted and actual sales unit and Rs.
5.) By the regression equation, it is clear that the actual sales line is in decreasing trend with compare to budgeted. But revenue side it is increasing with compare to budgeted. Thus future actual line sales will decreasing and future revenue will increasing with compare to budgeted, if other things reaming same.
6.) The straight-line trend shows the positive sales figure for future.
7.) The revenue per line declination is due to bad governance and slow economic growth, not due to increase of number of lines.
8.) Nepal telecom must increase its trunk channel capacity and system reliability to improve its revenue condition.
9.) Nepal telecom can't sell telephone line according to the demand of customers, it is because of inefficient management, lack of proper planning and resource etc.
10.) The revenue condition of small exchanges in rural areas exhibits strong support for the various economics zones.
11.) The local calls are increasing at this stage.

Nepal telecom was a monopolistic company of Nepal before 5 years. But unable to achieve its objective well. The monopoly status of this organization well not remain and it has to compete with other service provider(NCELL, Smart, STM, UTL, NSPTL). Thus, Nepal telecom needs to improve its quality of services through proper standardization.

CHAPTER FIVE:

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

Since, the established of Nepal Telecommunications corporation can look back on the part 33year of services to provide reliable and affordable telecommunication services to nation, Nepal telecommunication corporation was dissolved and converted to Nepal telecom from 1st Baisakh 2061. It was registered was under company act 2053; the privatization of Nepal telecom should beneficial to company. Nepal telecom has growing concern of grater nation importance in the area of providing telecommunication services to serve is an impetus to the social, political an economics development of the country. Nepal Telecom's vast telecommunications networks play a key role in supporting the growth of business in the information technology field. In Nepal telecom has enjoying monopoly in telecommunication sector expected UTL, Ncell, STM, Smart, NSTPL? However, the company is continuously facing problem of cash management due to the improper management of revenue and increasing debtors. And, the company is also facing liquidity problem. Further more, Nepal telecom has been investing a large amount of net profit in non-productive sectors that increases the operating expenses, which never help it to generate the revenue. So the objective of this study is to have true insight into its "Revenue effectiveness and cash management". If Nepal telecom should able to manage revenue efficiently, then the company should success for managing its cash. The study has attempted to provide a possible suggestive framework for the better cash management and revenue generation of Nepal telecom.

The necessary data and facts were collected through the annual report, budget books and website of Nepal telecom. The study covers the period of five years being from 2061/62 to 2065/66 and financial tools were used to accomplish the objectives.
Nepal telecom is a monopolistic company of Nepal but it unable to achieve its objectives well. Nepal telecom has a challenge to operate in a systematic manner that improves the key business process. Sales performance of Nepal Telecom is satisfactory and sales revenue is increasing every year but rate of the increasing is fixed. Nepal telecom is also suffering from the problem of intervention after converted to company. The government appoints most of the board of director and political parties has given pressure to telecom management. The company's main revenue source is GSM Mobile sector which cover more than 40% of total revenue of it's. Thus, this sector has been paying a vital role in comparison to whole revenue. Actually, Nepal can't success sell telephone line according to consumers demand. So, Nepal telecom needs to improve its quality of services through proper standardization, which may help to increase in revenue. Nepal telecom must consider revenue effectiveness as the starting points for its revenue planning

Through the study, it's found that Nepal telecom has huge amount of cash in or bank balance. Cash as a means and ends of business operations must be held in sufficient. Holding of cash both in excess and insufficient than requirement may the cash to problems. Nepal telecom has enough cash but it is found that the cash management of Nepal telecom is not effective. Basically, efficient cash management is concerned with the management of cash inflow and out flow but the figure shows the inabilities of management of Nepal telecom because it is lying idle.

The main source of cash of Nepal telecom is sale of telecom services. Besides these sources company receives income from sale of materials maturity of financial investment and other. Company uses its cash to purchases telephone exchange, materials, capital expenditures, administrative expenses, employee cost, operating & maintenance cost etc. and the company holds cash for transaction motive. Nepal Telecom has getting effort for cash management in a firm, which helps the company to maintain sufficient liquidity and also the same time improve its profitability.

5.2 CONCLUSION

1. The lack of accurate and proper sales forecast is one of the important contains that affect the financial performance of the company. In Nepal Telecom, there is consistency between planned sales and actual sales. The analysis of distributed sales line and revenues shows that the achievement is highly consistent. So, if the company forecasts the expected sales accurately, it can manage the various activities accordingly.

2. Sales budget shows GSM Mobile Service sector's sales revenue is main revenue sources of Nepal Telecom, which contributes more than 40% in average.

3. Correlation and coefficient value shows that there are positive correlations between the budgeted and actual sales units and by the regression line, it is clear at future revenue will increasing with compare to budgeted if other things mining same.

4) The net profit for Nepal Telecom 2:5. There, in Nepal Telecom sales is increasing each year.

5) The Net Fixed Assets turnover ratio and total assets turnover ratio is in increasing trend. From this analysis the company has better performance by utilize the assets for generate revenue.

6) Management has taken efficient credit policy to sales of telecom service that help to minimize its account receivable.

7) The capital employed of Nepal telecom has increased year by year, but its utilization is not satisfactory, but the working capital ratio is fluctuated within the study period. So, the company must manage the current assets and current liabilities properly at optimum level for achieving target sales revenue.

8) Debtor's turnover ratio is in increasing trend. The increasing ratio indicated that Nepal telecom has succeeded for adopting the proper receivable management policy.
9) Profitability ratio of Nepal telecom shows operating profit ratio is averagely 54% return on investment is averagely 20% and net profit is averagely 62% in Nepal telecom.

10) The average elasticity of sales with respect to their cash shows can be regarded as highly positive correlation. The analysis revealed that cash balance in the function of sales and cash balance would be increased on increase on revenue (sales).

11) There is insignificant relation between sales and receivables in Nepal telecom. So, that is no doubt that if sales will increases, receivables will decrease or vice-versa.

12) Correlation of coefficient between receivable and cash balance is negative correlated. So, it is not significant and cash balance should increases as the decreases in receivable or vice-versa in Nepal telecom.

13) Nepal telecom has position cash flow i.e. good for company. Sometimes it is worry about what to do with the excess cash.

5.3 RECOMMENDATION

Based on the above major issues and problems the researcher has provided the valuable suggestions for further footing up the exiting financial position of NTC. Which are as follows.

1) Improving the liquidity position
   - The corporation has suggested maintaining the current ratio under 1.5 due to service-oriented firm.
   - NTC should prepare financial planning on investment policy to behave as a business firm.
   - NTC has to estimate how much funds is required for immediate use and all the excess funds should be invested in such marketable securities which can be converted into cash when required because the funds have opportunity cost.
   -

2) Making ideal combination of debt and equity
   - The corporation should employ the proper amount of debt on equity to maximize the equity holder's wealth.
   - The corporation should mobilize its sinking funds to retirement of debts in suitable conditions.
   - NTC should try to obtain optimum level of low cost debt to maximize the profit position and it also helps to minimize the financial risk for solvency.
   -
3) Utilization of Fixed Assets
   - NTC should utilize the full installed capacity of fixed assets, which helps to obtain more sales and minimize the operating cost too.
   - NTC should invest on project with low financial risk and higher rate of return by making proper capital budgeting.
   -
4) Maximizing the collection of outstanding bill
   - NTC should make appropriate decision regarding the credit terms, credit standards and collection policy in such a manner that the benefit obtained should be higher than the facility provided to the customers.
   - NTC's collection policy should accelerate the optimum volume to sales and reduce the bad debt losses.
   - The government should issue circular for all government offices to pay their outstanding bill at a time.
   - NTC should regular monitor of the line distribution network and control of faulty billing system.

NTC should have followed the collection procedures as given below;

- ✓ Providing attractive discount to speed up the payment of receivables.
- ✓ Depute the concentration banking system for credit collection and mobile collection center to the distance customers.
- ✓ Black listing of longer non-paying customer's and forwarding legal action to them.
- ✓ Immediate action of line disconnection should be undertaken for non- paying customers.

All these actions should be tried one by one for the collection of delay payment. But, one thing should be noted that the collection policies neither should be strict nor should be lenient. It should be trade off between them.

5) Reducing operating and non-operating expenses
   - The corporation should employ the budgetary cost control techniques and standard cost control techniques for long-term programs.
   - By well management and good handling over debts written off, repair maintenance cost, operational cost, excessive depreciation cost,

administrative and unnecessary leakage expenses can further be reduced to obtain more profit.

6) Offering quality services

- NTC should be more careful towards customer's complaint like maintenance, connection of new telephone lines, placement and dismantle of existing line and immediate action should be undertaken.
- NTC should form the investigation wings for non- calling billing charges, which is the more serious complaint from customer's side.
- It should provide new telecommunication services with quality at reasonable cost.

7) Recruiting well-performed and skillful manpower

- NTC should employ the highly qualified, experienced energetic and work (job)-oriented trained manpower to utilize more assets efficiently.
- NTC should discourage the political appointment.
- The skillful manpower helps to cut off the training expenses, operation & maintenance cost to some extent.

8) Motivating the staffs

- To initiate the positive productivity movement, the corporation should provide their staffs excess rewards and incentives.
- The corporation should undertake an impartial policy for transfer, promotion, employee training and punishment for their employee.
- Determining the wages according to productivity to push up the employee's work performance.

9) Timely evaluating the financial performances

- The corporation should indicate the standard ratio through which the researcher could interpret accurately the financial performance.
- To know the financial strength and weaknesses, the financial performance should be timely evaluated through financial experts using suitable financial and statistical tools and techniques.

10) Government should provide more autonomy

- To make more serious to NTC's senior management over their accountability.
- To run the corporation with business motives to meet the competition with private company.
- To make NTC's management more aggressive over any vital decision to obtain opportunity benefits condition.

11) Further movements to erase the bankruptcy condition

- To optimize the total assets turnover ratio.
- To obtain more reserve funds to be self-reliance.
- To promote the net profit position as compared to investment on total assets.

12) Miscellaneous process to be carried out

- Any decision should be undertaken as the concept of business principal.
- New project should be carried out after extensive research on market possibility, customers consuming capacity, project cost and possible returns on its investment.
- NTC management should be cunning over its competitor's strategy.
- NTC should prepare the budget considering the concept of cash budgeting, financial forecasting and cost-volume-profit analysis.

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APPENDIX

APPENDIX -1

Budgeted and Actual Sales

Calculation of mean, standard deviation & coefficient of variation for the fiscal tear 2061/62 to 2065/66 (in units) (line '000')

Year	Budgeted	Actual		
	X	Y	$(X-\overline{X})^2$	$(Y -\overline{Y})^2$
2061/62	704	680	2062096	1979649
2062/63	1263	1152	769129	874225
2063/64	1670	1580	220900	257049
2064/65	2524	2729	147456	412164
2065/66	4540	4293	5760000	4866436
	Σ x =10701	Σ y = 10434	$\Sigma(X-\overline{X})^2$ = 8959581	$(Y -\overline{Y})^2$ =8389523

Mean $(\overline{X}) = \frac{\Sigma X}{N}$

=10701/5 = 2140 lines or 2140*1000=2140000

Mean $(\overline{Y}) = \Sigma Y/N$

=10434/5 =2087 lines or 2087*1000=2087000

Standard deviation (ö x) $=\sqrt{1/N \Sigma (X-X)^2}$

$=\sqrt{1/5*8959581} = 1338.62$

=1338.62*1000=1338620

Standard deviation (öy) $= \sqrt{1/N \Sigma (Y -Y) 2}$

$= \sqrt{1/5* 8389523} = 1295.34$

=1295.34*1000=1295340

Coefficient of variation (C .V.) $= \frac{\text{Standard deviation}}{\text{Mean}} \times 100\%$

$$\text{C.V. of x} = \frac{1338620}{2140000} \times 100\ \% = 62.55\%$$

$$\text{C.V. of y} = \frac{1295340}{2087000} \times 100\ \% = 62.07\%$$

Budget and Actual Sales (in Rs.)

Calculation of mean, standard deviation & coefficient of variation for the fiscal year 2061/62 to 2065/66 (in Rs.'00000')

Year	Budgeted	Actual		
	X	Y	$(X-\overline{X})^2$	$(Y-\overline{Y})^2$
2061/62	95425	91942	2540966464	3380375881
2062/63	109578	110589	1314425025	1559776036
2063/64	133231	147516	158810404	6589489
2064/65	169869	178893	577729296	830016100
2065/66	221060	221475	5659101529	5096817664
	Σ x =729163	Σ y = 750415	$\Sigma(X-\overline{X})^2$ = 10251032718	$(Y-\overline{Y})^2$ =10873575170

$$\text{Mean } (\overline{X}) = \frac{\Sigma X}{N}$$

$$= \frac{729163}{5} = \text{Rs. } 145833, = 145833 \times 100 = 14583300$$

$$\text{Mean } (\overline{Y}) = \frac{\Sigma Y}{N}$$

$$= \frac{750415}{5} = \text{Rs}150083, = 150083 \times 100 = 15008300$$

$$\text{Standard deviation (o x)} = \sqrt{\frac{\Sigma (X - \overline{X})^2}{\mathbf{N}}}$$

$$\sqrt{1 \times \frac{10251032718}{5}} = 45279.21 \text{or } 45279 * 100$$

$$= 4527900$$

$$\text{Standard deviation (o y)} = \sqrt{\frac{1}{\mathbf{N}} \Sigma (Y - \overline{Y})^2}$$

$$= \sqrt{\frac{1}{5} \times 10873575170} = 46633.84$$

$$= 46634 * 100 = 4663400$$

$$\text{Coefficient of variation (C .V.)} = \frac{\text{Standard deviation}}{\text{Mean}} \times 100$$

$$\text{C.V. of x} = \frac{4527900}{14583300} \times 100 = 31.05\%$$

$$\text{C.V. of y} = \frac{4663400}{15008300} \times 100 = 31.07\%$$

APPENDIX - 2

Budget and Actual Sales (in Rs.)

Calculation of Correlation coefficient between budget and actual sales of Nepal Telecom for the fiscal year 2061/62to 265/66

(Unit '000')

Year	Budgeted X	Actual Y	$(X-\bar{X}) = x$	x^2	$(Y-\bar{Y}) = y$	y^2	xy
2061/62	704	680	-1437	2062096	-1406	1979649	2020452
2062/63	1263	1152	-877	769129	-935	874225	819995
2063/64	1670	1580	-470	220900	-507	257049	238290
2064/65	2524	2729	384	147456	642	412164	246528
2065/66	4540	4293	2400	5760000	2206	4866436	5294400
	$\Sigma x = 10701$	$\Sigma y = 10434$	$\Sigma(X-\bar{X}) = 0$	$\Sigma x^2 = 8959581$	$(Y-\bar{Y})^2 = 0$	$\Sigma y^2 = 8389523$	$\Sigma xy = 8619665$

Correlation coefficient (r_{xy}) = $$\frac{\Sigma xy}{\sqrt{\Sigma X^2}\ \sqrt{\Sigma y^2}}$$

$$= \frac{8619665}{\sqrt{8959581}\ \sqrt{8389523}} = .99$$

Calculation of probable error (P.E.) of X and Y

$$P.E. = 0.6745 * \frac{1- r2}{\sqrt{N}}$$

$$=0.6745 * \frac{1- (0.09945)2}{\sqrt{5}} = 0.0033$$

Budgeted and Actual Sales (in Rs.)

Calculation of Correlation coefficient between budget and actual sales of Nepal Telecom for the fiscal year 2061/62 to 2065/66

(Rs.'00000')

Year	Budgeted	Actual					
	X	Y	$(X-\bar{X}) = x$	x^2	$(Y-\bar{Y}) = y$	y^2	xy
2061/62	95425	91942	-50408	2540966464	-58141	3380375881	2930771528
2062/63	109578	110589	-36255	1314425025	-39494	1559776036	1431854970
2063/64	133231	147516	-12602	158810404	-2567	6589489	32349334
2064/65	169869	178893	24036	577729296	28810	830016100	692477160
2065/66	221060	221475	75227	5659101529	71392	5096817664	5370605984
	Σx =729163	Σy = 750415	$\Sigma(X-X)$ = 0	$\Sigma(X-X)^2$ =10251032718	$(Y-\bar{Y})^2$ =0	Σy^2 =10873575170	Σxy=10458058976

Correlation coefficient (r_{xy}) = $\dfrac{\Sigma xy}{\sqrt{\Sigma X^2}\ \sqrt{\Sigma y^2}}$

$= \dfrac{10458058976}{\sqrt{10251032718}\ \sqrt{10873575170}}$ =.9906

Calculation of probable error (P.E.) of X and Y

$$P.E. = 0.6745 * \frac{1- r2}{\sqrt{N}}$$

$$=0.6745 * \frac{1- (0.9906)^2}{\sqrt{5}} = 0.0056$$

APPENDIX -3

We the following values as calculated above

Particulars	Budget (x)		Actual (y)	
	Unities lines	Rupees	Unities lines	Rupees
Mean	2140000	14583300	2087000	15008300
SD	1338620	4527900	1295340	4663400
CV	62.55 %	31.05%	62.07%	31.07%
Correlation coefficient r (x , y)			Units 0.9945	Rupees 0.9906
P.E.			0.0033	0.0056

Fit the regression equation for y (Actual) on x (Budget)

Total units (lines) case

$$(Y - \overline{Y}) = \frac{\text{SD of Y}}{\text{SD of X}} (X - \overline{X}) \times r_{xy}$$

$$(Y - 2087000) = \frac{1295340}{1338620} (X - 2140000) \times 0.9945$$

Y = (0.9624x+27511.83) Units (in '000)

Total rupees case

$$(Y - \overline{Y}) = \frac{\text{SD of Y}}{\text{SD of X}} (X - \overline{X}) \times r_{xy}$$

$$(Y - 15008300) = \frac{4663400}{4527900} (X - 14583300) \times 0.9906$$

Y = 1.0202x - 130141.13 thousand rupees

∴ The regression line on equation is as follows:

Total line case Y= (0.9624x +27511.83)

Total Rupees case Y= (1.0202x +130141.13)

APPENDIX - 4

Time series Analysis

F/Y 2063/64 is assumed as based year

Fitting straight - line trend by heart squares (Unit'000') (InRs'00000')

Fiscal Year	Actual sales	Actual sales	Mid time X	X^2	Units (lines)	Rupees
	Y(units)	Y(Rs.)			XY	XY
2061/62	680	91942	-2	4	-1360	-183884
2062/63	1152	110589	-1	1	-1152	-110589
2063/64	1580	147516	0	0	0	0
2064/65	2729	178893	1	1	2729	178893
2065/66	4293	221475	2	4	8586	442950
	ΣY =10434	Σ Y = 750415	ΣX = 0	ΣX^2 =10	ΣXY=8803	ΣXY=327370

Where,

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

In units case

$$a = \frac{10434}{5} = 2086.8$$

=2086.8*1000

=2086800

In Rs. case

$$a = \frac{750415}{5} = 150083$$

=150083*100=15008300

$$b = \frac{\Sigma XY}{\Sigma X^2}$$

$$= \frac{8803}{10} = 880.3$$

=880.3*1000=880300

$$b = \frac{\Sigma XY}{\Sigma X^2}$$

$$= \frac{327370}{10} = 32737$$

=32737*100

=3273700

Now, substituting the value of a and b is straight line equation

Y = a + b thus, straight line equation for,

Units (lines case) Y =2086800 + 880300x

Rupees case Y = 15008300 + 3273700x

APPENDIX - 5

Following analysis shows the correlation between cash balance & sales

Calculation of Correlation coefficient between budget and actual sales of Nepal Telecom for the fiscal year 2061/62 to 2065/66

Year	Sales	cash balance	$(X-\overline{X}) = x$	x^2	$(Y-\overline{Y}) = y$	y^2	xy
2061/62	91942	95745	-58141	3380375881	-45591	2078539281	2650706331
2062/63	110589	120216	-39494	1559776036	-21120	446054400	834113280
2063/64	147516	147463	-2567	6589489	6127	37540129	-15728009
2064/65	178893	161345	28810	830016100	20009	400360081	576459290
2065/66	221475	181910	71392	5096817664	40574	1646249476	2896659008
	750415	706679	1	10873575170	-2	4608743367	6942209900

Correlation coefficient (r_{xy}) = $\dfrac{\Sigma xy}{\sqrt{\Sigma X^2}\ \sqrt{\Sigma y^2}}$

$= \dfrac{6942209900}{\sqrt{10873575170}\ \sqrt{4608743367}} = .9807$

Calculation of probable error (P.E.) of X and Y

$P.E. = 0.6745 * \dfrac{1- r^2}{\sqrt{N}}$

$=0.6745 * \dfrac{1- (0.9807)^2}{\sqrt{5}} = 0.0115$

	X	Y
Mean	150083	141336
SD	46633.84	30360.31

Regression line of cash balance (y) on actual sales (X)

$$\mathbf{(Y - \overline{Y})} = r(x, y) \times \frac{\sigma \mathbf{Y}}{\sigma X} \mathbf{(X - \overline{X})}$$

$$(Y - 141336) = 0.9807 \times \frac{30360.31}{46633.84} (X - 150083)$$

$$Y - (0.6385X + 45508.01)$$

Regression line of sales revenue cash (X) on cash balance (y)

$$(X - \overline{X}) = r(x, y) \times \frac{\sigma X}{\sigma Y} (Y - \overline{Y})$$

$$(X - 150083) = 0.9807 \times \frac{46633.84}{30360.31} (Y - 141335.8)$$

$$X = 1.5064Y - 212908.25$$

APPENDIX - 6

Calculation of Correlation coefficient between receivable and cash balance of Nepal Telecom for the fiscal year 2061/62 to 2065/66 (Rs.00000)

Year	Receivable	cash balance	$(\overline{X}-X) = x$	x^2	$(Y-\overline{Y}) = y$	y^2	xy
2061/62	28259	95745	-4654	21659716	-45591	2078539281	212180514
2062/63	30994	120216	-1919	3682561	-21120	446054400	40529280
2063/64	34555	147463	1642	2696164	6127	37540129	10060534
2064/65	34826	161345	1913	3659569	20009	400360081	38277217
2065/66	35932	181910	3019	9114361	40574	1646249476	122492906
	164566	706679	-1	40812371	-2	4608743367	423540451

Correlation coefficient $(r_{xy}) = \dfrac{\Sigma xy}{\sqrt{\Sigma X^2}\ \sqrt{\Sigma y^2}}$

$$= \frac{423540451}{\sqrt{40812371}\ \sqrt{4608743367}} = 0.9766$$

Calculation of probable error (P.E.) of X and Y

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

$$=0.6745 * \frac{1- (0.9766)^2}{\sqrt{5}} = 0.01397$$

APPENDIX - 7

Calculation of Correlation coefficient between receivable and sales of Nepal Telecom for the fiscal year 2061/62 to 2065/66 (Rs.00000)

Year	Receivable	Sales	(X-$\bar{X}$) = x	x^2	(Y -$\bar{Y}$) = y	y^2	xy
2061/62	28259	91942	-4654	21659716	-58141	3380375881	270588214
2062/63	30994	110589	-1919	3682561	-39494	1559776036	75788986
2063/64	34555	147516	1642	2696164	-2567	6589489	-4215014
2064/65	34826	178893	1913	3659569	28810	830016100	55113530
2065/66	35932	221475	3019	9114361	71392	5096817664	215532448
	164566	750415	-1	40812371	1	4608743367	612808164

Correlation coefficient (r_{xy}) = $\dfrac{\Sigma xy}{\sqrt{\Sigma X^2}\ \sqrt{\Sigma y^2}}$

$$= \frac{612808164}{\sqrt{40812371}\ \sqrt{4608743367}} = 1.4129$$

Calculation of probable error (P.E.) of X and Y

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

$$= 0.6745 * \frac{1- (1.4130)^2}{\sqrt{5}} = 0.30058$$

	X	Y
Mean	32913.2	150083
SD	2857	30360.31

Regression line of Receivable (x) on sales (y)

$$\mathbf{(X - \bar{X})} = r(x, y) \times \frac{\sigma \mathbf{X}}{\sigma Y} \mathbf{(Y - \bar{Y})}$$

$$\mathbf{(X} - 32913.2\mathbf{)} = 1.4130 \times \frac{2857}{30360.31} \mathbf{(}Y - 150083\mathbf{)}$$

$\therefore$ X= 0.1330Y + 12952.16

APPENDIX-8

Milestone Date and Action of Nepal Telecom

1913	Establishment of first telephone lines in Kathmandu
1914	Establishment of Open Wire Trunk Link from Kathmandu to Raxual (India).
1935	Installation of 25 lines automatic exchange in palace.
1936	Installation of Open Wire Trunk Line from Kathmandu to Dhankuta
1950	Establishment of Telegram service
1950	Introduction to high Frequency Radio system (AM)
1950	Establishment of CB telephone exchange (100 lines) in Kathmandu
1951	Installation of Open Wire Trunk line from Kathmandu to Palpa
1955	Distribution of telephone line to general public
1962	First Public Telephone Exchange in Kathmandu (300lines CB)
1963	Beginning of International Telecommunication Service using HF Radio to India and Pakistan
1964	First Automatic exchange in Nepal (1000 Lines in Kathmandu)
1971	Microwave Introduction of Telex services
1972	Transmission links establishment of international circuits
1982	Establishment of SPC telex exchange
1983	Establishment of digital Telephone Exchange
1984	Commencement of STD Service
1987	Commencement of ISD Service
1995	Installation of Optical Fiver Network
1996	Conversion all Transmission link to Digital transmission link
1996	Automation on the entire Telephone Network
1996	Independent International Gateway Exchange Established
1996	Introduction of VSAT services
1997	Digital link with D.O.T. India through Optical fiver in Birgunj -Raxual
1998	Direct Link with Bangladesh
1999	Launching of GSM mobile Service

2000	Launching of Internet service
2000	Implementation of SDH Microwave Radio
2001	Launching of payphone service
2002	East West Highway Optical Fiber Project
2003	GSM Prepaid Service
2004	NEAPL TELECOM (transformation from Corporation to Nepal Doorsanchar Company)
2003	Launching of prepaid Mobile Service
2004	Launching of Prepaid Calling Card Easycall
2005	Launching of AFS-Toll Free Phone & test of CDMA Service
2005	Launching of AKSES Network
2006	Launching of PSTN Credit Limit, HCD-Nepal Direct
2006	Launching of CDMA Service & PSTN Voice Mail Service
2007	Launching of GSM Mobile GPRS, 3G/CRBT Service
2008	Launching of ADSL
2009	Launching of CDMA Postpaid Service
2010	Soft launch of Easyphone IP Call Service