Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics

Diploma Thesis

A Comparative study on cash management (National Trading Limited and Salt Trading Corporation Limited)

Author: Sushma Maharjan

Supervisor: Ing. Zdeněk Toušek, Ph.D.

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

DIPLOMA THESIS ASSIGNMENT

Bc. B.Sc. Sushma Maharjan

Economics Policy and Administration
Business Administration

Thesis title

A Comparative study on cash management (National Trading Limited and Salt Trading Corporation Limited)

Objectives of thesis

The main objective of this comparative study on cash management is to examine the overall cash management prospects of National Trading limited in comparison with Salt Trading Limited.

The specific objectives of this study are as follows

i. To identify and compare the cash position of each firm.
ii. To critically review the cash management techniques practiced by each firm.
iii. To compare the cash flow statement of each organization.
iv. To suggest appropriate cash management policy for the future.

Methodology

There will be the use of secondary as well as primary data.

For further analysis, there will be the use of financial tools and statistical tools. Some of the tools that will be used in this thesis are listed below;

Financial Analysis:

Analysis of cash turnover ratio

Current ratio

Inventory Conversion Period

Statistical tools:

Straight-line trend

Karl Pearson’s coefficient of correlation

Standard deviation

The proposed extent of the thesis

60 – 80 pages

Keywords

Nepal, Nepal trading limited, salt trading corporation, financial position, ratio analysis, statistical analysis, cash management, Trend analysis

---

Recommended information sources

Corporate Cash Management: Third Edition: A Treasurer's Guide 3rd Edition ISBN-10: 1938910885
Corporate Treasury and Cash Management (Finance and Capital Markets Series) 1st ed. 2004 Edition ISBN-10: 1349512699
Essentials of managerial finance J. Fred Weston, Scott Besley, Eugene F. Brigham ISBN 0030101999
The Handbook of Global Corporate Treasury 1st Edition ISBN-10: 1118122836

Expected date of thesis defence

2018/19 SS – FEM

The Diploma Thesis Supervisor

Ing. Zdeněk Toušek, Ph.D.

Supervising department

Department of Trade and Finance

Electronic approval: 3. 4. 2020

prof. Ing. Luboš Smutka, Ph.D.

Head of department

Electronic approval: 3. 4. 2020

Ing. Martin Pelikán, Ph.D.

Dean

Prague on 05. 04. 2020

Declaration

I declare that I have worked on my diploma thesis titled **" A Comparative study on cash management (National Trading Limited and Salt Trading Corporation Limited)"** by myself and I have used only the sources mentioned at the end of the thesis. As the author of the Diploma thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 6th April 2020

Sushma Maharjan

Acknowledgment

I am thankful for the wonderful opportunities of studying at the center of academic excellence like CZU. This thesis would not have been thinkable, possible and conceivable without the supervision and the help of several individuals who in one way or another contributed and extended their valuable assistance in the research and conclusion of this paper. First and foremost, my utmost gratitude to **Ing. Jan Hučko, Ph.D.**, Head of International Relations Office, Faculty of Economics and Management, through whose sincerity and guidance I was introduced to the faculty of Economics and Management.

I am heartily thankful to my supervisor, **Ing. Zdeněk Toušek, Ph.D.** of the faculty of Economic and Management at Czech University of Life sciences. He has been very supportive through the process of my thesis writing, he has been supportive till the end of my thesis gets ready. His door was always open for me whenever I need his assistance. I also thank him from my deep core of heart for, motivation and the encouragement he has given to me as key factor of my success of my work. His practical comments and supporting behavior given an extra dimension for my Thesis.

I am also very thankful to all professors who taught me during my whole period for helping and supporting me. And all my friends around me who never let me feel alone and apart from my family.

Last, but not least, I would like to express my sincere gratitute to my parents **Ram raja Maharjan** and **Tirtha maya Maharjan** who showed me this beautiful world and also for encouragement which helps me to face this real world.

Abstract

Nepal is one of the least developed country, where more than 70% of the economically active people are depending on agriculture for livelihood. For bright economic development of Nepal, traditional agricultural can be transformed through the process of industrialization. With this vision government introduced NTL as a trading organization, with main function of trading activities including quota goods to be imported from India for the purpose of establishing domestic prices, regulating the supply of basic construction materials, machinery goods and consumer goods. After a year STCL was introduced under NTL and government policy. Its main moto is to provide quality goods in reasonable price for general people with even lower level income. For easily available to general people, STCL has established its 6000 dealer all over Nepal.

Cash management is all about management of liquidity in order to effective and efficient survival of a firm, keeping record of day to day activities are essentials for every organization. Cash management is not only managing cash as an asset, its about how liquidity assets can be used to earn extra money by using smart payment cycle. This research is about how some companies are not being able to succeed on their day to day business due to inappropriate use of liquid. To understand the financial situation of these two company Ratio analysis, Statistical analysis and Trend analysis tools are used to identify financial situation and to overcome with actual problem.

NTL is government owned organization which is established for the public well-fare with non-profit motive. Whereas, STCL is formed to provide quality products on reasonable price to make profit. Due to which STCL financial position is better than NTL.

Keywords: Nepal, NTL, STCL, financial position, ratio analysis, Statistical analysis, Trend analysis, cash management

Abstrakt

Nepál je jednou z nejméně rozvinutých zemí, kde více než 70 % ekonomicky aktivních lidí závisí na zemědělství na živobytí. Pro jasný ekonomický rozvoj Nepálu lze tradiční zemědělství transformovat procesem industrializace. S touto vizí vláda představila NTL jako obchodní organizaci, s hlavní funkcí obchodních aktivit, včetně kvótovaného zboží, které má být dováženo z Indie za účelem stanovení domácích cen, regulace dodávek základních stavebních materiálů, strojního zboží a spotřebního zboží. Po roce STCL byl zaveden v rámci NTL a vládní politiky. Jeho hlavní moto je poskytovat kvalitní zboží za rozumnou cenu pro lidi s ještě nižším příjmem. Pro snadnou dostupnost pro obecné lidi STCL založil 6000 poboček po celém Nepálu.

Řízení hotovosti je především o řízení likvidity za účelem účinného a efektivního přežití firmy, vedení záznamů o každodenních činnostech je pro každou organizaci nezbytné. Řízení hotovosti není jen správa hotovosti jako aktiva, ale také o tom, jak lze likvidní aktiva použít k vydělávání peněz navíc pomocí inteligentního platebního cyklu. Tento výzkum je o tom, jak některé společnosti nejsou schopny uspět v jejich každodenním podnikání kvůli nevhodnému použití kapaliny. K pochopení finanční situace těchto dvou společností poměrová analýza, statistická analýza a nástroje analýzy trendů se používají k identifikaci finanční situace a překonání skutečného problému.

NTL je vládní organizace, která je zřízena pro veřejné jízdné s neziskovým motivem. Vzhledem k tomu, STCL je tvořen tak, aby poskytoval kvalitní výrobky za rozumnou cenu, aby byl zisk. Díky tomu je finanční pozice STCL lepší než NTL.

Klíčová slova: Nepál, NTL, STCL, finanční situace, poměrová analýza, statistická analýza, analýza trendů, správa hotovosti.

TABLE OF CONTENTS

List of Table

List of Figures

List of Abbreviations

ACP - Average collection period

A.D. - Anno Domini

A/R - Account receivable

C and B - Cash and bank

CV - Co-efficient of variations

DNPL - Danbury Nepal Private Limited

DSO - Daily sales outstanding

F/Y - Fiscal years

HMG - His Majesty Government

ICP - Inventory conversion period

Ltd - Limited

NEPSE - Nepal Stock Exchange Limited

NTL - National Trading Limited

PEs - Public Enterprises

RCP - Receivable Conversion Period

SD - Standard Deviation

STCL - Salt Trading Corporation Limited

UNL - Unilever Nepal Limited

USSR - Union of Soviet Socialist Republic

1.Introduction

In Nepal, more than 70% of the economically active people are depending on agriculture for livelihood. Low productivity of this sector is one of reason for Nepal to remain one of the least developing countries in the world. Prospects for overall economic development will be brighter only if the present structure of the economy with pre-dominant dependence on traditional agricultural can be transformed through the process of industrialization.

After the restoration of democracy in 1990 A.D. the development of Nepal was supposed to be flourished but this didn't come true. Although Nepal is getting various foreign aids the development of Nepal is not being sufficiently. For the over-all development of socio-economic in Nepal it must launch various programs. Nepal is following the principal of mixed economy. Government of Nepal is contributing for the economic development and there is also right to do economic activities to private sectors. Government corporations can play an important role in social economical activities. Many government enterprises are providing services to public but ineffective management has led them to liquidation. Keeping the concept of public enterprises, the government of Nepal has started various trading, manufacturing, finance, insurance, public utilities and services. The main objectives of public enterprises are to accelerate economic growth.

The main sector of the study is trading companies. Trade signifies a market and is a means by which the exchange of a goods and service take place as a result of buyers and sellers being in contact with each other, either directly or through mediating agents or institutions. Thus, the trading is the sum of involved in directing the flow of goods and services from producers to consumers. Every organization is not operationalized without cash. Therefore, cash is the important factor for every organization. Nepalese publics trading institutions are not following the cash management practices that may be due to the lack of proper knowledge of cash management or negligence. Too much high and low level of cash may lead organizations in critical conditions.

The basic objective of cash management is to insure adequate cash neither more nor less. It refers to avoiding lazy cash and investing excess cash in marketable securities as excess cash

yields nothing. At the same time, it is the most unproductive also. It is not like machinery, which directly helps in producing goods.

It is concerned with managing cash inflows and outflows, if cash inflows are less than cash outflows; we need to arrange for cash either by taking loan or by other means. If cash inflows are greater than outflow, the excess cash should be invested in marketable securities. (*Pradhan, Bijaya 2004*).

Nepalese public enterprises are primarily based on traditional practices to manage cash. There is no proper and systematic system of planning, budgeting and forecasting of cash requirements. (*Bajracharya, 1990*)

Cash management is concerned with the managing i) cash flows ii) cash flow within the firm and iii) cash balance held by the firm at a point of time by financing deficit of investing surplus cash. (*Panday, 1994*)

The proposed thesis is based on information provided by companies' directors and objectives one. My study will emphasis on cash management practices of two main trading organizations National Trading Corporation and Salt Trading corporation. It will study their efficiency and drawback comparatively and suggest them for remedies for the management of cash fund. So, the study is based on the comparative evaluation of cash management of two firms as similar nature. This comparative evaluation study uses some financial and statistical tools to evaluate the cash position, which makes easy to compare with each other.

1.1 Companies' Profile

1.1.1 Introduction of National Trading Limited

Trade is one of the major aspects of the national economy. The efficient administration of trade is one primary responsibility of the national government. As trade sector involves imports and exports, both aspects assume importance for economic development of the country. It imports materials and consumers' goods which cannot be produced within country and exports various local products to other parts of the world. Naturally the

developing country like Nepal would need the presence of several agencies both in the public and private sector to coordinate the above activities and manage its trade efficiently.

National Trading Limited was established as a public limited company in March 1962 A.D. under the Nepal company act, in public completely owned by the government of Nepal. NTL Was created in order to channels commodity aids from the People Republic of China and USSR, with a view to meet the local cost of development projects initiated by these countries through the sale of aid goods in domestic markets. Previously, this function handled by department of commerce, in Nepal. In order to create a better channel to serve the growing needs of national income and people at large, through the regular supply of essential goods at reasonable prices, Nepal government set up NTL as state trading organization. It was entrusted with the functions of engaging on all kinds of trading activities including quota goods to be imported from India for the purpose of establishing domestic prices, regulating the supply of basic construction material, machinery and equipment and consumer goods. NTL began to produce goods from diverse sources and also as it was exporting to diverse markets, NTL through its activities definitely did support the countries policy of trade diversification.

The main Functions of Corporation

The main function of NTL is to supply machinery and equipment, industrial raw materials, constructions materials, consumer goods and goods of daily necessities regularly and at reasonable price with a view to serve the needs of the people at large on the one hand, and also the needs of the country's economic development in the other. This service motive for promoting and protection the interest of the country and the people especially of those living in the far-flung area of the country could only is expected from public enterprises like NTL which seldom has profit making as the sole objective.

During the initial year of its operation, NTL was mainly engaged in handling goods received under commodity Aid to Nepal from some friendly countries. During the course of time, it has extended its work on procurement and distribution of construction materials, industrial raw materials, and consumer goods from India and other overseas countries as well. Moreover, Machinery Sales and Repair Center was set up in order to sell various types of machinery and equipment required by agricultural and industrial sectors and to repair them.

Furthermore, Bonded Warehouse and Duty-Free Shop was set up by NTL with a view to supply duty free goods to diplomatic personnel and tourist's products to overseas countries and also engage in barter trade with the autonomous Tibetan Region of the People Republic of China and few other socialist countries.

Now, NTL is dealing in commodity Aids goods and in the import of construction materials, industrial and consumer goods of daily use. Transport equipment like tractors jeep writing and printing papers etc. and providing repair services to its customers.

Presently, NTL has been working for the following objective:
To establish the price of construction materials and industrial raw materials needed for the country both by local purchase and import.
To maintain stable price through increase the supply by importing the necessary consumer goods for general public.
To supply bonded warehouse and duty-free goods.
To act as an agent of government in the matter of import and distribution of goods which the government has to import and distribute time to time and handle the commodity –aids goods received for government.
To engage in agencies business by getting the agent through producer

Capital

The initial authorized capital of the company was €1,200,000 divided into 1,500,000 shares of €0.8 each, issued, subscribe and paid up capital of €567657.6 divided into 709572 ordinary shares of €0.8 each fully paid up. (*National Trading Limited, 1962)*

1.1.2 Introduction of Salt Trading Corporation Limited

The controllable transaction of salt in our country has resulted in the artificial lacking of salt from time to time. Moreover, the unnecessary increasing in price of salt, trend of selling inedible salt to customer had also increased. Country couldn't supply edible salt its entire people.

So, releasing the voice of public, Government of Nepal under the guidance of late king Mahendra Bir Bikram Shah Dev, included some of the people involved in salt trading corporation at that time it also included government of Nepal and the organization under the ownership of government Nepal. In this way Salt Trading Corporation Limited was established in 12thSeptember1963 A.D. under the collaboration of HMG, NTL and share of common people.

Salt Trading has been serving its customer's very honestly and continuously right after establishment. The quality and price of salt is very good even to poor income group. Moreover, the corporation has also assured to its customer about the quality supply of its products with reasonable price. Corporation has already established 93 branches and sub-branches in 75 districts. And distribution chain has very effectively been made throughout the country along with branches, and sub-branches and about 6000 dealers. Corporation has also a long experience in trading of basic goods.

The main features of STCL are to provide highly qualitative salt with reasonable price to its people all over the country whole year. Corporation is importing salt from India annually and is selling to its customer in 40% less price than in India. Besides Salt, Corporation has supplied other various products to its customer. STCL provides edible goods, agricultural goods and other various goods.
Service provided by organization

Corporation has maintained the supply of following goods.

i. Edible goods: Salt, Ghee, Sugar, Flour, Rice
ii. Other goods: Lubricant, Coal, Cement, Tractor, Metal detector.
Mixture of Nutrition: in or order to avoid the badness seen in public health, corporation has mixed the following nutritious elements in edible goods.

- Iodine is mixed in salt
- Vitamin 'A' and 'D' in vegetable ghee and oil respectively
- Iron in flour
- Agriculture Centre: Salt Trading Corporation has set up trading and agriculture center in different of country to provide qualitative agricultural goods like chemical fertilizers, Insecticides, hybrid seeds, equipment to the people. Now it has served

only 25% people but in near future, Corporation has mission to extend its service throughout the country.

Capital

Initial authorized capital of the company was €800,000 divided into 1,000,000 shares of €0.8 and it has issued subscribe and paid up capital of €19821.6 divided into 24777 ordinary shares of €0.8 each. *(Salt Trading Corporation, 1963)*

1.2 Statement of the Problems

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

Cash and Bank balance of an enterprise is that portion of total assets which is put to variable operative and rapidity of turnover which influence the types and terms of financing. Hence, cash management is in itself decision-making area within the framework of the overall current asset's management.

Cash management in public enterprises of Nepal is primarily bases on traditional practices cash flow, which is lacking in a scientific approach. Cash management has been the most indicated the challenging area of modern corporate finance as much as management always 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.

Big and large most enterprises had periodic accumulation of surplus cash and corresponding cash shortage from time to time. However, none of enterprises considered the implications of holding idle cash balance and few look in the potential benefit of investing surplus in marketable securities. Those that did not fail to consider the cost of administrating such investment. Nepalese public enterprises have never thought of source of current asset i.e. cash and usually depend on government for it. Some of private enterprises have depreciation

fund (the amount written off as depreciation should be kept aside and invested in readily saleable securities) and utilized surplus to overcome scarcity of cash.

In order to remedy the current problems of cash management in public enterprises studies and researches are conducted to find out reality, so this study would be one of those efforts and thus it examines the cash management practices being employed in National Trading LTD in comparisons with Salt Trading Corporation LTD. Basically, the problems of this research as follows:

i. What is comparative cash position of each corporation?
ii. Is there optimum cash position in these corporations?
iii. What is the relationship between level of cash and other financial variables?
iv. Is there any relationship between cash balance and other type of financial sources?
v. What is the relationship between receivables and cash availability?
vi. What is the receivable conversion period and inventory conversion period of the corporations?
iii. How is the profitability of each corporation going on?

2. Objectives of the Study

The main objective of this thesis is to examine the overall cash management prospects of National Trading limited in comparison with Salt Trading Corporation Limited.
The specific objectives of this study are as follows:

- To identify and compare the cash position of each firm.
- To critically review the cash management techniques practiced by each firm.
- To compare the cash flow statement of each organization and show the current situation of the company for the evaluation of the company in future.
- To suggest appropriate cash management policy for the improvement of economic operation of the company.

2.1 Importance of the Study

As we know cash is the life blood of an organization. Without it no business can be run. The appropriate level of cash leads the company in growing direction, but the high and minimum level of cash may lead the company downwards. By all segments of organizational activities, if some of the departments are handled by independently without considering of their implication for cash management. The conflicting interest of those departments is bound to create serious problems. The study of cash management is there considered as an integrated approach to management science.

The idea behind cash management is therefore maintaining adequate liquid assets whenever and wherever required by the firm. The maintenance corporate liquidity therefore consists of determining the volume and timing of cash required by firm. Liquidity and technical solvency are two different terms always confused and misused in cash management. A company could be solvent and yet may not have enough cash. 'Liquidity' denotes the capability to meet its current obligations, whereas 'solvency' is strength is strength of enterprises to meet its entire obligation including long term loans. In conclusion every rupee reduced in cash balance may contribute to the generation of additional profit.

This study may prove helpful to the future researchers of concerned field. Poor management of cash affects adversely on profitability of company. This study will be very useful to provide information and to draw the attention of National Trading LTD and Salt Trading Corporation LTD to identify the strength and weakness of their cash management. This study is expected to be helpful to the individuals and stakeholders because it highlights the cash management of national Trading Limited and Salt trading limited.

2.2 Limitation of Study

This study will have following limitations:

This study will cover only two trading company namely NTL and STCL.

This study will cover the period of seven years beginning from 2012 A.D. to 2018 A.D

Most of data used in study will be of secondary type

This study will fully dependent on the accuracy of the data provided by two corporations.

3. Literature overview

Review of literature is an essential part of all studies. It is a way to discover with other research. It is also a way to avoid investing problems that have already been answered. It refers to the reviewing of the past studies in the concerned field. Such studies could be thesis, dissertations, books, articles and or any sort of other publications written earlier by a person or an organization. The purpose of literature review is thus to find out what research studies have been conducted in one's chosen field of study and what remains to be done.

3.1 Conceptual Framework

3.1.1 Meaning of Cash Management

The term 'cash' constitutes the most readily acceptable item of current assets to firm and includes the currency, coins, cheques and some near cash items such as marketable securities and bank time deposits. Some items of cash such as currencies, coins, cheques, are readily available in terms of cash, whereas, other items such as treasury bills, commercial papers and other marketable securities are readily convertible into cash without any delay. Financial manager in his function of cash management must ensure that there is sufficient cash , meaning that if there is excessive cash, the financial manager must seek to invest in low-risk highly liquid money market instruments that are conveniently convertible into cash within no point of time if need arises. 'These securities provide a small profit on cash that may not needed for the firm's operation. These securities are widely used as short term investments by the firms in developed countries. Each security offers different characteristics that make it is suitable for different firms. These securities are as follows: (*Subedi, 2006*)

a) Treasury Bills: A treasury bill is an unconditional promise by the government treasury holder of the bill a specified amount at maturity. Treasury bills are matured normally at 3,6 or 12 months.

b) Commercial and Finance Paper: Commercial papers refer to short term, unsecured promissory notes of large non- financial corporations. Finance paper refers to similar notes from finance companies. These notes are issued by firms needing cash for periods of 30 days to one year. Other firms purchase them with cash that have a desire to earn a higher yield.

c) Other marketable securities: The other marketable securities are treasury notes, banker's acceptances, repurchase agreements etc.'

"Cash management is also called 'management of money position' because cash includes not only the cash or currency in hand but also the readily convertible securities or other near cash items e.g. time and demand deposits, readily available credit and so on." (*Shrestha, 2004*) Cash is an asset constituting the most liquid item among all the assets. But to obtain cash involves cost because corporations must raise capital through issue of shares or by borrowing with interest. Indeed, cash which has cost, whether received through generation of funds in business operations or externally through money markets, procurement of cash is liability and a wasted opportunity unless it is put to its optimal use. As such whatever cash a corporation has must be utilized efficiently to meet obligations of interest payments if cash is obtained from borrowings and if it is received through issue of shares the corporations has responsibility to owners to assure them to pay favorable rate of return.

Cash is regarded as the both input and output of a business operation. Cash serves as input in sense that all business activities are carried on without any obstructions in regular basis with the availability of cash. All business begins with the provision of sufficient cash to do business. At the same time, the cash is the thing that a businessman ultimately wants to achieve through the sale of goods and service is manufactured. Cash as means and ends of business operation must be in sufficient quantity. Holding of cash in excess and insufficient than requirement may lead a firm to problems. Shortage of cash puts obstruction in the way of production whereas excessive cash than requirement contribute nothing to the profitability of firm's idle cash earns nothing. Therefore, a financial manager, often challenge of maintaining optimum level of cash, which bypass the risk and doesn't put negative impact on firm's profitability. The basic issue in cash management is to keep the investment in cash as low as possible while still keeping the firm operating efficiently and effectively. Cash is the most important form of current assets. It is the basic input and ultimate output. Thus, management of cash has been regarded as one of the conditioning factors in the decision making.

3.1.2 Functions of Cash Management

The firms' functions of cash management should consist of following strategies to overcome uncertainty about cash flow prediction and to maintain coincidence in cash inflow and outflow.

Turnover inventory as quickly as possible, avoiding stocks-outs that may result in a loss of sales.

Pay account payable as late as possible without deteriorating the firm's credibility but take the advantage of any favorable cash discounts.

Collect accounts receivable as quickly as possible without losing future sales due to high pressure collection techniques. Cash discounts, if they are economically justifiable, may be used to accomplish this objective.

Involve in cash planning to determine deficit or surplus cash in each period.

The cash in surplus must be invested into marketable securities.

(*Poudel, Rajan B. and friends, 2006*)

3.1.3 Objectives of Cash Management

The basic objectives of cash management are two fold,

(a) meeting payment schedule and

(b) minimizing funds committed to cash balances.

Meeting Payment Schedule:

In the normal course of business, firms have to make payment of cash on a continuous and regular basis to suppliers of goods, employees and so on. At the same time, there is a constant inflow of cash through collections from debtors. To meet the payment schedules, a firm should maintain an adequate amount of cash balance. The advantages of maintaining adequate cash balances are,

(i) the relationship with the bank is not strained;

(ii) it prevents insolvency or bankruptcy arising out of the inability of a firm to meet its obligations;

(iii) it helps in fostering good relations with trade creditors and suppliers of raw material, as prompt payment may help their own cash management,

(iv) a cash discount can be availed of if payment is made within the due date;

(v) it leads to a strange credit rating which enables the firm to purchase goods on favorable terms and to maintain its line of credit with banks and other sources of credit.

(vi) To take advantage of favorable business opportunities that may be available periodically; and

(vii) finally, the firm can meet unanticipated cash expenditure with minimum of strain during emergencies, such as strikes, fires, or a new marketing campaign by competitors.

(b) Minimizing funds committed to cash balances:

The second objective of cash management is to minimize cash payment schedule. The aim of cash management, therefore, should be to have an optimal amount of cash balances. In minimizing the cash balances, two conflicting aspects have to be reconciled. A high level of cash balances will, as shown above, ensure prompt payment together with all the advantages. But it also implies that large funds will remain idle, as cash is a non-earning asset and the firm will have to forgo profits. A low level of cash balances, on the other hand, may mean failure to meet the payment schedule. The aim of cash management, therefore, should be to have an optimal amount of cash balances. (*Khan M.Y and Jain P.K, n.d*)

3.1.4 Efficiency of cash management

The need for efficiency of firm's cash management has been well recognized over the years because of two basic reasons. First, the increased interest costs of funds being tied up has increased the opportunity cost of holding cash so that financial managers, today, are more encouraged to search efficient way of managing cash. Second, the use of computerized electronic funds transfer mechanism has made improved cash management possible. This section deals with a number of techniques available for effective and efficient cash management.

a) Speedy Cash Collection:

One important way of increasing efficiency of cash management is to speed up cash collection efforts then it can reduce cash balance requirement. The fundamental idea to collect accounts receivable as soon as possible but pay account payable as late as is consistent with maintaining the firm's creditworthiness with suppliers. (*Poudel, Rajan B.and Friends, 2006*) Reducing the lag for gap between the times a customer pays his bill can accelerate cash collection and the time the cheques are collected, and funds became available for use. Within this time gap, the delay is caused by the mailing time. The amount of cheques sent by the customer but not yet collected are called deposit float. The greater the deposit floats longer the time taken in converting cheques into usable funds.

b) Concentration Banking:

Concentration banking, also known as decentralized collection system, requires the establishment of different collection center at different places instead of a single center at firm's central office. To adopt this system, a firm may open bank account at different collection center. The collections centers will be required to collects cheques from customer and deposit them in their local bank accounts. This reduces the gap in mailing of cheques between customer and firm, the firm and its local bankers. The cheques and funds deposited into local bank are sent to concentration bank each day where the firm has its central account.

c) Lock-box System:

"A lock box system can significantly reduce all types of float. A firm will set up a lock-box arrangement in a city (or cities) corresponding to the geographic distribution of its customers. Customer are directed to mail payments to the lock-box system (a post box office) administered by a local bank that collects checks from the box. Sometimes several times a day and deposits the checks to the firm's account. The bank begins the clearing process and notifies the firm that a check has been received, reducing the processing float. The bank charges the receiving firms for service rendered. To determine whether a lock-box system is advantageous, the firm will compare the bank fees (including compensating balances) against the gains from reducing float" (Weston and Copeland, 1999)

d) Special Handling of Cash:

"Special handling of cash enables corporation to have sufficient funds that can be put the profitable use. This special handling may involve personal pickup of these cheques or the use of air mail or special delivery." (*Subedi, 2006*)

e) Slowing Disbursement:

Apart of speedy collection of account receivable the operation cash requirement can be reduced by slow disbursement of account payable. It my recalled that a basic strategy of cash management is to delay payment as long as possible without imparting the credit rating of the firm. In fact, slow disbursement represents a source of funds requiring no interest payment. There are some techniques to delay payments; avoidance of early payments, centralized disbursement, floats and accruable." (*Shrestha, 2004)*

f) Using Float:

Float is the difference between the balance shown in a firm (or individuals) check book and balance on bank's records. Firm's not float is function of its ability to speed-up collections and checks written (disbursement float)

g) Transferring Funds:

A transferring fund is a system for moving funds among accounts at different banks. There are two principal methods-wire transfer cheques. With an electronic depositary transfer, fund is immediately transferred from one bank to another. With an electronic depositary transfer cheques (EDTC) arrangement in the movement of funds, an electronic cheques image is processed through an automatic clearing house. The funds become available on business day later. From small transfers, a wire transfer may be too costly.

h) Overdraft System:

It a system whereby depositors may write cheques in excess of their balance with other bank automatically extend loans to cover shortage. Most of the foreign countries use overdraft system.

i) Synchronized Cash Flows:

Synchronization of cash flow can be achieved at a situation in which inflows coincide with outflows, thereby permitting a firm to hold transactions balance to a minimum. *(Subedi, 2006)*

j) Minimum Cash Balance:

Corporations are required to keep a minimum cash balance requirement of a bank either for the service it render or in consideration of lending arrangements.

3.1.5 Different Techniques of Cash management

a) Cash Budget:

Cash budget serves as the most important techniques of planning and controlling the use of cash. It is most significant device to plan and control cash receipt and payment. It provides much more detailed information concerning a firm's future cash flows. It is the most

important tools for managing cash. The essence of preparing cash budget is to determine whether at a given point of time, if there is surplus or shortage of cash.

b) Cash Planning:

Cash Planning can help anticipate future cash flows and needs of the firm and reduces the possibility of idle cash planning is a technique to plan for and control the use of cash. The forecasts may be based on the present operation or anticipated future operation. Cash plan are very crucial in developing the overall operation plans of the firms. Cash planning may be done on daily, weekly or monthly basis. It depends on upon the size of the firms and philosophy of management. (*Panday, I.M, 1994*)

c) Long-term Cash Forecasting:

Long term cash forecasting is prepared to give an idle of the company's financial requirement of distance future. Once a company has developed long term cash forecast, it can be used to develop long term cash forecast, it can be used to evaluate the impact of say new product development on the firm's financial condition three, five or more years in future. The major uses of the long-term cash forecast are companies' future financial needs, especially for its working capital requirements to evaluate proposed capital projects and it helps improve corporate planning. Long term cash forecasting not only reflects more accuracy the impact of recent acquisitions but also foreshadows financing problems, these new additional may past for the company.

d) Short- term Cash forecasting:

There are most two commonly used methods of short-term cash forecasting are as follows;

i) Receipt and Disbursement Forecasting:

The prime aim of receipt and disbursement forecasts is to summarize these flows during a predetermined period. In case of those companies where cash items of income and expenses involve flow of cash; this method is favored to keep a close control over cash.

ii) Adjusted Net Income Method

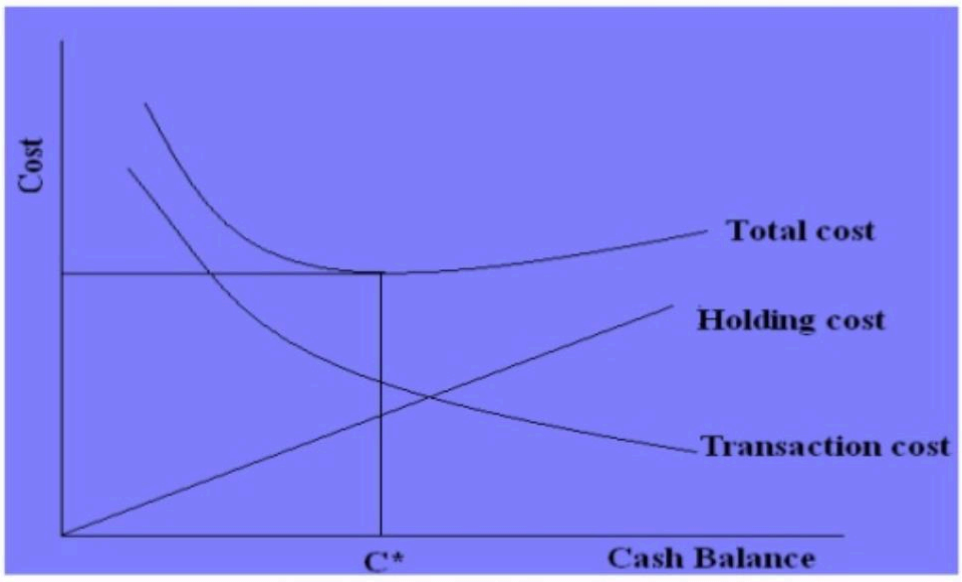
This method of cash forecasting involves the tracing of working capital flows. Sometimes, it is also called the sources and uses approach. Two objectives of this method are to project the company's need for cash at some future date and to show whether the company can

generate this money internally or not, how much give will either borrow or rise in the capital market.

3.1.6 Determining the Optimum Cash Balance

Financial manager responsibilities are to maintain a sound liquidity position of the firm. So that dues may be settled in time. The firm needs cash not only to purchase raw materials and pay wages but also for payment of dividend, interest, taxes and countless other purpose. The test of liquidity is really the availability of cash to meet the firm's obligations when they become due. Thus, the cash balance is maintained for transaction purpose and an additional amount may be maintained as a safety stock. The financial manager should determine the appropriate amount of cash balance, a trade- off between risk and return influences such a decision. If the firm maintain small cash balance, its liquidity position becomes weak and suffers from a capacity of cash to make payment. But investing released funds in some profitable opportunities can attain a higher profitability. If the firm maintains a high level of cash balance it will have a sound liquidity position but forgo the opportunity to earn interests. Thus, the firm should maintain an optimum cash balance to find out the optimum cash balance the transaction costs and risk of too small balance should be matched with opportunity costs of too large a balance. The figure shows this trade-off graphically.

Figure 1 Determination of optimum cash balance



Source: McKinnon, R.I., 1963

3.1.6.1 Optimum cash balance under certainty; Baumol's Model

In viewing of minimizing the opportunity cost of holding cash and maximizing the return on the available funds, the cash balance be maintained at a minimum level and the funds not required firm immediately use be invested in the marketable securities. Baumol model is one of the methods that can be used for this purpose Baumol model is based on the assumptions that;

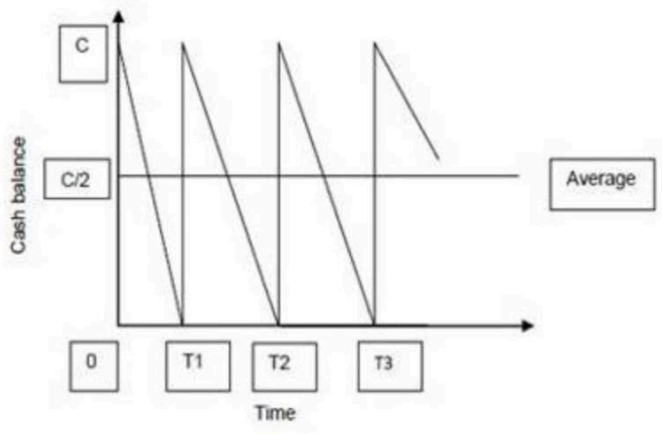
The cash is used at constant rate.

The periodic cash requirements are less or and

"There are some costs such as opportunity costs and increase and other costs such as transaction cost and decrease as cash balance increase.

Because of these assumption (1) and (2) the graphical representation of cash looks like as follows:

Figure 2 Baumol's model for cash balance:

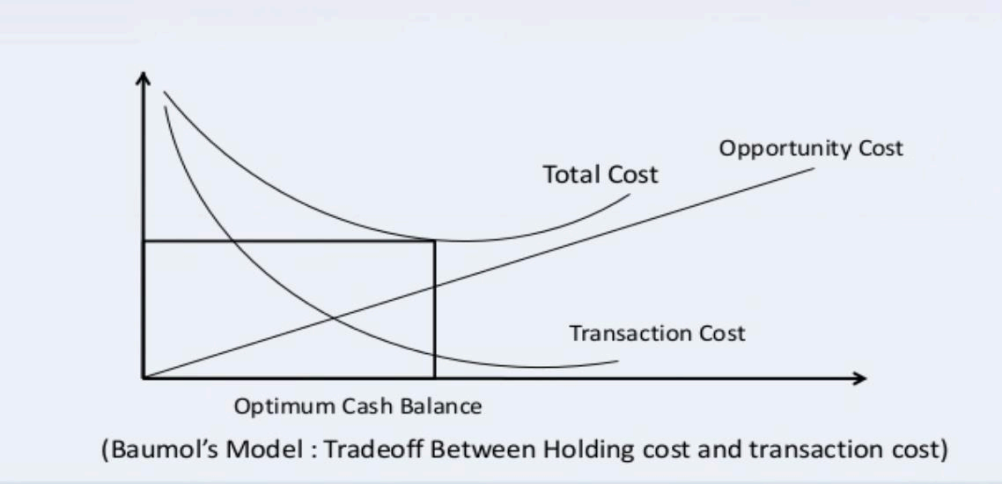


Source: Miller, M.H. and Orr, D., 1966

Given its assumptions, the model prescribes an optimal size of cash balance and the optimal size of account or borrowing. What matter for a firm is the total of opportunity cost and transaction cost? Therefore, objective of this model is to minimize the total cost.

The figure given below shows the relationship between the average size of the cash balance and various costs associated with cash maintenance.

Figure 3 Relationship between average cash balance and cash maintain:

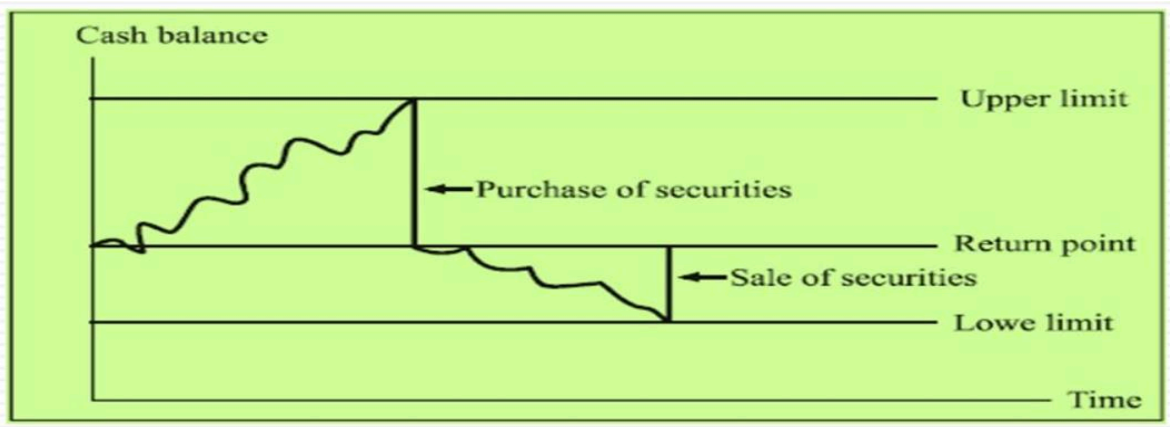


Source: Miller, M.H. and Orr, D., 1966

3.1.6.2 Optimum cash balance under uncertainty: Miller-Orr Model

The Limitation of Baumol Model is that it does not allow cash flows to fluctuate. Firms in practice do not use their cash balance uniformly nor are they able to predict daily cash inflows and outflows. The Miller-Orr model cash flow variation assumes that net cash flows are normally distributed with a zero value of mean and standard deviation. As shown in figure below, the Miller-Orr model provides for two control limits upper control limit as well as and lower control and return point. If the firm's cash flows fluctuate randomly and hit the upper limit, then it buys sufficient marketable securities to come back to a normal level of cash balance (then return point). Similarly, when firm's cash flows wander and hit the lower limit. It sells sufficient marketable securities to bring the cash balance back to the normal level (return point)

Figure 4 Miller-Or model for optimum cash balance



Source: Miller, M.H. and Orr, D., 1966

3.1.6.3 Ogler's Model

According to this model, an optimal cash management strategy can be determined through linear programming model. The construction of the model comprises three sections which are as follows,

Selection of appropriate planning horizon

Selection of appropriate decision variables and

Formulation of the cash management strategy itself.

The advantage of linear programming model is that it enables coordination of the optimal cash management strategy with the other operations of the firms such as production and with fewer restrictions of working capital balances. The model usually uses one-year planning horizon with twelve monthly periods because of its simplicity. It has four basic sets of decisions variables which influences cash management of a firm and which must be incorporated into the linear programming model of the firm. There are as follows,

- Payment schedule
- Short- term financing
- Purchase and sell of marketable securities
- Cash balance itself

The formation of the model requires that the financial manager first specify an objective function and specify a set of constraints. Ogler'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 the 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 'adding the net returns over the planning period'. Thus, the objective function recognizes each operation of the firm that generates cash inflows or outflows as adding or subtracting profit opportunities for the firm. in the objective function, decision variables, which cause inflows, such as payment of receivables, have positive coefficient, while decision variables, which generate cash outflows, such as interest on short term borrowing, have negative coefficient. The purchase of marketable securities would, for example produce revenue and thus have a positive coefficient while the sale of those securities would incur conversion costs and have a negative coefficient.

An examples of linear programming model as follows:

Objective function: Maximize profit = $a_1x_1 + a_2x_2$

Subject to:

$C_1X_1 + B_2X_2$ Cash available constraint.

$B_1X_1 + B_2X_2$ >current arrests requirement constraint.

3.1.7 Cash Conversion Cycle

Cash conversion cycle measures the length of time the firms has funds tied up in working capital. It is the length of time between when the company makes payments and when receives cash payment. Putting another way, it is the length of time between paying for raw materials and receiving cash from sale of finished goods. Cash conversion period/cycle consists the following period.

i. Inventory Conversion Period

It is the average length of time required to convert materials o\into finished goods; it is the amount of time product remains in inventory in various stages of completion. The inventory conversion period is calculated by dividing inventory by the cost of goods sold per day.

ii. Receivables Collection Period

It is the average length of time required to convert the firm's receivables into cash i.e. to collect cash following a sale. The receivables collection period also is called the day's sales outstanding (DSO), and it is calculated by dividing account receivables by average credit sales per day.

iii. Payable Deferral Period

It is the average length of time between the purchase of raw material and labor and the payment of cash for them. It is computed by dividing accounts payable by credit purchases.

iv. Cash Conversion Cycle

Cash conversion cycle computation nets out the three periods just defined, resulting in a value that equals the length of time between the firm's actual cash expenditures to pay for (invest in) productive resources (materials and labor) and its own cash receipts from the sale

of products (that is, the length of time between paying for labor and materials and collecting on receivables).

Thus,
Cash Conversion Cycle =Inventory Conversion period + Receivable Collection Period – Payable Deferral Period.

3.1.8 Motives of Holding Cash

The firm's holds cash for various motives. They are:

Transaction Motives:

Transaction motives refer to the need to hold cash to satisfy normal disbursement collection activities associated with a firm's ongoing operation. Transaction means the act of giving and taking or kinds in ordinary course of business. Cash is spent for the payments of purchase, labor, taxes, and dividend etc. and generated from sale of goods or services, return on outside investments etc.

Precautionary Motives:

A precautionary motive refers to hold cash as a safety margin to act as a financial reserve. A firm should also hold some cash for the payments of unpredictable or anticipated events. Such as strikes and lock up from employees, increase in cost of raw materials, funds and labor, falls in market demand and so on.

Speculative Motive

The speculative motive refers to the need to hold the cash in order to be able to take advantage of bargain purchase that may arise, attractive interest rates and favorable exchange rate fluctuations. For example; purchasing of raw material at reduced price on payment of immediate cash falls in price of shares and securities, purchasing at favorable price.

Compensating Balance/ Compensating Motives

Besides above motives, a firm, sometimes also need cash to meet the compensating balance requirement demanded by commercial banks. Firm often maintains bank balance in excess of transaction needs as a means of compensating balance. Bank provides various services to

the firm like; payment of check information of credit, loan etc. Out of these four motives for holding cash, the most important ones are the transaction motive. This is because precautionary balance can be met by short borrowings and business firms normally do not speculate and thus doesn't require speculative balances.

3.2 Review of books

In this section an attempt has been made to review some book on financial management, which deals with the management of cash.

The well-known professor Weston and Brigham have given some theoretical insight into the cash management after their various studies on it. The bond conceptual findings of their studies provide sound knowledge and guidance for the future studies in the field of management. Cash management in any enterprise and naturally to this study as well. They explain in the beginning, the motives for holding cash specific advantage of adequate cash, synchronization of cash flows, expending collection and cheques clearing, using float, cost of cash management determining the minimum cash balance, compensating balances overdraft system cash management, management of account receivable credit policy, evaluating changes in credit policy. *(Weston J. Fred and Brigham Eugene, n.d)*

From the book entitled 'financial management' written by M.Y. Khan and P.K. Jain, cash management is one of key areas of 'working capital management'. Apart from the fact that it is the most liquid current assets, cash is the common denominated to which all current assets, can be reduced because the other major liquid assets i.e., receivables and inventory get eventually converted in cash. This underlines the significance of cash management. *(M.Y. Khan and P.K. Jain, n.d)*

For the cash management, a well –known Indian professor I. M. Pandey has described some conceptual ingredients, which are based on his various research studies. We can learn lesson from it and helpful for this study indeed. He has described various except of cash management which are as follows; fact of cash management, motives for holding cash, cash forecasting and budgeting, managing the cash flows, controlling disbursement, determinant of the optimum cash balance. (*Panday, 1994*)

Cash management, techniques and components are described in Van- Horne book in the cash management Chapter. 'Functions included in cash management are management of

collections, lock-box system and other procedures, control of cash disbursements payroll and dividend disbursements, zero balance account, electronic fund transfer, balancing Cash and marketable securities, compensating balance and fees, Models for determining optimal cash investor model and stochastic model (*Van Horne, 1999*)

"In any type of firm, the financial manager should not strive to attain the aspect of profitability, but he should also turn towards ensuring liquidity of the corporation. Since every business is a constant debtor as it borrows funds from financial Institutions and purchase merchandise on credit. Thus, the enterprise should always keep vigilance upon liquidity if it wants to save itself from deterioration of credit standard." (*Solman,1964*)

"Corporate must adopt cash such a policy that makes optimum cash management possible for improving the efficiency of cash management effective method of collection and should be adopted. However, in a developing country. Corporation has given not much attention in assessing the tome value of money so certain method of efficient cash management practiced by corporations in the countries may not be viable in the view of either the deficiency of knowledge or lack of consequences among corporate managers of developing country to calculate the interests cost of funds lost, if cash is not collected promptly." (*Shrestha, 1994*)

"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 it must be conserved" (*Kent; 1964*)

We also received some theoretical concept on the component of cash management from Van Horne books. He has categorized the various component of cash management. These are the functions of cash management, managing collection, transferring funds, concentration banking, lock box system etc.

3.3 Review of articles

Journals are hardly found in Nepal. But some of the journals which are related to our study are found in T.U. Central Library. These are reviewed here that are related with current topic. A study jointly carried out Pradhan and Koirala (Pradhan Koirala 1982) entitled Working capital management in Nepalese corporations". They have focused on evaluation of working capital position of selected manufacturing and non-manufacturing corporations in Nepal. They based their study on five manufacturing and six non- manufacturing public enterprises.

This study is concentrated in the size of investment, trend of investment and need to control the investment in current assets management. Major findings of the study are as follows;

Investment in total assets had declined over the periods of time in both manufacturing companies. However, the manufacturing corporations had consistently more investment in cash and receivable as compared to non- manufacturing corporations.
Inventory management was a great significance in manufacturing companies while cash and receivable were a great importance for the non-manufacturing companies. The manufacturing bear high level of inventory.
Major Motive of holding cash In Nepalese Corporation was to provide a reserve for routine outflow of cash to keep on the production process and sales.

3.4 Review of Government Publications

The latest annual report on financial status of public enterprises (PEs) published by ministry of finance has further highlighted the darker side of these government owned enterprises compared to previous financial performance.

As regards to the financial performance PES, most of them have incurred operating losses. In FY 2002/03 aggregating €12.88 million, mainly due to operating loss of Rashtriya Banijya Bank amounting to €26 million. During this period, profit level of public utility enterprises has been positive, losses of service and social sector has transformed into profit. Operating losses of PEs belonging to industrial and trading sectors, however, has gone up. For instance, profit level of PEs like Janakpur cigarette Factory, Industrial District Management Ltd, Nepal Telecom Company, Rashtriya Beema Sanstha and Citizen's Investment Trust have been going up. Similarly, Nepal Transit and warehousing management company, Royal Nepal Airlines, Nepal Television, Nepal Industrial development Corporation are making operating profits from losses in FY 2002/03. At the same time, losses of Dairy Development Corporation, Royal Drugs Ltd and Agricultural Inputs co. have come down. Aggregate operating profit of PES in FY 2003/04 is estimated to improve further totaling €31.12 million. The reason behind this optimism is reduction in losses of trading sector, recovery of loss-making financial sector into profit-making one, and increase in the profit of public utility sector. In FY 2001/02, net capital investment in the PES totaled €1.20072 billion, which dropped to €0.77784 billion in FY 2002/03. The reason for this drop-in net capital

investment is the decline in investment level in Public utility and financial sectors. Such investment in FY 2003/04 however, is estimated to reach €1.02848 billion because of reversal of FY 2002/03 capital investment scenario. Net capital investment or profit ratio in FY 2001/02 was negative 3.65% which improved a little to minus 1.66% in the following year. The ratio is estimated to further improve into positive by 3.8% in F.Y. 2003/04. These above literature reviews indicated that almost all of the public enterprises are operating under loss. The financial performances of this PES have been seen disappointing. Cash management is no doubt an internal part of finance functions, and research undertaking on cash management function is one of the rarest undertakings as seen in T.U. Central Library.15 (*15 Economic Survey, 2003*)

3.5 Thesis/ Dissertations

In review of literature section, the books, publication and dissertations will be discussed. There were only few thesis and dissertation written on cash management when browsed through computer records of these reports presented earlier in Tribhuvan University Central Library.

Some of the theses regarding cash management are reviewed here.

1) Pradhan, Bijaya (1997): This is one presented by Mr. Bijaya Pradhan in 1997, entitled 'A study of cash management of salt trading corporation limited', partial fulfillment of the requirements for the degree of Master of Business Administration. The thesis was on secondary data of company for the past six years. The major findings of the study have been presented below.

The Cash collection efficiency in the company is satisfactory.

Management has taken liberal credit policy to sales of goods. Hence the cash and bank balance of the study period is minimum of accounts receivables.

Optimum cash balance in maintained

Mr. Bijaya Pradhan has provided some recommendation to improve cash management of STCL as:

Design effective and efficient management of cash and receivables

Adopt effective credit policy

Maintain optimum cash balance

Prepare cash budget

Invest in marketable securities

2) Mulepati, Sabita (2005): This is another thesis on cash management of Nepal Drug LTD (Royal Drug LTD), entitled, "A study on cash management of Nepalese public enterprises, a case study of Royal Drug LTD,'in partial fulfillment of Mater of business program. The thesis was based on especially secondary data. The major findings of the study have been presented below.

1) Overall cash Management

Nepal Drug LTD doesn't have any definite policy regarding how much of cash balance to each fiscal year.

NDL has not been forecasting cash balance taking into consideration the sales volume.

NDL fails to collect receivables from its debtors timely.

NDL fails to maintain adequate proportion of cash in its current assets.

NDL has not been precisely meeting its current liabilities payment.

2) Liquidity position

A large portion of NDL's current asset has been tied-up in the most illiquid assets; i.e. inventory

Current assets and quick assets are not maintained in accordance with current liabilities.

Profitability of NDL in being worsening trend, liquidity does not practically increase with increase in profitability and vice –versa.

3) Cash flow statement

Operating activity of company is moderately satisfactory.

Investing activities of NDL is poor; surplus cash and cash equivalent have not been invested in short- term investment opportunities.

Financing activity of NDL is almost passive; thus poor.

The study has given the following recommendation to overcome the constraints of cash management.

Responsibility should be clearly defined.

Familiar with strengths and weaknesses of the enterprise.

Efficient management of cash.

To prepare monthly trial balance.

To design an effective account receivable management.
Adopt effective credit policy.
Activate effective investing and financing activities.
Maintain optimum cash balance each year.
Prepare cash budget on the basis of cash flow analysis.

Neupane, Kiran (2005) - This is another thesis written on cash management of STCL entitled 'A study on cash management of Salt Trading Corporation Limited,' in partial fulfillment of MBS program. Mr. Neupane has extracted following findings about the cash management pf STCL.
The corporation has been following traditional approach in the management of cash.
The STCL could not make the best use of available cash balance.
The average cash turnover is in fluctuating trend over the study period.
The average inventory conversion period in cash is very low i.e. 62 days.
The average payable conversion period is than faster than average receivable period which is not good signal for the purpose of managing cash.
The company Poor average cash conversion cycle i.e. 64 days.
The company has liberal credit policy to sales.
The company has not maintained optimum cash balance.

Mr. Neupane has given the following recommendation to improve the cash management of STCL.
To manage cash efficiently.
To prepare monthly trial balance, cash funds statements and financial reports.
To design effective account receivables management.
Adopt effective credit policy.
Maintain optimum cash balance.
Invest the surplus in profitable opportunities.
Prepare cash budget.

Bhandari, Puja (2006): - This is the thesis entitled "A study on cash management in Nepalese manufacturing companies with special reference to Dabur Nepal Pvt. Ltd. and Uniliver Nepal Ltd. The major findings of this thesis are follows;

The companies are lacking definite policy regarding how much of cash and bank balance to hold each fiscal year.
Correlation between cash and bank balance and account receivables of both companies are is negative which suggests increase in cash and bank follows decrease in account receivables and vice- versa.
Cash and bank balance is positively correlated with current assets liabilities of both firms.
The current ratio of both firms is satisfactory.
The average quick ratio of DNPL is greater than ratio of UNL; it reveals that DNPL has satisfactory level of liquidity position.
Average ratio of Net profit after tax to sales and current assets of UNL is better than that of DNPL

Miss Bhandari has given the following recommendations to improve the application of cash management system for its better operation.
To management Cash efficiently.
To design the effective account receivables management.
Adopt effective credit policy
adopt effective management of inventory
Forecasting the cash and bank balance taking into consideration of sales volume
Maintain optimum cash balance every year.
6) Bajracharya, Sujana, (2005): - This is the next thesis on cash management entitled '" A study of cash management in Nepalese public Enterprises (A case study of Hulas Steel Industries). The conclusion of this thesis has been described below,

It can be stated that Hulas Steel Industry's Cash management is poor. Declining profitability of the company adds much to the worsening financial position of the company. Besides, cash management being one of the important elements in financial function, there are other numerous aspects of finance involved in the overall performance of the company counts for the managerial aspects such as human resource management, organizational structure, marketing management etc. however, above all disappointing down falling trend of the financial position is indicative of the fact that Hulas Steel Industries should immediately seek for drastic change in its managerial structure. So far cash management is concerned,

the recommendations suggested above could, to a greater extent, uplift Hulas Steel Industry's cash management situation.

This research has given the following recommendation for the improvement of company's cash position.

Responsibility should be clearly defined.
Familiar with strengths and weakness of the enterprise.
Efficient management of cash
To prepare monthly trial balance
To design the effective account receivables management
Adopt effective credit policy
Activate investing activities
Maintain optimum cash balance every year.

7) Awale, Surendra (2005) This is another thesis which is reviewed entitles 'Comparative evaluation of capital structure between Salt Trading Corporation Limited and National Trading Limited.

3.6 Research Gap

There are various researches which have been done on the current topic "Cash Management." I want to prove that this research is an original one as it has studied about the two main leading trading organizations on their management of cash. There are some thesis on the study of working capital management and the capital structure management of this organization comparatively but about the management of cash has not been studied earlier. I hope this research will definitely help the new researchers to study in the corresponding subject. It will find out the problem faced by the organization in the management of cash and suggest them to overcome from such problems.

4. RESEARCH AND METHODOLOGY

4.1 Introduction

Research Methodology describes, the methods and processes applied in the entire aspects of this study. It states the entire process how data have been extracted and tools that have been used to analyze and interpret data in objectives of research work. The main purpose of this chapter is to focus on different research method and condition while conducting the research work. Every research needs systematic methodology to show the better result of research work. for the study of cash management between NTL and STCL also needs an aproprioate researh methodology. For the purpose of these study primary as well as secondary data have been used that were available from both organizations.

Research Design

A well settled research is necessary to fulfill the objective of the study aim to evaluate managerial efficiency and performance regarding various fund management. Research design is the plan, structure and strategy of investigation conceived to obtain answers of research question. It means definite procedures and techniques that guide to the study and propounds way for research methodology. Research is very helpful in facilitating smooth operation of research work there by making research as efficient as possible yielding maximum information with minimum expenditure of efforts, time and resources.

This study is a case of National Trading and Salt Trading LTD. The research is based on historical data. For these past seven year data has been used. To achieve the objective of the study descriptive and analytical research designs have been used. To conduct the study both descriptive approaches are utilized for conceptualization, problem identification, conclusion and suggestion of the study where as analytical approach will be followed for the presentation and analysis of data. The balance-sheets, profit and loss account statements, statements of proposed and approved budget with expenses for last seven fiscal years have been compared to analyze the cash management of the companies.

Population and Sample

There are many trading companies which are actively operating their business in market. It is not possible to study all of them regarding the research topic. Therefore among them two reputed trading companies are taken as judgement Sample Company from population for

this research study. Those companies are National Trading Limited and Salt Trading Corporation limited. However, this is a case study, and thus the findings couldn't be extensively generalized to all other public trading enterprises.

Sources of Data

This study is taken on secondary as well primary data. The main sources will be published and unpublished records of companies, previous studies and different articles, journals and news etc. In some cases, papers providing data will be also obtained in order to clear various available data and to get more pertinent information from related person's interview on a small scale are also undertaken. In this regard questionnaire (see annex I) has been used as a primary data.

4.2Tools for Analysis of data

To find out true picture of cash management of National Trading Ltd. and Salt trading Corporation Ltd. financial tools and statistical tools are used. They are as follows: -

4.2.1 Financial Tools

A Ratio analysis is a widely used tool of financial analysis. The ratio reveals the relationship in more meaningful way to enable one to draw conclusion from it. As the case of cash management involves the ratio for judging operational efficiency, the rate of return on total assets and capital employed and activity, efficiency ratio would be particularly meaningful for management and investing, although there is no hard and fast rule. It also provides a framework for financial planning and control. It can provide some useful insights into the operation of the country

a) Analysis of cash turnover ratio:

This ratio indicates the number of times average cash balance is turned over during the year. It is computed as follows:

$$\text{Cash turnover ratio} = \frac{\text{Sales}}{\text{Cash and Bank Balance}}$$

It measures the speed with which cash moves through as enterprise's operation.

b) Account receivable turnover ratio:

This ratio is computed by dividing sales by account receivables. Thus,

$$\text{Account receivable turnover ratio} = \frac{\text{Sales}}{\text{Account Receivables}}$$

It indicates the no. of time the receivables are turned over during the year. It gives the general measure of productivity of the receivable measurement. If the ratio is high the working capital becomes higher and if the ratio is low the working capital becomes lower.

c) Cash and bank balance to Account receivables:

This ratio measures the cash and bank balance in relation with account receivables of the firm. Higher ratio refers to the sound liquidity position and vice-versa. However, too high ratio is the indicative of the fact that the business dealing is only restricted to only to those parties making quick payments, thereby limiting its scope of sales volume.

This ratio is obtained by following formula;

$$\text{Cash and bank balance to account receivable} = \frac{\text{Cash and bank balance}}{\text{Account receivables}}$$

d) Current ratio:

Current ratio measures the liquidity position of the firm. It examines the liquidity position the firm as to holding current assets against current liabilities. Higher ratio indicates satisfactory position and vice- versa. However, too high ratio is the indication of the poor cash management indicating poor credit management. The standard of this ratio 2:1, however the standards of Nepalese public enterprises tend to less than 2:1. But nevertheless any company should maintain this ratio above 1:1, since lower than this ratio definitely indicates poor liquidity position.

This ratio is obtained by following formula,

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

e) Cash and bank balance to current assets:

This ratio is supportive to analyze the liquidity position of the firm. It measures the position of cash and bank balance, the most liquid current asset in total current assets. Higher ratio indicates sound liquidity position and vice-versa.

This ratio is obtained by following formula,

$$\text{Cash and bank balance to current assets} = \frac{\text{Cash and bank balance}}{\text{current Assets}}$$

f) Cash and bank to current liabilities:

This ratio calculates the cash balance available in meeting payment of firm's current liabilities. Moderately higher ratio indicates good liquidity; too high and low ratio is not favorable for the firm. Too high ratio indicates excess cash balance by firm and low means the firm unable to meet the current liabilities.

This ratio is obtained by following formula,

$$\text{Cash and bank balance to current liabilities} = \frac{\text{Cash and bank balance}}{\text{Current liabilities}}$$

g) Net profit margin ratio:

This ratio is used to calculate the profitability position of the firm. Higher ratio indicates the higher profitability of the firm and vice-versa.

This ratio is obtained by following formula,

$$\text{Net profit margin} = \frac{\text{Net profit}}{\text{Sales}}$$

h) Average collection period:

It indicates the no. of days it takes on an average to collect account receivables. It is computed as to collect account receivables. It is computed as follows;

$$\text{Average collection Period} = \frac{\text{Days in a year(360)}}{\text{Receivable tuenover ratio}}$$

i) Inventory Conversion Period

Inventory conversion period indicates the efficiency of firms in selling its product.

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

$$\text{ICP} = \frac{360}{\text{inventory turnover}}$$

4.2.2 Statistical tools

a) Straight line trend:

A widely and most commonly used method to describe the trend is the method of least square. Under this method, a trend line is fitted to the data satisfying the following two conditions.

Let the trend line between the dependent variable y and the independent variable x be representd by :

$$y = a + bx \quad \text{.....(i)}$$

Then for any given value of independent variable x, the estimate value of y denoted by y_c given by above equation is;

$y_c = a + bx$

or, $a = \frac{\sum y}{n}$

and, $\sum xy = b \sum x^2$

or, $b = \frac{\sum xy}{x^2}$

b) Standard deviation:

The standard deviation of a series of value is defined as the square root of the mean of the distribution. It may be found by finding the differences between each individual frequency and the mean of the frequency distribution, squaring these differences individually adding the square deviation and dividing by N and extracting the square of the results. The fundamental formula for the standard deviation is follows:

$$\text{S. D.} = \sqrt{\frac{\sum(x-\bar{x})^2}{n}}$$

Where, n = No of observation/ Time periods

$\bar{x}$ = Expected return of the historical Data

The standard deviation measures the absolute variability of a distribution the greater the amount of the dispersion or variability the greater the SD, for the greater will be magnitude of the deviation of the values from their mean. A small SD means a high degree of uniformity of the observation as well as homogeneity of a series.

In conjunction with standard deviation, coefficient of variation (CV) is also computed which is relative measure of dispersion based on standard deviation. It is defined by standard deviation divided by mean of the expected return. It is used to standardize risk per unit of return. A project with low CV has less risk per rupee than the project with high CV.

$$CV = \frac{\text{Sandard Deviation}}{\text{Expected Return}} \text{ x } 100$$

c) Karl Pearson's co-efficient of correlation:

"Correlation analysis is the statistical tools that we can use to describe the degree to which one variable is linearly related to another." It does not tell us anything about causes and effect relationship. Correlation analysis helps in determining relationship between two or more variable. "In business, correlation analysis enables the executive to estimate costs, sales price and other variables. (*Levin, Richard I, and David, 1991*)

On the basis of some other series with which their costs, sales or prices may be functionally related. Some of the guesswork can be removed from decisions when the relationship, between variables to be estimated and one or more other variables on which it depends are closed and reasonably in variant.

Out of various method of calculating correlation, Karl Pearson's correlation coefficient is best and one of the most popular method. Karl Pearson's correlation coefficient measures the degree of relationship between two variables suppose X and Y; given by,

$$r = \frac{\sum uv}{\sqrt{\sum u^2 . \sum v^2}}$$

Where;

r = Karl Pearson's coefficient of Correlation between X and Y.

$u = x - \bar{x}$

$v = y - \bar{y}$

$$\bar{x} = \frac{\sum X}{n}$$

$$\bar{y} = \frac{\sum y}{n}$$

n = Number of Years.

Interpretation of correlation coefficient (r)

a. The value of 'r' lies between +1.00 to -1.00
b. When r =+1, there is positively perfect correlation between the two variables.
c. When r = -1, there is a negatively perfect correclation between the two varialbes.
d. When r =0, the variables are uncorrelated i.e, increase or decrease in one variable results no impact on another variable and vice-versa.

To test the reliability of Karl pearson's correlation coefficient, we use probable error method. It is given by:

$$\text{P.E.} = 0.675.\frac{1-r^2}{\sqrt{n}}$$

It is used in interpretation whether calculated value of 'r' is siginifcant or not.

1. It r< P. E, it is insignificant. So, perhaps there is no evidence of correlation.
2. It r> 6P. E., it is significant .
3. But when P. E< r< 6 (P.E), the value of 'r' is inconclusive as to stastistically signigicant/ insignificant correlation.

The upper and lower limits within which the correlation coefficient is expected to lie are given by:

r + P. E (Upper Limit) and

r - P. E (Lower Limit), respectively

But when 'r' is of negative value , i.e. -1.00 r< 0, in order to compare 'r' with P.E which is always in positive value,'r modulus' or |r| is calculated. |r| is nothing but it is the positive value of 'r' itself.

For instance, if 'r' is calculated as r = -0.5, then |r| = 0.5.

This positive value of 'r' is compared with P. E. and 6 (P.E.) to derive to a conclusion of practically significant/insignificant correlation.

d) Regression analysis:

"The regression is the determination of the statistical relationship between two or more variables. In simple regression there are only two variables. One independent variable and effect the behavior of dependent variable. Regression can only be interpreted on what exists physically i.e. there must be physical way in which independent variable (X) can effect dependent variables (Y)" (*Kothari, C.R, 1989*) For the analysis of cash management of STCL and NTL simple regression analysis is applied to locate the relationship between sales and cash balance. The computation of regression lines of sales (x) on cash balance (y) as follows:

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

Where, $\bar{x}$ = Mean of X variable

$\bar{y}$ =Mean of Y variable

x = Standard deviation of X variable

y = Standard deviation of Y variable

r = Karl Pearson's coefficient of Correlation.

Likewise, the regression line of y variable on x variable is given by;

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

5. PRESENTATION AND ANALYSIS OF DATA

The basic objective of this study as stated in chapter one is to analyze cash management of National Trading Limited and Salt Trading Corporation Limited. For accomplishment of this objective, a definite course of research Methodology has been followed which is described in chapter third. Now in this chapter the effort has been made to assess and analyze the cash management to describe the actual position of cash management in NTL and STCL.

5.1 Analysis of Data by Financial Tools

5.1.1 Analysis of Cash and Bank Balance

Management of cash plays a significant role in current assets. The total cash includes cash in hands, cash at bank and cash in transit. The table below shows the cash position of NTL and STCL during the period of study.

Table 1 Analysis of cash and bank balance of NTL & STCL (€ in million)

	NTL		STCL	
Fiscal years	Cash and bank balance	% increased	Cash and bank balance	% increased
2012	0.22336	-	0.28024	-
2013	0.47888	114.40	0.50456	80.05
2014	0.35736	(25.38)	0.43056	(15)
2015	0.46528	30.20	0.30824	28.41
2016	0.19344	(33.98)	0.46816	52.66
2017	0.20136	16.50	0.61232	45.99
2018	0.18392	(8.66)	0.41336	(32.99)

Source: Annual report of NTL & STCL, 2018

Note: -Figure within bracket () indicates minus

Interpretation: -

The above table shows the cash and bank balance of NTL is € 0.22336 millions in the year 2012. This balance is increased by 114.4% in the year 2013 and reached to €59.86 millions but this balance in the year 2014 €44.67 million. This balance decreased by 25.38 % compared to the year 2013. in the same way, the cash and bank balances are €0.46528 million, €0.19344 million, €0.20136 million and €0.18392 million in the fiscal year 2015, 2016, 2017 and 2018 respectively. It is increased by 30.28% in the year 2015, decreased by 33.98% in the year 2016, increased by 16 .50 % in the year 2017 and decreased by 8.66% in

the year 2018 compared to the previous year cash. Similarly, the cash and bank balance of STCL are €0.28024 million, €0.50456 million, €0.43056 million, €0.30824 million, c0.46816million, €0.61232 million and €0.41336million, during the fiscal years 2012 to 2018 respectively. It is increased 80.05% in the year 2013. In the same way it was decreased by 15% in the year 2014, increased by 28.41% in the year 2015, increased by 52.66% in the year 2016, increased by 45.99% in the year 2017 and decreased by 32.99% in the year 2018.

The above discussion shows both of the companies have not following any effective policy regarding the management of cash. The cash and bank balance of the companies are fluctuating unequally in the various time periods. On the whole these figures show no any definite policy of cash management, while in some years they have maintained excessive of cash balance. While in other years they have low. Moreover, the companies have not planned cash inflow and outflow forecast. It is of crucial importance for the companies to keep careful watch over the cash movements of determine how cash throws offs become available and also to investigate the opportunity for the use of cash.

5.1.2 Analysis of Cash Turnover Ratio

Cash turnover ratio represents how quickly the cash is received from its sale be formulated to find out. Higher turnover is signal of good liquidity and vice-versa.

Table 2 Analysis of Cash Turnover Ratio of NTL and STCL. (€ in million)

	NTL			STCL		
F/Y	C and B balance	Sales	Ratio (times)	C and B balance	sales	Ratio (times)
2012	0.2236	6.12856	28.75	0.28024	14.73896	52.59
2013	0.47888	4.25144	8.88	0.50456	12.64368	25.06
2014	0.35736	7.8312	21.91	0.43056	13.9452	32.39
2015	0.46528	9.39528	20.19	0.30824	15.00696	48.69
2016	0.19344	7.73912	40.01	0.47056	19.688	41.84
2017	0.20136	7.82024	38.84	0.61392	31.19152	50.81
2018	0.1832	6.47312	35.2	0.41336	17.55144	42.46
Total	2.10312		193.78	3.02144		293.84
Average	0.30045		27.68	0.43163		41.97

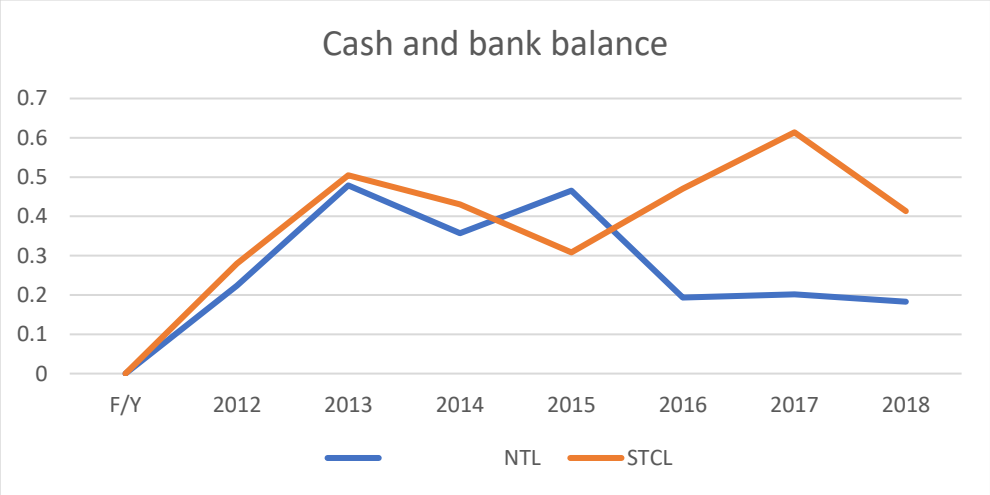
Source: -Annual report of NTL and STCL 2018

Interpretation: -

In the above table, the cash turnover ratio of NTL is not stable during the seven years period; it is highest in the year 2016 i.e.40.01 times and the lowest in the year 2018 i.e.35.2 times. Comparing to the average ratio of seven years there is variability in the cash turnover ratio these ratios show that is not homogeneity or cash turnover ratio is fluctuating. Sometimes it takes more time whereas some time it takes less time than that of average.

In the context of STCL, the cash conversion ratio is higher than the average of seven years period in all years except in the years 2013 and 2014. This shows in the year 2013 it takes 25 times and 2014 it takes 32 times which is below from standard i.e. 41.97. This shows there is not homogeneity in cash collection from sales in STCL during the study period. The following ratio can be presented in graph as follows: -

Figure 5 Graphical presentation of cash turnover ratio



Source: -Own calculation

5.1.3 Account Receivable Turnover Ratio

Account receivable is relationship between credit sales and collection period. If turnover is high there would be little congestion of fund in turnover and vice-versa. The corporations sell their goods on credit and cash basis. When the corporations extend credit to its customer, books debts are credited. Debtors and account receivables are to be converted into cash over certain period and therefore they are included in current assets. The liquidity position of the corporations depends on the quality of debtors to a great extent. The following table shows the account receivable turnover ratio of NTL and STCL

Table 3 Analysis of Account Receivable Turnover Ratio of NTL and STCL

(€ in millions)

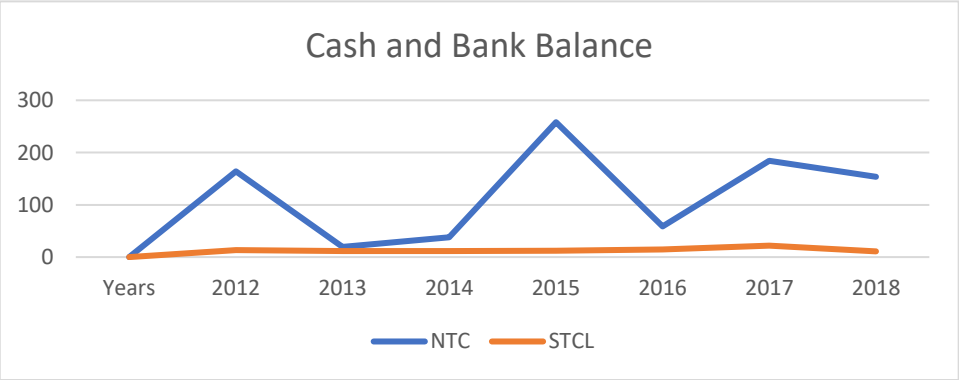
	NTL			STCL		
Years	Receivables	Sales	Ratios	Receivables	Sales	Ratios
2012	0.0392	6.42856	163.994	1.11752	14.73896	13.189
2013	0.2148	4.25144	19.793	1.0832	12.64368	11.673
2014	0.20648	7.8312	37.927	1.2008	13.9508	11.618
2015	0.0364	9.39528	258.112	1.21752	15.00696	12.326
2016	0.1321	7.73912	58.585	1.34216	19.688	14.669
2017	0.0424	7.82024	184.440	1.42224	31.19152	21.931
2018	0.0421	6.47312	153.756	1.63104	17.55192	10.761
Total			876.606			96.167
Average			125.229			13.738

Source: -Annual report of NTL and STCL 2018

Interpretation: -

From the table we can say that the account receivable turnover ratio of NTL is very high in the year 2015 i.e. 258.81 times and in the year 2013 it is very lowi.e.19.79 times. The average of seven years period is 125.33 times. In the same way the average ratio of STCL is 13.73 times. The highest ratio is in the year 2017 i.e. 21.93 times and the lowest ratio is in the year 2018 i.e. 10.76 times. Comparing to NTL there is homogeneity in the receivable turnover ratio of STCL.

Figure 6 Graphical presentation of Account receivable Turnover ratio



Source: -Own calculation

From the above trend analysis, we can say there is higher fluctuation in Account receivable turnover Ratio of NTL than STCL.

5.1.4 Cash and Bank Balance to Account Receivable

This ratio measures the relationship between level of cash and bank balance to account receivable over a period of time. The greater the account receivable the better the cash turnover would be provided that; cash and bank balance can be maintained at a desired level. The following table shows the relationship between Account receivable and cash balance.

Table 4 Analysis of cash and Bank Balance to Account Receivable (€ in Million)

	NTL			STCL		
Year	C and B Balance	Account receivable	Ratios	C and B balance	Account receivable	Ratios
2012	0.22336	0.0392	5.69	0.28024	1.11704	0.25
2013	0.47888	0.2148	2.22	0.50456	1.0832	0.46
2014	0.35736	0.20648	1.73	0.43056	1.2008	0.35
2015	0.46528	0.0364	12.78	0.30824	1.21752	0.25
2016	0.19328	0.13208	1.46	0.47056	1.34216	0.35
2017	0.20568	0.0424	4.85	0.61232	1.42224	0.43
2018	1.8392	0.04208	43.7	0.41336	1.63104	0.25
Total			72.43			2.34
Average			10.34			0.33

Source: -Annual report of NTL and STCL 2018

Interpretation:-

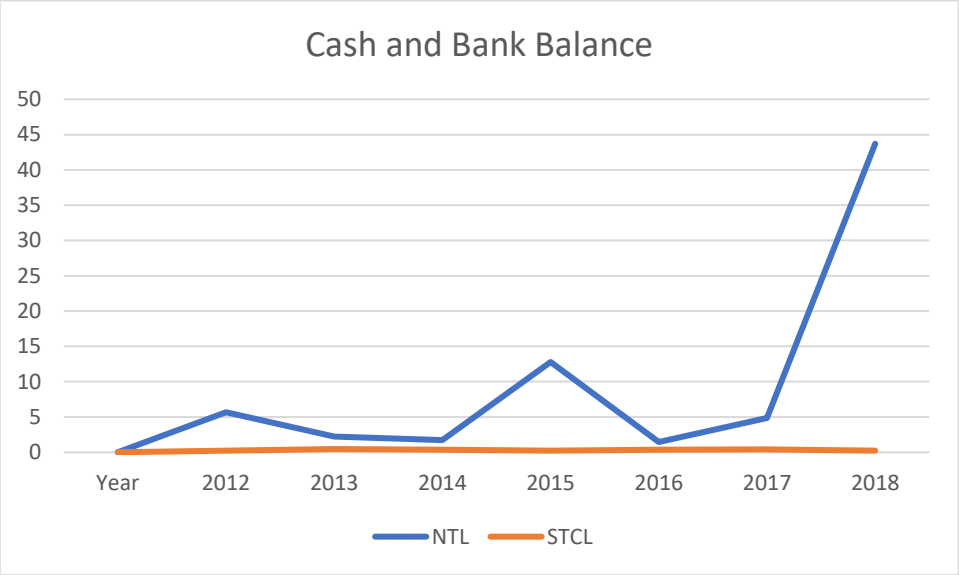
The analysis of above table shows the cash and bank balance to account receivable ratio o NTL and STCL. It clearly shows that this ratio of NTL is in fluctuating trend i.e. 5.69, 2.22, 1.73, 12.78, 1.46, 4.85 and 43.7 times respectively for the years 2012 to 2018. The minimum ratio during the period is 1.46 times in the year 2016 and the maximum ratio is in the year 2018 i.e. 43.70 times. This shows the cash and bank balance to account receivable turnover ratio of NTL is not satisfactory during the study period.

For STCL, this ratios ratio is quite homogeneous than NTL. They are 0.25, 0.46, 0.35, 0.25, 0.35, 0.43 and 0.25 times respectively for the years 2012 to 2018. Evaluating this situation,

cash and bank balance is neither s good or so bad that is moderately satisfactory because the minimum ratio of cash and bank balance account receivable is 0.25 times and maximum is 0.46 times. From the above study we can say that, higher the account receivable caused lower the cash balance and vice- versa. Thus, management should adopt strong credit policy to increase cash balance to maintain desired level of cash balance.

Graphically it can be presented as follows,

Figure 7 Graphical presentation of cash and bank balance to receivables



Source: -Own calculation

5.1.5 Current Ratio

Current Ratio shows the ability for payment of current debt from current assets. It measures the liquidity positions of the company. It is called simple relationship between current assets and current liabilities. As a conversational rule, a current ratio of 2:1 or more is considered to be satisfactory. The higher the current ratio, greater the margin of safety, the large the amount of current assets in relation to current liabilities, the more the firm's ability to meet current obligation and strong working capital policy. It is calculated as,

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

Table 5 Analysis of Current Ratio of NTL and STCL. (€ in million)

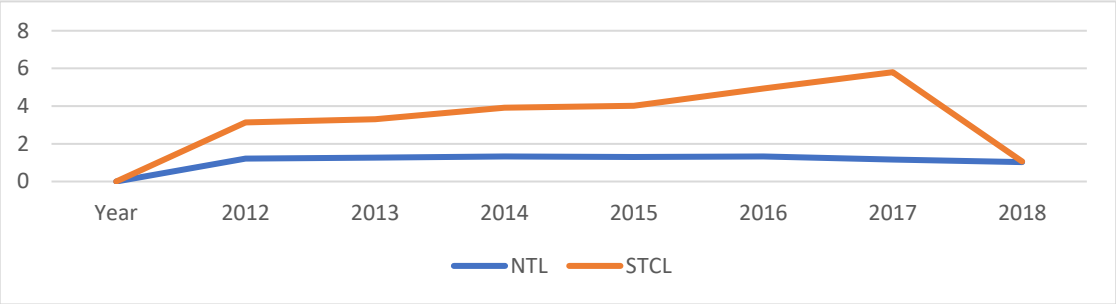
	NTL			STCL		
Year	Current Assets	Current Liabilities	Ratio in times	Current Assets	Current Liabilities	Ratio in times
2012	3.55528	2.91336	1.22	6.68512	2.13664	3.13
2013	5.70504	4.51528	1.26	8.18496	2.47776	3.3
2014	5.52776	4.15776	1.33	8.54752	2.18024	3.92
2015	5.59112	4.30496	1.3	8.9184	2.22032	4.02
2016	5.188	3.90984	1.33	13.4548	2.72672	4.93
2017	4.1972	3.57976	1.17	12.78032	2.2052	5.8
2018	5.95296	5.7536	1.03	14.02264	13.0496	1.07
Total			8.64			26.17
Average			1.23			3.73

Source: -Annual report of NTL and STCL 2018

Interpretation: -

In the above table, we can see that the current ratio of NTL are 1.22, 1.26, 1.33, 1.30, 1.33, 1.07 and 1.03 for the years 2012 to 2018 respectively. It shows there is the lowest ratio in the year 2015 i.e. 1.03 times and the highest ratio is in the year 2014 and 2016 i.e.1.33 times. The average ratio for seven years period is 1.04. From the above study, it is concluded that NTL is not able to maintain standard ratio of 2:1 which shows poor liquidity position. Similarly, current ratio of STCL are 3.13, 3.30, 3.92, 4.02, 4.93, 5.08 and 1.07 for the years 2012 to 2018 respectively in the year 2017 there is the highest ratio i.e. 5.80 and the 2018 there is the lowest ratio i.e. 1.07 during the study period. The average ratio for the seven years period is 3.73. In comparison with NTL the current ratio of STCL are good except in the year 2018 i.e. 1.07 which is below the standard.

Figure 8 Graphical Presentation of Current Ratio



Source: -Own calculation

The above trend lines show the current ratio of NTL is homogenous or it is not fluctuating. For STCL this ratio is increasing till the year 2017 but it has decreased adversely in the year 2018.

5.1.6 Cash and Bank Balance to Current Assets

The current ratio is supportive to analyze the liquidity position of the firm. It measures the position of cash and bank balance, the most liquid asset in total current assets. Higher ratio indicates sound liquidity position and vice-versa. It is calculated cash and bank balance divided by current assets, which is shown in the following table

Table 6 Analysis of Cash and Bank Balance to Current Assets Ratio (€ in million)

	NTL			STCL		
Year	C and B Balance	Current assets	Ratio %	C and B balance	Current assets	Ratio %
2012	0.22336	3.5553	6.28	0.28024	6.6851	4.19
2013	0.47888	5.7050	8.39	0.50456	8.1850	6.16
2014	0.35736	5.5206	6.47	0.43056	8.5475	5.03
2015	0.46528	5.5911	8.32	0.30824	8.9184	3.56
2016	0.19328	5.1880	3.72	0.47056	13.4484	3.49
2017	0.20568	4.1972	4.9	0.61232	12.7771	4.79
2018	1.8392	5.9530	3.08	0.41336	13.9426	2.94
Total			38.11			27.26
Average			5.44			3.89

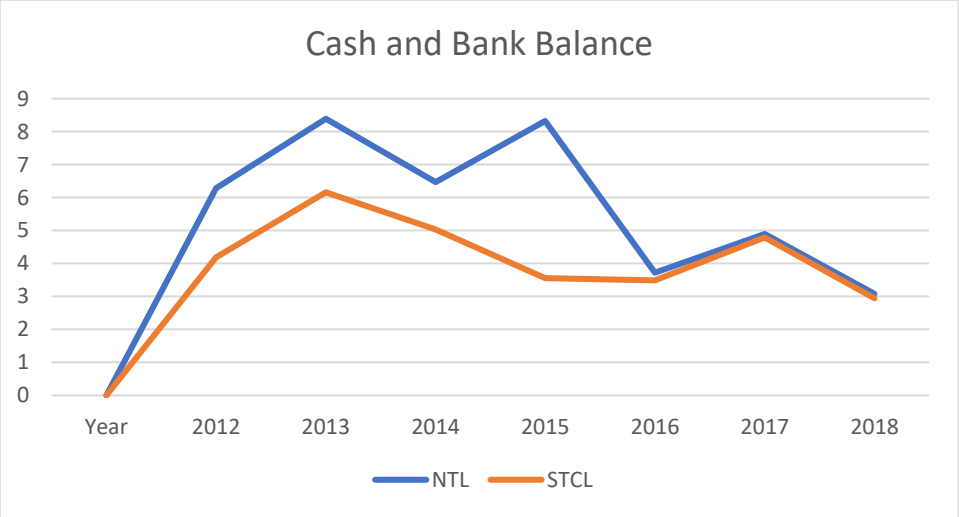
Source: -Annual report of NTL and STCL 2018

Interpretation: -

The above table shows that the highest ratio is in the year 2013 i.e. 8.39% and the lowest ratio is in the year 2018 i.e. 3.08% of NTL. Similarly, other ratios are 6.28% 8.32%, 3.72%, 4.90% and 3.08% for the years 2012 to 2018 respectively. The average for seven years period is 5.44%. After the calculation of this ratio, we cash see fluctuation in the ratio. Thus, it can be concluded that cash position of NTL is not good.

For STCL, the highest ratio is in the year 2013 i.e. 6.16% and the lowest ratio is in year 2018 i.e. 2.94%. Other ratios are 4.19%, 5.03%, 3.56%, 3.49% and 4.79% for the years 2012 to 2018 respectively. The average ratio for the seven years period is 3.89%. Comparing to NTL the cash and bank balance to current ratio of STCL is poor. It can be shown in the following trend lines.

Figure 9 Graphical presentation cash and bank balance to current asset ratio



Source: -Own calculation

5.1.7 Analysis of Cash and Bank Balance to Current Liabilities Ratio

Among the techniques of measuring corporate liquidity, the ratio of cash and bank balance to current liabilities may also be used as 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 indicator. However, a very low ratio is not desirable as it may lead corporate solvency. The following

table shows the level of cash in relation to current liabilities of National Trading Limited and Salt Trading Corporation Limited.

Table 7 Analysis of Cash and bank to current liabilities (€ in million)

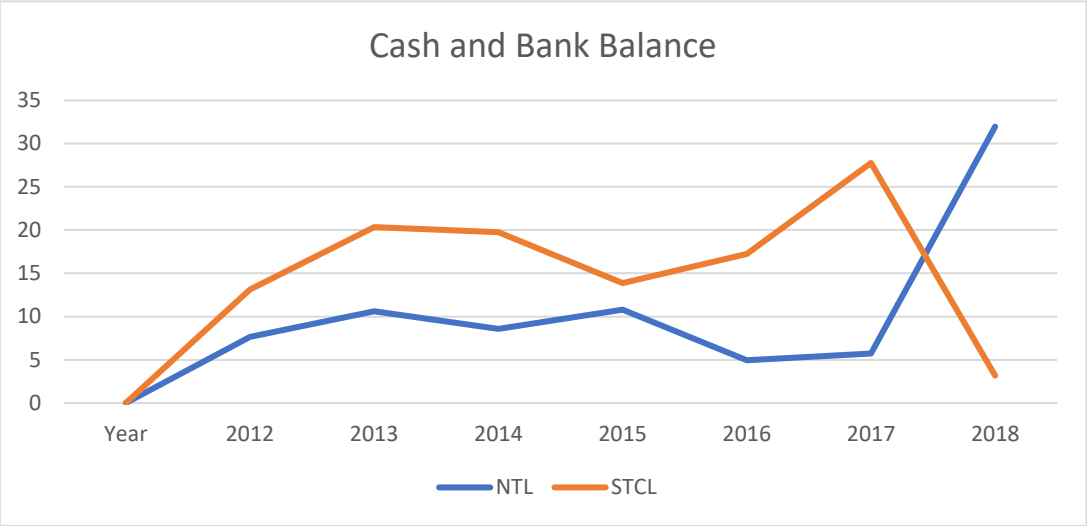
	NTL			STCL		
Year	C and B balance	Current liabilities	Ratio in percentage	C and B balance	Current liabilities	Ratio in percentage
2012	0.2234	2.9134	7.66	0.2802	2.1366	13.11
2013	0.4789	4.5153	10.6	0.5046	2.4778	20.36
2014	0.3574	4.1578	8.59	0.4306	2.1802	19.74
2015	0.4653	4.3048	10.8	0.3082	2.2203	13.88
2016	0.1934	3.9098	4.94	0.4706	2.7267	17.25
2017	0.2057	3.5798	5.74	0.6123	2.2052	27.76
2018	1.8392	5.7536	31.96	0.4134	13.049	3.16
Total			80.29			115.26
Average			11.47			16.46

Source: -Annual report of NTL and STCL 2018

Interpretation: -

The analysis of above table shows Cash and bank balance to current liabilities ratio of NTL are in fluctuating trend. They are 7.66%, 10.60%, 8.59%, 10.80%, 4.94%, 5.74%, and 31.96% for the years 2012 to 2018. During the study period cash and bank balance is not homogeneous. The average ratio for the years is 11.47%. Similarly, the highest ratio for STCL is in the year 2017 i.e.27.76% and the lowest ratio is the year 2018 i.e. 3.16%. The average ratio for the seven years period is 16.46%. The ratio is in fluctuating trend. Thus, it can be said that STCL has faced the problem of cash management. The following trend lines shows the ratio calculated above.

Figure 10 Graphical presentation of cash and bank balance to current liabilities ratios



Source: -Own calculation

In the above trend analysis, we can see the cash and bank balance to current liabilities of both companies are fluctuating. There is more fluctuation in this ratio of STCL than NTL.

5.1.8 Analysis of Net Profit Margin Ratio

Earning the profit is the main objective of every business organization. So, the analysis of net profit can be meaningful. It shows the relationship between net profit and sales Net profit also helps to determine the firms to maintain optimum cash balance. It is calculated by dividing net profit after tax by sales. The table shows the net profit margin of two firms.

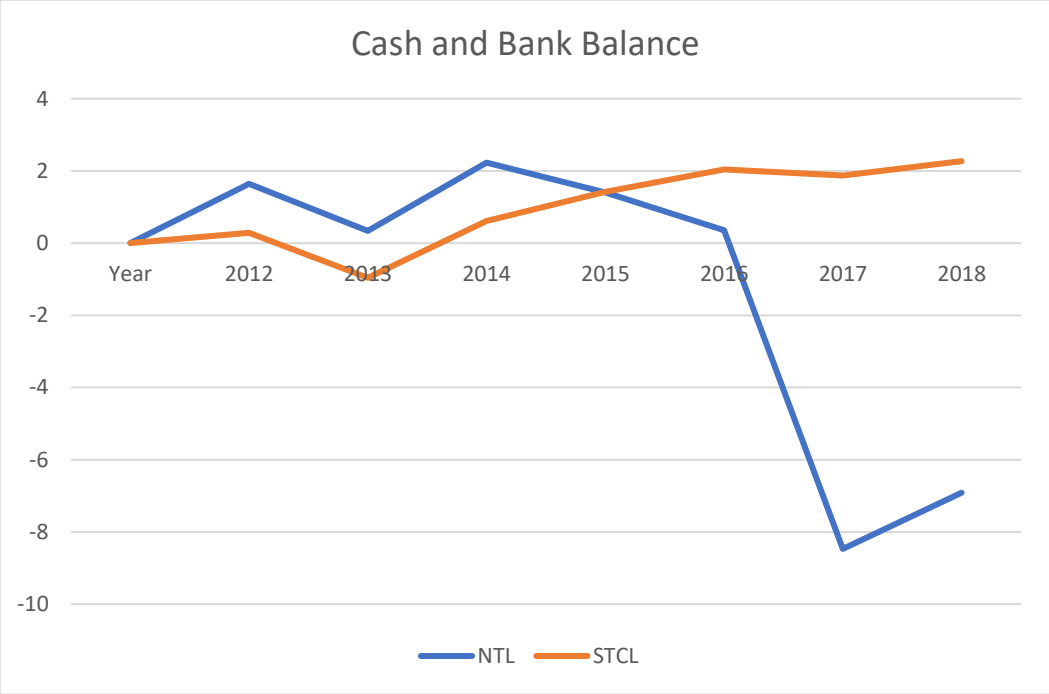
Table 8 Analysis of Net profit Margin Ratio. (€ in million)

	NTL			STCL		
Year	NPAT	Sales	Ratio %	NPAT	Sales	Ratio %
2012	0.105	6.429	1.64	0.0423	14.739	0.29
2013	0.014	4.251	0.34	-0.1210	12.644	-0.96
2014	0.175	7.831	2.23	0.0844	13.945	0.61
2015	0.037	9.395	1.4	0.2133	15.007	1.42
2016	0.028	7.739	0.36	0.4020	19.688	2.04
2017	-0.662	7.820	-8.47	0.5842	31.184	1.87
2018	-0.447	6.473	-6.91	0.3984	17.551	2.27

Source: -Annual report of NTL and STCL 2018

Interpretation: - The above table clears that the net profit margin ratio of NTL is not homogenous during the study period. The highest ratio was in the year 2014 i.e. 2.23% and the lowest ratio is in the year 2017 (i.e. -8.47) which is a loss. Similarly, for STCL the highest ratio was in the year 2018 i.e.2.27% and the lowest ratio is in the year 2013 i.e.-0.96 which shows net loss.

Figure 11 Graphical presentation of Net profit Margin Ratio



Source: -Own calculation

From the above study, we can see that NTL is suffering with loss from last two years of the study.

5.1.9 Analysis of Average Collection Period/ Receivable Conversion Period

Receivable conversion period indicates the no of day's debtor turnover into cash. it analyzes the determining collections of debtors. The longer the collection period, more efficient in the management of credit policy and short period refers the strict credit policy. The receivable conversion period is calculated as follows,

$$\text{RCP} = \frac{\text{Days in a year}}{\text{Receivable turnover ratio}}$$

Table 9 Analysis of Average Collection period

	NTL			STCL		
Year	Days in a year	Receivable turnover	ACP	Days in year	Receivable turnover	ACP
2012	360	163.99	2	360	13.19	28
2013	360	19.79	18	360	11.67	31
2014	360	37.92	10	360	11.61	31
2015	360	258.81	1	360	12.33	29
2016	360	58.60	6	360	14.67	25
2017	360	184.44	2	360	21.93	17
2018	360	153.83	2	360	10.76	34
Total			41			195
Average			5.85			27.85

Source: -Annual report of NTL and STCL 2018

Interpretation: -The above table shows the average collection period of NTL is the highest in the year 2014 which is 10 days and the lowest is in the year 2015 that is 1 days. This table shows that high receivable turnover causes to low average collection period.

In the same way, STCL has the highest days to collect its receivable is in the year 2018 and the lowest days is in the year 2017. The low days of collection shows the ability of firms to collect their account receivables from sales.

5.1.10 Analysis of Inventory Conversion Period

Inventory conversion period indicates the efficiency of firms in selling its product. The short period indicates fast conversion of inventory into sales and long period indicates slow conversion inventory into sales. It can be calculated as follows:

$$\text{ICP} = \frac{360}{\text{inventory turnover}}$$

Table 10 Analysis of Inventory Conversion Period. (€ in million)

Year	NTL				STCL			
	Inventory	Sales	I.T	ICP	Inventory	Sales	I.T	ICP
2012	2.851	6.429	2.25	160	1.323	14.739	11.1	32.31
2013	4.499	4.251	0.95	378.94	2.320	12.644	5.45	66.05
2014	4.460	7.831	1.76	204.54	1.600	13.945	8.72	41.28
2015	4.499	9.395	2.09	172.24	2.966	15.007	5.06	71.14
2016	3.824	7.739	2.02	178.21	5.505	19.688	3.58	100.55
2017	2.835	7.820	2.76	130.43	3.765	31.192	8.28	43.47
2018	3.045	6.473	2.13	169.14	6.319	17.551	2.72	132.2
Total				1393.5				487
Average				199.07				69.57

Source: -Annual report of NTL and STCL 2018

Interpretation: -In the above table, the inventory conversion period of NTL are not stable during the study period, the highest period during the study period is 378.94 days in the year 2013 and the lowest period is in the year 2017 that is 130.43 days. This shows there is idle inventory for long period. That may create the problems in the management of cash in the company

In the context of STCL the ICP is also is in fluctuating trend. The highest days during the study period is 132.25 days in the year 2018 and the lowest ratio is in the year 2012 i.e. 32.31. The lower day of inventory conversion period is beneficial for firm to convert inventory into cash.

5.2 Analysis of Data Statistical Tools

5.2.1 Fitting the straight line least square spreadsheet for variations in Cash Balance

To analyze the data by using least square method, let us assume that the fiscal year be X and cash balance be Y. If we keep fiscal year ranking from 1 to 7 then no of observation would be seven.

So that the straight-line trend be

$Y_C = a + bx$

Where,

$\bar{x} = \frac{\sum x}{n}$

$a = \frac{\sum y}{n}$

$x = (x - \bar{y})$

Table 11 Least square spreadsheet fiscal years and cash and bank balance of NTL

(in € million)

Fiscal years(X)	Cash and bank balance(Y)	$x = (X - \bar{x})$	x^2	xY
2012	0.2234	-3	9	-0.6701
2013	0.4789	-2	4	-0.9578
2014	0.3574	-1	1	-0.3574
2015	0.4653	0	0	0.0000
2016	0.1934	1	1	0.1934
2017	0.2057	2	4	0.4114
2018	1.8399	3	9	5.5198
$\sum X$ =28	$\sum Y = 3.7639$	$\sum x$=0	$\sum x^2$=28	$\sum xY$=4.1394

Source: -Annual report of NTL and STCL 2018

$\bar{x} = \frac{\sum x}{n} = \frac{28}{7} = 4$

$a = \frac{\sum y}{n} = \frac{3.7693}{7} = 0.5377$

$b = \frac{\sum xy}{\sum x^2} = \frac{4.1394}{28} = 0.1478$

$\therefore Yc = 0.5377 + 0.1478x$

This trend lines shows the positive figure of cash balance in future. The annual rate of increment in cash balance is same to be €147,800(0.1478 X 1,000,000)

Table 12 Least square spread sheet between cash and bank and fiscal years of STCL

(€ in million)

Fiscal year	Cash and bank balance	$x = (X - \bar{x})$	x^2	xY
2012 (1)	0.2802	-3	9	-0.8407
2013 (2)	0.5046	-2	4	-1.0091
2014 (3)	0.4306	-1	1	-0.4306
2015 (4)	0.3082	0	0	0
2016 (5)	0.4706	1	1	0.4706
2017 (6)	0.6139	2	4	1.2278
2018 (7)	0.4134	3	9	1.2401
$\sum X$ =28	$\sum Y = 3.0214$	$\sum x$=0	$\sum x^2$= 28	$\sum xY$=0.6581

Source: -Annual report of NTL and STCL 2018

$\bar{x} = \frac{\sum x}{n} = \frac{28}{7} = 4$

$a = \frac{\sum y}{n} = \frac{3.0214}{7} = 0.432$

$a = \frac{\sum xy}{x^2} = \frac{0.65810}{28} = 0.0235$

$\therefore Yc = 0.432 + 0.0235x$

This trend lines also shows the positive figure of cash balance for future. The annual rate of increment is same to be 0.0235X1,000,000 = 23,500

5.2.2 Correlation Co-efficient between cash and Bank Balance and Actual Sales

To find correlation between sales and cash and bank balance Karl Pearson's co-efficient of correlation (r) is determined. For this purpose, actual sales (X) are assumed to be dependent variable and cash and bank balance(Y) are assumed to be independent variable. At first, it is assumed that actual sales will increase as cash balance increase or vice-versa. It makes there is positive correlation between cash balance and sales. The significance of correlation 'r' is tested with probable error.

Table 13 Correlation 'r' between actual sales and cash and bank balance of NTL

(in € million)

F/Y	Actual sales(X)	Cash balance	$u = (x - \bar{x})$	$v = (y - \bar{y})$	u^2	v^2	uv
2012	6.42856	0.22336	0.705737	0.3132	0.4981	0.0981	0.2211
2013	4.25256	0.47088	2.88174	0.0657	8.3044	0.0043	0.1894
2014	7.8312	0.35736	-0.6969	0.1792	0.4857	0.0321	-0.1249
2015	9.39528	0.46528	-2.26098	0.0713	5.1120	0.0051	-0.1613
2016	7.73912	0.19344	-0.60482	0.3432	0.3658	0.1178	-0.2076
2017	7.82024	0.20568	-0.68594	0.3309	0.4705	0.1095	-0.2270
2018	6.47312	1.83992	0.66118	-1.303	0.4372	1.6986	-0.8617
	$\sum x$ =49.940	$\sum y$ =3.756	$\sum u$ =0	$\sum v$ =0	$\sum u^2$ =15.674	$\sum u^2$ =2.066	$\sum uv$ =-1.172

Source: -Annual report of NTL and STCL 2018

$\bar{x} = \frac{\sum x}{n} = \frac{49.940}{7} = 7.134$

$\bar{y} = \frac{\sum y}{n} = \frac{3.756}{7} = 0.537$

Therefore;

$r = \frac{\sum UV}{\sqrt{\sum U^2 . \sum V^2}}$

$r = \frac{-1.172}{\sqrt{15.674 * 2.066}} = \frac{-1.172}{5.691} = -0.206$

We have standard deviation of Actual sales X

$\sigma x = \sqrt{\frac{\sum (x - \bar{x})^2}{n}} = \sqrt{\frac{15.674}{7}} = 1.496$

Similarly, standard deviation of cash balance Y

$\sigma y = \sqrt{\frac{\sum (y - \bar{y})^2}{n}} = \sqrt{\frac{2.066}{7}} = 0.2951$

The value of 'r' is -0.206 shows that there is lower negative correlation between cash and bank balance and actual sales. But this negative correlation is not only due to chances. The test of significance of the values of 'r' shows that either there is significant negative relationship or not between the cash balance and sales.

i.e. P.E of 'r'

$r = 0.6745 * \frac{1 - r^2}{\sqrt{n}}$

$= 0.6745 * \frac{1-(-0.206)^2}{\sqrt{7}}$

$= 0.6745 * \frac{1-0.0424}{\sqrt{7}} = 0.2441$

6*P. E = 6*0.2441 = 1.465

Since r < P.E.X 6, the value of 'r' is not at all significant. Whether cash balance increases the sales will increases or vice- versa. So, the assumption is wrong.

A regression line can also be fitted to show the degree of relationship between actual sales and cash and bank balance. Cash and bank balance can be forecasted by the value of actual sales. For this purpose, cash and bank balance can be forecasted by the value of actual sales. Cash balance and actual sales have been assumed interrelated economic variables. The regression line of sales X on cash balance Y is,

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

$\bar{x} = 7.134$

$\bar{y} = 0.537$

$x - 7.134 = (-0.206) * \frac{1.496}{0.2951} * (y - 0.537)$

$x - 7.134 = -1.044y + 0.5607$

$x = -1.044y + 0.5607 + 7.134$

$x = -1.044y + 7.694$

This equation shows that sales will decrease by €1.044, per euro increase in cash.

Next regression line of cash balance (Y) on actual sales (X), Y on X is as under

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

$y - 0.537 = (-0.206)\frac{0.2951}{1.496}(x - 7.134)$

$y - 0.537 = -0.0406x + 7.1746$

$y = -0.0406x + 7.7116$

This shows that, per euro cash increase if sales decrease by 0.0406 €.

Table 14 Correlation 'r' between actual sales and cash and bank balance of STCL

(in € million)

F/Y	Actual sales (X)	Cash balance (Y)	$u = (x - \bar{x})$	$v = (y - \bar{y})$	u^2	v^2	uv
2012	14.739	0.280	-3.085	-0.151	9.516	0.023	0.47
2013	12.644	0.505	-5.180	0.073	26.833	0.005	-0.38
2014	13.945	0.431	-3.879	-0.001	15.043	0.000	0.00
2015	15.007	0.308	-2.817	-0.123	7.934	0.015	0.35
2016	19.688	0.471	1.864	0.039	3.476	0.002	0.07
2017	31.192	0.612	13.368	0.181	178.698	0.033	2.42
2018	17.551	0.413	-0.272	-0.018	0.074	0.000	0.00
	$\sum x$ =124.766	$\sum y$ =3.020	$\sum u$ =0	$\sum v$ =0	$\sum u^2$ =241.573	$\sum u^2$ =0.078	$\sum uv$ = 2.93

Source: -Annual report of NTL and STCL 2018

$$\bar{x} = \frac{\sum x}{n} = \frac{124.766}{7} = 17.8237$$

$$\bar{y} = \frac{\sum y}{n} = \frac{3.020}{7} = 0.4314$$

$$r = \frac{\sum uv}{\sqrt{\sum u^2 . \sum v^2}} = \frac{2.93}{\sqrt{241.573 * 0.078}} = 0.67 = 67\%$$

We have standard deviation of actual sales X

$$\sigma x = \sqrt{\frac{\sum (x - \bar{x})^2}{n}} = \sqrt{\frac{241.573}{7}} = 2.2204$$

Similarly, Standard deviation of cash balance Y

$$\sigma y = \sqrt{\frac{\sum (y - \bar{y})^2}{n}} = \sqrt{\frac{0.078}{7}} = 0.0399$$

The Value of ‘r’0.67 shows there is high positive relationship between cash and sales. By the test of significant of the value of ‘r’ we can find there is positive correlation or not between two variables,

i.e. P.E of 'r'

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

$$P.E = 0.6745 * \frac{1-0.62^2}{\sqrt{7}} = 0.157$$

6*P. E = 6*0.157= 0.0262

Since r <P.E X 6 the value of ‘r’ is not significant, so there is doubt that if cash balance increases, the sales will increase. So, the assumption is wrong.

To forecast the cash balance from the actual sales, we use regression method. So, the sales X on cash balance Y can be shown in the following equation,

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

$$x - 17.8237 = 0.67\frac{2.2204}{0.0399}(y - 0.4314)$$

$$x - 17.8237 = 37.285(y - 0.4314)$$

$$x - 17.8237 = 37.285y - 16.085$$

$$x = 37.285y - 33.3909$$

This equation shows that sales will be increased by 37.285 per euro increase in cash balance.

Next regression line of cash balance on actual sales, X on Y is as under

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

$$y - 53.92 = 0.67\frac{13.81}{232.81}(x - 2227.96)$$

$$y - 53.92 = 0.039x - 88.54$$

$$y = 0.039x - 34.62$$

Thus, an assumption is that the cash balance is the function of sales achieved. This shows that per rupee increase in cash balance increases sales by 0.039.

5.2.3 Fitting the Straight-Line Trend by Least Square for Sales and Receivables

Time element is also an important factor because with the passage of time sales achievements account receivables changes, which can be expressed by the component of time series. A straight-line trend by the method of least square will show the relationship between the years (time) and ratio in time account receivables and sales.

Table 15 Fitting the straight-line trend by least square method of NTL

Years(X)	Ratio in time(Y)	$x = (X - \bar{x})$	x^2	xY
2012 (1)	163.99	-3	9	-491.97
2013 (2)	19.79	-2	4	-39.58
2014 (3)	37.92	-1	1	-37.92
2015 (4)	258.81	0	0	0
2016 (5)	98.59	1	1	98.59
2017 (6)	184.4	2	2	368.8
2018 (7)	153.82	3	3	461.46
$\sum X$ =28	$\sum Y$ =917.32	$\sum x$=0	$\sum x^2$=28	$\sum xY$=359.38

Source: -Annual report of NTL and STCL 2018

$\bar{x} = \frac{\sum X}{n} = \frac{28}{7} = 4$

x = No of observations

y = Ratio in time of A/R and sales

Straight line trend

$y = a + b\alpha$

$a = \frac{\sum y}{n} = \frac{917.32}{7} = 131.04$

$b = \frac{\sum xY}{\sum x^2} = \frac{359.38}{28} = 12.835$

Therefore y=131.04+12.835α

This trend line shows that the sales directly affected by account receivables in future. The future ratio can be forecasted by the calculated equation again.

Table 16 Fitting the Straight-line Trend by Least Square Method of STCL

Years(X)	Ratio in time(Y)	$x = (X - \bar{x})$	x^2	xY
2012 (1)	13.19	-3	9	-39.57
2013 (2)	11.67	-2	4	-23.34
2014 (3)	11.61	-1	1	-11.61
2015 (4)	12.32	0	0	0
2016 (5)	14.66	1	1	14.66
2017 (6)	21.93	2	2	43.86
2018 (7)	10.76	3	9	32.28
$\sum X$ =28	$\sum Y$ =96.14	$\sum x$=0	$\sum x^2$=28	$\sum xY$=16.28

Source: -Annual report of NTL and STCL 2018

$\bar{x} = \frac{\sum X}{n} = \frac{28}{7} = 4$

X=No of observations

Y= Ratio in time of A/R and sales

Straight line trend,

$y = a + b\alpha$

$a = \frac{\sum Y}{n} = \frac{96.14}{7} = 13.73$

$b = \frac{\sum xY}{x^2} = \frac{16.28}{28} = 0.5814$

Therefore, y = 13.73+0.5814α

From this trend line the ration in future can be forecasted which shows direct relationship between sales and account receivables.

5.2.4 Correlation Coefficient of NTL between Sales and Account Receivables

To find out the correlation between sales and account receivables Karl Pearson's coefficient correlation coefficient 'r' is determined. For this purpose, sales and account receivables are assumed to be interrelated economic variables. it is assumed that receivables(X) is dependent variable and sales(Y) is independent variables. It is assumed that receivables will increase in as per the increment in sales. it means that there should be positive relationship between sales and account receivables.

Table 17 Correlation Coefficient 'r' between Receivables and Sales of NTL (€ in million)

Years	Receivables(X)	Sales(Y)	$u = (x - \bar{x})$	$v = (y - \bar{y})$	u^2	v^2	uv
2012	0.039	6.429	-0.063	-0.706	0.0039	0.4978	0.0443
2013	0.215	4.251	0.113	-2.883	0.0127	8.3099	-0.3252
2014	0.206	7.831	0.104	0.697	0.0109	0.4859	0.0728
2015	0.036	9.395	-0.066	2.261	0.0043	5.1128	-0.1483
2016	0.132	7.739	0.030	0.605	0.0009	0.3660	0.0182
2017	0.042	7.820	-0.060	0.686	0.0036	0.4707	-0.0409
2018	0.042	6.473	-0.060	-0.661	0.0036	0.4369	0.0396
	$\sum x$ =0.713	$\sum y$ =49.939	$\sum u$ =0	$\sum v$ =0	$\sum u^2$ =0.0399	$\sum u^2$ =15.6801	$\sum uv$ = -0.3394

Source: -Annual report of NTL and STCL 2018

$$\bar{x} = \frac{\sum x}{n} = \frac{0.713}{7} = 0.1019$$

$$\bar{y} = \frac{\sum y}{n} = \frac{49.939}{7} = 7.13414$$

$$r = \frac{\sum uv}{\sqrt{\sum u^2 . \sum v^2}} = \frac{-0.3394}{\sqrt{0.0399 * 15.6801}} = -0.4291 = -0.43$$

The value of 'r' (-0.43) shows that there is negative relationship between sales and receivables. The test of significant of the value of 'r' shows either there is significant negative relation or not between sales and receivables.

The probable error of 'r'

$$P.E = 0.6745 * \frac{1-r^2}{\sqrt{n}} = 0.6745 * \frac{1-(0.43)^2}{\sqrt{7}} = 0.2078$$

6 X P.E = 6 X 0.2078 = 1.2468

Since r < 6 X P.E, the value of 'r' is not significant. So that there is doubt to say if sales increases the receivables will also increases. A regression line also can be fitted to show the degree of relationship between sales and account receivables. For this purpose, receivables have been assumed to be dependent on sales.

So that, the regression line of receivables(X) on sales (Y) is as follows

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

Now,

$$\sigma x = \sqrt{\frac{\sum(x-\bar{x})^2}{n}} = \sqrt{\frac{0.0399}{7}} = 0.0755$$

$$\sigma y = \sqrt{\frac{\sum(y-\bar{y})^2}{n}} = \sqrt{\frac{15.6801}{7}} = 1.49667$$

$$or, x - 0.10192 = (-0.43)\frac{0.0755}{1.49667}(y - 7.13414)$$

$$or, x - 0.10192 = -0.022y - 0.157$$

$$x = -0.22y + 32.46$$

Thus, for one euro increase in sales, the amount of account receivables will decrease by 0.22€

Again, the regression lines of sales (Y) on receivables (X) as follows:

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

$y - 7.13414 = (-0.43)\frac{1.49667}{0.0755}(x - 0.10192)$

$y - 7.13414 = -8.52x + 0.04383$

y = 8.52 x + 7.17797

Thus, for one euro increase in receivables, the amount of sales decreases 8.52 €.

Table 18 Analysis of correlation coefficient between sales and account receivables of STCL

Years	Rev.(X)	Sales(Y)	$u = (x - \bar{x})$	$v = (y - \bar{y})$	u^2	v^2	uv
2012	1.11704	14.73896	-0.1707	-3.0847	0.02912	9.51562	0.52644
2013	1.0832	12.64368	-0.2045	-5.18	0.04182	26.83261	1.05931
2014	1.2008	13.9452	-0.0869	-3.8785	0.00755	15.04276	0.33704
2015	1.21752	15.00696	-0.0702	-2.8167	0.00493	7.93402	0.19768
2016	1.34216	19.688	0.0544	1.8643	0.00297	3.47561	0.10153
2017	1.42224	31.19152	0.1345	13.368	0.01810	178.699	1.79851
2018	1.63104	17.55144	0.3433	-0.2723	0.11788	0.07413	-0.09348
	$\sum x$ =9.014	$\sum y$ =124.766	$\sum u$ =0	$\sum v$ =0	$\sum u^2$ =0.22237	$\sum u^2$ =241.57337	$\sum uv$ =3.92703

Source: -Annual report of NTL and STCL 2018

$$\bar{x} = \frac{\sum x}{n} = \frac{9.014}{7} = 1.2877$$

$$\bar{y} = \frac{\sum y}{n} = \frac{124.766}{7} = 17.8237$$

Now,

$$r = \frac{\sum uv}{\sqrt{\sum u^2 . \sum v^2}} = \frac{3.92703}{\sqrt{0.22237 * 241.57337}} = \frac{3.92703}{7.3293} = 0.54$$

The value of 'r' 0.54 shows that there is high positive correlation between sales and account receivables. But this positive correlation is not due to chances. The test of significant of the value of 'r' shows either there is positive correlation or not between sales and receivables.

The probable error of 'r'

$$P.E = 0.6745 * \frac{1-r^2}{\sqrt{n}} = 0.6745 * \frac{1-0.54^2}{\sqrt{7}} = 0.18$$

6 x P.E. =X 0.18=1.08

Since r < 6X P.E., the value of 'r' is not significant. So, there is doubt to say if sales increases, the value of receivables also increases. A regression lines also can be fitted to show the degree of relationship between sales and account receivables. For this purpose, receivables have been assumed to be dependent on sales.

So that, the regression line of receivables (X) and sales Y is as follows.

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

where,

$$\sigma x = \sqrt{\frac{\sum(x-\bar{x})^2}{n}} = \sqrt{\frac{0.2224}{7}} = 0.178$$

$$\sigma y = \sqrt{\frac{\sum(y-\bar{y})^2}{n}} = \sqrt{\frac{241.57}{7}} = 5.875$$

or, x – 1.2877 = 0.54*$\frac{0.178}{5.875}(y - 17.824)$

or, x – 1.2877 = 0.0164y – 0.292

or, x = 0.0164y + 0.9957

This shows, one euro Increase in sales the receivables will increase by 0.0164 €

Again,

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

$$y - 17.824 = 0.54 * \frac{5.875}{0.178}(x - 1.2877)$$

or, y – 17.824 = 17.82x – 22.951

or, y = 17.82x -5.127

This shows, that per euro increase in receivables increases by 18.80 €.

5.2.5 Analysis of correlation coefficient between account receivables and cash and bank balance

To find the correlation between receivables and cash and bank balance, Karl Pearson's correlation coefficient is determined. For this purpose, account receivables and cash and bank balance are assumed to be interrelated economic variables. Let us assume receivables (X) are dependent variables and cash and bank balance are independent variables.

Table 19 Correlation coefficient between account receivables and cash and bank balance of NTL

Years	Rec(X)	Cash and bank (Y)	$u = (x - \bar{x})$	$v = (y - \bar{y})$	u^2	v^2	uv
2012	0.039	14.73896	-0.063	-3.0847	0.0039	9.51562	0.19434
2013	0.215	12.64368	0.113	-5.18	0.0127	26.83261	-0.58534
2014	0.206	13.9452	0.104	-3.8785	0.0109	15.04276	-0.40336
2015	0.036	15.00696	-0.066	-2.8167	0.0043	7.93402	0.18590
2016	0.132	19.688	0.030	1.8643	0.0009	3.47561	0.05591
2017	0.0424	31.19152	-0.060	13.3678	0.0036	178.69861	-0.80207
2018	0.04208	17.55144	-0.060	-0.2723	0.0036	0.07413	0.01634
	$\sum x$ =0.713	$\sum y = 124.7658$	$\sum u$ =0	$\sum v$ =0	$\sum u^2 = 0.0399$	$\sum v^2 = 241.5733$	$\sum uv = -1.3383$

Source: -Annual report of NTL and STCL 2018

$$\bar{x} = \frac{\sum x}{n} = \frac{0.713}{7} = 0.10186$$

$$\bar{y} = \frac{\sum y}{n} = \frac{124.7658}{7} = 17.82368$$

$$\sigma x = \sqrt{\frac{\sum (x-\bar{x})^2}{n}} = \sqrt{\frac{0.0399}{7}} = 0.028536$$

$$\sigma y = \sqrt{\frac{\sum (y-\bar{y})^2}{n}} = \sqrt{\frac{241.5733}{7}} = 5.87456$$

Now,

$$r = \frac{\sum uv}{\sqrt{\sum u^2 . \sum v^2}} = \frac{-1.33828}{\sqrt{0.0399 * 241.57337}} = -0.3411$$

The value of 'r' is 0.34 shows there is negative correlation between receivables and cash and bank balance. The test of significant shows either there is significant negative correlation or not between account receivables and cash and bank balance.

The probable Error P.E 'r'

$$P.E = 0.6745 * \frac{1-r^2}{\sqrt{n}} = 0.6745 * \frac{1-(-0.341)^2}{\sqrt{7}} = 0.225$$

$\therefore 6 \times$ P.E. $= 6 \times 0.2253 = 1.352$

Since the value of r < 6X P.E, the value of 'r' is not at all significant. So that there is doubt that whether receivables increase the cash balance will decreases. There is no extra evidence to prove that either receivables increase the cash and bank balance decreases.

Table 20 Correlation coefficient between receivables and cash and bank balance of STCL

Year	Rec.(X)	Cash and bank(Y)	$u = (x - \bar{x})$	$v = (y - \bar{y})$	u^2	v^2	uv
2012	1.11704	0.28024	-0.1707	-0.1512	0.0291	0.0229	0.025798
2013	1.0832	0.50456	-0.2045	0.07316	0.0418	0.0054	-0.01496
2014	1.2008	0.43056	-0.0869	-0.0008	0.0076	0.0000	0.00073
2015	1.21752	0.30824	-0.0702	-0.1232	0.0049	0.0152	0.008643
2016	1.34216	0.47056	0.05446	0.03916	0.0030	0.0015	0.002133
2017	1.42224	0.61232	0.13454	0.18092	0.0181	0.0327	0.024341
2018	1.63104	0.41336	0.34334	-0.0180	0.1179	0.0003	-0.00619
	$\sum x$ =9.014	$\sum y$ =3.01984	$\sum u$ =0	$\sum v$ =0	$\sum u^2$ = 0.2224	$\sum u^2$ =0.0780	$\sum uv$ =0.04049

Source: -Annual report of NTL and STCL 2018

$$\bar{x} = \frac{\sum x}{n} = \frac{9.014}{7} = 1.2877$$

$$\bar{y} = \frac{\sum y}{n} = \frac{3.01984}{7} = 0.43141$$

$$r = \frac{\sum uv}{\sqrt{\sum u^2 . \sum v^2}} = \frac{0.04049}{\sqrt{0.2224 * 0.0780}} = 0.3074$$

The value of 'r' is positive 0.3, which shows there is positive correlation between receivables and cash and bank balance. But this positive correlation is not only due to chances. The test of significant and the value of 'r' shows either there is positive correlation or not between account receivables and cash and bank balance.

The probable error of,

$$P.E = 0.6745 * \frac{1-r^2}{\sqrt{n}} = 0.6745 * \frac{1-0.30^2}{\sqrt{7}} = 0.023$$

Since the value of r < 6 X P.E., the value of ''r is not at all significant. So, it is doubted to say that whether receivable increases the receivables also increases the cash balance will decreases or vice-versa. So, there is no extra evidence to prove that receivable will increases, cash and bank balance decreases.

5.3 Analysis of Primary Information Collected through Questionnaire

In course of analyzing the data, I have not only analyzed the secondary data. To make my research work more effective and accurate, I have also collected some primary data through the means of questionnaire by the help of company's employee having different post i.e., general manager, senior account officer, sales manager, junior account officer.

All of these four members of an organization are responsible persons for financial position of an organization, who help me for filling up questionnaire. I had not consulted the lower level employees of the company. On the basis of answers given by them, I am going to analyze the answers. For this purpose, I arrange the information in a tabular form which is in below and questionnaire given with options of answers are kept in last at annex.

Table 21 Analysis of respondent answers about cash management of NTL

Q. No.	No of respondents						
	Options of answers						
	Yes	No	a	b	c	d	Specify
1	1	3					
2			4				
3			3			1	
4					4		
5	4						
6			1				
7	4						
8							
9	4						
10							2%
11							90%
12	4						
13				2		2	
14					2	2	
15			3	1			
16	4						
17					4		
18		4					
19			3		1		
20	1	3					

Source: - Answers of the questionnaire (see annex-I)

It can be said (table 21) that answers given by the respondents are homogeneous there is same opinion in some questions whereas different opinions in the rest questions. While analyzing the answers given by the respondents surfacelly it can be said that there is no specific policy and guidelines regarding the cash management of NTL. Except some exception there seem to be homogeneity in answers for the questionnaire no.1,2,3,4,5,6,7,9,10,11,12,16,17 and 18.

On these questions most of the respondents answer in each other whereas different answers are given in the remaining other questions. According to the majority of the respondent the company does not have cash budget, if a company does not make a cash budget then there

is no meaning of methods of cash budget whereas there is a dispute among them about the methods and time period of cash budget. Most of the respondents are in favor of both cash and credit sales and they are in uniformity of credit period allowed to customer.

Some respondents are in favor of following any specific method for cash collection and some respondents are not in favor of following any specific method for cash collection. Some respondents answered that the major problems of the company are inadequate cash balance while managing the cash and some respondents answered that the major problems of the company is problem of effective utilization of cash. Most of the respondents are in the favor of not using any standard methods or models for determining optimal cash balance.

There is no any advance payment system from customers and out of four, one says that the company takes advantage of cash discount rarely and three respondents says that the company never takes advantage of cash discount. According to respondent's majority, it can be said that the organization does not able to pay its short-term liabilities on due dates and this is due to shortage of cash, delayed payment by customers and decline in cash sales. There is different thought of the respondents for improving cash collection system, some are in the favor of initiate compromise, some are in the favor of charging higher rate of interest. Thus, by analyzing this primary information it is found that the result of secondary data analysis and results of primary data analysis are matches in various major aspects.

Table 22 Analysis of primary data from respondents of STCL

Q.N.	No of respondents						
	Options of answers						
	Yes	No	A	b	c	d	specify
1	1	3					
2			1				
3			1		3		
4					4		
5	1	3					
6					1		
7		4					
8							

9	1	3					
10							3%
11							90%
12	4						
13					3	1	
14					2	2	
15			3	1			
16		4					
17			3		1		
18		4					
19			3			1	
20	1	3					

Source: - Answer of Questionnaires (see Annex-I)

We can see (table 22) that there is homogeneity in the answer of the respondents; these answers are not very different to the answer of NTL's respondents. The problem of cash management in STCL can be seen through the study of these questionnaires.

According to them the corporation do not prepare cash budget. It has not uniformity in credit terms allowed to customer. Most of the respondent is in favor of charging interest for delayed payment. Due to the liquidity problems of the customer, the payment becomes delay. The corporation allows them long credit of period, as it doesn't like to bear the risk of losing them. There are different views of customer in improving collection system. It also has been proved that the corporation rarely takes cash discount. According to the respondents the corporation is not able to pay its short-term liabilities due to scarcity of cash. There is not any system of leaving cash as optimum balance.

Form the above study it can be proved that both the leading trading organizations are not managing the cash efficiently.

6 findings and Discussion

6.1 Findings

a) Major Findings from Secondary Data:

Summary of the major findings from secondary data has been presented under following corresponding to the study objective.

- Both the companies have fluctuating trend of cash and bank balance. Average cash balance of NTL is greater than STCL and it is fluctuating more. The trend analysis of cash and bank balance shows positive figure of cash balance in future. The fluctuating cash and bank balance shows there are not any definite policies how much of cash and bank balance to hold each fiscal year.
- The cash turnover ratios of both companies are in fluctuating trend. This ratio of STCL is better than NTL as it has greater ratios during study period. Correlation coefficient between cash and bank balance being low negative and the relation r < P.E.X 6, suggest statistically inconclusive negative correlation as to significant, in significant, showing little complicity of cash and bank balance with sales variable of NTL where as STCL has positive correlation between sales and cash and bank balance as it signifies the test r >6X P.E.
- Proportion of account receivables to sales is not satisfactory of both companies as they have fluctuating trend, and account receivables doesn't increase or decrease in the same pattern as sales does. The study shows that there is negative correlation between the two corresponding variables for NTL as STCL has positive degree of co-relation, but it is not conclusive as they don't the probable error test.
- The proportion of cash and bank balance to account receivables of STCL is homogeneous than NTL, so this ratio of NTL is not satisfactory. NTL has average ratio for seven years period is 10.31 times, while STCL has 0.33 times. the value of r (-0.250) shows there is negative correlation between cash and bank balance account receivables of NTL and that of STCL is +0.30. But there is doubt as both of them do not signify the probable error test.
- The average current ratio of STCL is good i.e.3.73:1 as it is greater than industry average 2:1 but NTL has this ratio of only 1.23:1, this shows unsatisfactory liquidity position.
- The average cash and bank to current asset ratio of NTL is greater than STCL that is 5.44 times and STCL has this ratio of 3.89 times, which shows sound liquidity position in NTL.
- The cash and bank balance to current liabilities ratio of NTL is lower than that of STCL, which shows NTL has sound liquidity position and is able to meet the current obligation from its cash and bank balance.
- The net profit margin ratio of NTL is very poor, since it has been suffering from loss since last two years, whereas this ratio of STCL is quite satisfactory.
- In the same, the Average collection period of NTL is better than STCL comparing average days of seven years period but the inventory conversion period of STCL is better than NTL.

b) Major Findings from Primary Data:

Summary of major findings of the companies can be presented as follows:

- Both of the companies do not use the cash budget as there is majority in the respondents' answers. Some of the respondent state that they prepare cash budget to forecast cash requirement in future.
- Both of companies have sales in cash and credit basis and there is liberal term in credit collection.
- The companies offer cash discount for early payments and generally the percentage of discount is 2%. The cash collection ratio these companies are suffering from overdue amount to the collection. The reasons for these are liquidity position of customer, risk of losing customer and defective system of credit collection.
- The companies use average collection period method and account receivable turnover ratio to monitor credit behavior of customer.
- There is not advance collection system in sales in both companies.
- Both the companies rarely take cash discount offered by bank arrangements.
- Both the of companies are unable to discharge all short-term liabilities on due dates and the reasons for that is shortage of cash and decline is cash sales.

6.2 Discussion

While analyzing the management cash in NTL and STCL, some issues and constraints have been noticed which may be described as follows.

1. Absence of forecast and plan: it is observed that the cash management least concerned to forecast of cash for the coming period. The cash forecasting is lacking completely in the corporation. The fluctuating trend of cash deficit reveals the fact clearly.
2. The lack of accurate and proper sales forecast is one of the important constraints that affect the financial performance of the corporations. If the corporations forecast the expected sales accurately, it can be mange the various activities accordingly. For example, they can for capital, investment, requirement of current expenses and inventories etc.
3. The quality management itself is a scarce factor in both companies. Both of the companies exhibit that managements lack basic knowledge of financial management.
4. Restrictive credit policy is one important constraint that affects the sales volume of corporations. If they adopt liberal credit policy, they can increase the sales volume and receivable turnover by employing a very restrictive credit policy. But however, this is true up to certain point only because such strategy tends to decrease the sales.
5. Due to certain constraints in management, both companies denied providing information except balance sheet and profit and loss account, which are not sufficient for analysis of cash management.

7 Conclusion and Recommendations

7.1 Conclusion

In conclusion, it can be said that the cash management is an essential part of financial decision making. Many factors or determinants such as level of sales, credit terms, quality of customers, economic condition etc. has to be considered in cash management. Apart from the level of purchase, method of creating cash management, establish of credit terms, types of credit policy, motives of holding cash management, different techniques of cash management are to be considered.

Conclusively, it can be stated that NTL's and STCL's cash management is very poor. Negative low profitability of the companies adds much to the worsening financial position of the companies. Besides, cash management being one of the important elements in financial function, there are other numerous aspects of finance involved in the overall financial performance of the company. In addition to this, the overall performance of the company counts for other managerial aspects such as; human resource management, organizational structure, markets management etc. However, above all disappointing down-falling trend of the financial position is indicative of the fact that both companies should immediately seek for drastic change in its managerial structure. So far cash management is concerned, the recommendations suggested above could, to a greater extent, uplift NTL's and STCL's cash management situation.

7.2 Recommendations

As recommendations, shall be summarized there should be use of **monthly trial balance, Cash fund flows and financial report** in order to appraise their financial position to the board of directors and the stakeholders.

Both companies NTL and STC Ltd are not able to manage cash. Companies are having common problems with cash receipts and payment due to lack of proper budget forecasting. They are not able to keep cash balances at a minimum level and to invest the surplus cash fund in profitable opportunities. So, they must have **proper budget forecasting**.

Account receivable should be given top priority by the management of the corporation. Both companies should study about the character, capacity, capital, collateral and conditions of the credit requesting customers. Companies should be able to enjoy suitable credit policy for long duration. Which will help them for **high turnover and low collection period**. The companies should manage its cash affairs in such a way as to keep cash balances at a minimum level and to invest the surplus cash fund in profitable opportunities.

The excess cash normally is invested in marketable securities which can be conveniently and promptly converted into cash. The excess may build up slack season, but it would be needed when demand pick up. The financial managers of both companies must **decide about the portfolio or marketable securities in which the firms' surplus cash should be invested**.

From the analyses it has been identified that NTL and STCL have been preparing cash budget without any definite planning. So, it is recommended to **prepare cash budget based on cash flow analysis**. The objective of preparing a cash budget is to forecast whether at

any point of time there is likely to be an excess or shortage of cash. The following steps are considered for construction of a cash budget.

Step 1: To identify the sources of cash flows (receipt):

Normally the sources of a business are as follows:

i. Cash sales.
ii. Cash collection from debtors.
iii. Cash sales of fixed assets.
iv. Interest and dividend received.
v. Issue of share and debenture.
vi. Bank loan.
vii. Loan from financial institutions.

Step 2: To determine the cash outflow (payment).

Following are the list of payments:

i. Cash purchase
ii. Payment of the credit purchase.
iii. Wages and salary payment.
iv. Payment of manufacturing, administrative and selling expenses.
v. Repayment of borrowed capital.
vi. Payment for purchase of fixed assets.
vii. Payment of other expenses.

Step 3: To find out the closing balance. The closing balance of cash can get by the following way:

Closing balance of Cash = opening balance of Cash + Receipt of Cash – payment of Cash.

The specimen of cash budget is given below:

Cash budget for the month……

Beginning cash balance		*****
Add: Receipt		
Cash sale	*****	
Collection from debtors	*****	
Sales of fixed assets	*****	
Interest received	*****	
Dividend received	*****	
Collection from issuing shares	*****	
Loan received	*****	
Total receipt(A)		*****
Cash payment		
Cash purchase	*****	
Wages and salary	*****	
Manufacturing overhead	*****	
Administrative overhead	*****	
Selling overhead	*****	
Interest	*****	
Dividend	*****	
Fixed assets purchased	*****	
Repayment of borrowed capital	*****	
Total payment (B)		*****
Closing cash balance(A-B)		*****

Annex 1: Research Questionnaire

Research Questionnaires for "cash management"of National Trading limited and Salt Trading Corporation Limited.

1. Does your organization use "Cash Budget"?
   Yes [ ] No [ ]
2. If yes how often do you prepare cash budget?
   a. Annually [ ]
   b. Semi-annually [ ]
   c. Monthly [ ]
   d. Weekly [ ]
3. What methods do you follow to forecast your cash requirements?
   a. Cash budget method [ ]
   b. Adjusted net income method [ ]
   c. Ratio analysis method [ ]
   d. Projected balance method [ ]
   e. Mathematical model [ ]
4. What policy does your organization follow in respect of sales?
   a. Cash sales [ ]
   b. Credit sales [ ]
   c. Cash and credit sales [ ]
5. Do you have uniform terms of credit allowed to customers?
   Yes [ ] No [ ]
6. If 'yes' what is the period credit allowed to customer?
   a. Net 7 days [ ]
   b. Net 15 days [ ]
   c. Net 30 days [ ]
   d. Net 60 days [ ]
   e. Net 90 days [ ]
7. Do you have policy on charging interest on delayed payments?
   Yes [ ] No [ ]
8. If 'yes' then what is the rate of interest charged?
   Please specify [ ] %
9. Do your organizations offer cash discount to the customer for early payments?
   Yes [ ] No [ ]
10. If 'yes' what is rate of discount percent?
    Please specify [ ] %
11. What is the cash collection ratio in your organization?
    Please specify [ ] %
12. Is there over due amount to the collection?
    Yes [ ] No [ ]
13. If 'yes' what is your opinion may be the causes of over due amounts receivables?
    a. Customer attitudes [ ]
    b. Problem of the liquidity of customer [ ]
    c. Risk of losing customer [ ]
    d. Defective system of credit collection [ ]
13. What is your suggestion to cash collection system?
    a. Contact on telephone [ ]
    b. Initiate compromise [ ]

c. Charging higher rate of interest [ ]
d. Seek the health of collection agent [ ]

14. In monitoring the credit behavior of your customer which method do you apply?
a. Account receivable turnover [ ]
b. Average collection period method [ ]
c. Ageing schedule [ ]
d. Days sales outstanding [ ]
e. Cash budget variance analysis [ ]

15. Do you have a system of collection system of advance payment from customers?
Yes [ ] No [ ]

16. To what extent does your organization take advantage of cash discount offered by bank arrangements?
a. Always [ ]
b. Sometimes [ ]
c. Rarely [ ]
d. Never [ ]

17. Is your organization able to discharge all short term liabilities on due dates?
Yes [ ] No [ ]

18. Rank the reasons, if your organization is unable to discharge all short term liabilities on due dates?
a. Shortage of cash [ ]
b. Delayed payment customer [ ]
c. Decline in cash sales [ ]
d. Inability to arrange bank credit/Loans [ ]
e. Any other [ ]

19. Do you have practice leaving a portion of cash fund optimum of cash[ ] or bank [ ] balance

Annex 2: Cash flow statement of NTL

Year	2013	2014	2015	2016	2017
A)Cash flow from operating Activities					
Add: Adjustment for Depn. of FA	22,243.65	28,403.00	23,302.01	19,971.13	17,994.81
Deferred revenue exp. written off			2,102.24	2,309.41	4,479.44
Interest	215,123.47	229,835.65	238,333.36	207,448.48	178,227.24
Provisions					
Loss on sale of fixed assets			42.27		-3,788.55
Other non cash expenses					
Cash flow Before change in W.C	433,865.34	289,206.16			
Change in working capital					
Add. Decrease in current assets and	232,916.29	37,346.89	369,471.00	1,003,159.02	
Increase in current liabilities	83,930.41		30,967.49	3,592.05	
Less. Increase in current assets and	709,553.34	497,932.83			-38,097.93
Decrease in current liabilities		254,322.71	553,912.32	885,537.12	-388,422.34
Cash flow from operation	750,712.03	580,875.76			
Less. Payment of interest	15,173.40	229,835.66	237,757.60	207,448.48	178,227.24
Payment of corporate tax	7,666.79	160,570.37	27,547.04	16,799.27	
Cash flow before extra-ordinary items					
Income from extra-ordinary items					
Cash flow from operating Activities(A)	**158,370.78**	**-38,672.31**	**373,467.21**	**989,951.80**	**-38,097.93**
B) Cash flow from Investing Activities					
Interest/dividend received	15,173.40	20,739.84	28,474.16	35,334.46	29,007.98
Purchase/sale of fixed assets	7,666.79	33,502.98	9,227.41	-3,961.62	-15,495.25
Increase/decrease in loan and deposits				587,856.00	2,569,181.53
Decrease in preliminary expenses					
Investment in shares	-44,400.00	-29,160.00		-2,158.47	-36,403.10
Cash flow from Investing Activities(B)	**-21,559.81**	**25,082.82**	**37,701.57**	**29,214.37**	**-22,890.36**
C) Cash flow from Financing Activity					
Issue of Shares					
Payment of long term loan					
Dividend Paid	-102,178.37	-40,640.40	-81,280.80	-81,280.80	-4,161.97
Others				-10,116.68	-2,106.48
Cash flow from financing Activities(C)	**-102,178.37**	**-40,640.40**	**-81,280.80**	**-91,397.48**	**-6,268.45**
Net cash flow generation for the year(A+B+C)	34,632.60	-54,229.89	329,887.98	927,768.68	-67,256.75
Add. Opening Cash Balance	308,946.38	357,387.08	387,613.25	193,463.91	205,716.26
Closing Cash Balance	343,578.98	303,157.19	717,501.23	1,121,232.60	138,459.51

Annex 3: Cash Flow Statement of STCL

Fiscal year	2013	2014	2015	2016	2017
A) Cash flow from operating Activities					
1.Income before tax	111133.3	292228.99	532725.3	785282.21	579296.3
Add adjustment for					
Depreciation of fixed assets	169678.26	16639.072	20294.92	29028.504	30985.04
Deferred revenue expenditure written off	7849.92				
Share invest written off	4280				
Profit/loss on sale of assets	-77	-1468.352	-1066.752	63.944	-1158.264
Interest expenses	74682.296	840261.34	891406.09	925490.38	959958.42
Dividend received	-9147.2	-10208	-7264.08	-61.68	
Interest received				-6138.6	
Operating profit before change in W.C.	877739.59	1137453	1436095.5	900720.76	
Less. Increase in current assets and	-1530468.6	-1382662.3	-4367775.1	-897461.73	
Decrease in current liabilities					
Add. Decrease in current assets and	720106.95	1138344.1	549780.25	1823022.4	
Increase in current liabilities					
Prize by BOD payment		-4218.096	-106631.52	-12060.056	
Payment of corporate tax		-196000	-87303.16	-75409.488	-118462.95
Cash flow from operating activities(A)	**425777.54**	**1830369.8**	**-1033107**	**3484536.7**	**2753711**
B) Cash flow from investing Activities					
Sale of assets	11591.072	3248.4	1988.976	159.048	231.64
Purchase of fixed assets	-35346.808	-76779.624	-157567.55	-60764.152	-96402.072
Dividend received	9147.2	10208	7264.08	61.68	
Investment in shares and other sectors	-4976	-86400	-48	-54076.568	-2319825.9
Cash from investing Activities (B)	**-19584.536**	**-149723.22**	**-148362.5**	**-114619.99**	**-2415996.4**
C) Cash from financing Activities					
Issue of share					
Bank overdraft				43546.208	4286057.4
Loan issue/ payment	669759.87	224290.76	365434.12	-1404163.5	-966920.28
Payment of dividend	-746822.7	-49555.4	-59466.48	-47644.32	-35381.072
Payment of interest/ received		-840261.42	-891629.41	6138.6	-918326.35
Cash flow from financing Activities(C)	**-77062.824**	**-665526.06**	**-585661.77**	**-1402123.1**	**2365429.7**
Net Cash flow generation for the year (A+B+C)	-73805.392	-122332.33	162342.64	141774.08	-198935.98
Add. Opening Cash balance for the year	504632.41	430579.02	308246.69	470589.33	612363.41
Closing cash balance	**430579.02**	**308246.69**	**470589.33**	**612363.41**	**413427.42**

Annex 4: Balance sheet of National Trading Limited

Balance sheet 2012 (€ In million)

Capital and Liabilities	Amount	Assets	Amount
Shareholders funds:		Fixed assets	0.23368
Share capital 0.56768		Current assets	3.55528
Capital reserve 0.08608		Investment	0.0948
Reserve 0.5364		Reserve fund	0.31648
Profit and loss A/c 0.09672	1.28688		
Debt funds:			
Ling –term debt	0		
Current liabilities	2.91336		
Total capital and liabilities	4.18424	Total Assets	4.18424

Balance sheet 2013 (€ In million)

Capital and liabilities	Amount	Assets	Amount
Shareholders funds:		Fixed Assets	0.22336
Share capital 1.31192		Current Asses	5.70504
Capital reserve 0.08608		Investment	0.08664
Reserve 0.39064		Reserve Fund	0.3465
Profit and loss A/c 0.01432	1.84576		
Debt fund:			
Long term debt			
Current liabilities	4.51288		
Total capital and liabilities	6.36104	Total assets	6.36104

Balance sheet 2014 (€ In million)

Liabilities and capital	amount	Assets	amount
Shareholders funds:		Fixed assets	0.2087
Share capital 1.35464		Current assets	5.52056
Reserve & profit 0.694		Investment	0.47712
	2.04864		
Debt funds:			
Long term debt			
Current liabilities	4.15776		
Total capital & liabilities	775.8	Total assets	6.2064

Balance sheet 2015 (€ In million)

Capital and liabilities	Amount	Assets	Assets
Shareholders funds:		Fixed asses	0.21512
Share capital 1.35464		Current assets	5.59112
Reserve and profit 0.65368		Investment	0.50616
	2.00832		
Debt funds:			
Long term debt			
Current liabilities	4.3048		
Total capital and liabilities	6.31312	Total assets	6.31312

Balance sheet 2016 (€ In million)

Capital and liabilities	Amount	Assets	Amount
Shareholders funds:		Fixed assets	0.18952
Share capital 1.35464		Current assets	5.18808
Reserve & profit 0.6612		Investment	0.54856
	2.01584		
Debt funds:			
Long term debt			
Current liabilities	3.90984		
Total capital and liabilities	5.92568	Total assets	5.92568

Balance sheet 2017 (€ In million)

Capital and liabilities	Amount	Assets	Amount
Shareholders fund:		Fixed assets	0.17424
Share capital 1.35464		Current assets	4.1972
Reserve and profit/loss (0.01344)		Investment	0.54952
	1.3412		
Debt funds:			
Long-term debt			
Current liabilities	3.57976		
Total capital and liabilities	4.92096	Total assets	4.92096

Balance sheet 2018 (€ In million)

Capital and liabilities	Amount	Assets	Amount
Shareholders fund:		Fixed assets	0.17424
Share capital 1.35464		Current assets	5.95296
Reserve and profit/loss (0.394)		Investment	0.58704
	0.96064		
Debt funds:			
Long term debts			
Current liabilities	5.7536		
Total capital and liabilities	6.71424	Total assets	6.71424

Annex 5: Balance of Salt Trading Corporation Limited

Balance sheet 2012 (€ In million)

Capital and liabilities	Amount	Assets	Amount
Shareholders fund:		Fixed assets	0.33664
Share capital 0.19816		Current assets	6.68512
Reserve and profit/loss 0.31512		Investment	1.14696
	0.51328	Preliminary expenses	0.01576
Debt funds:			
Long term debts 5.53456			
Current liabilities 2.13664			
	7.66464		
Total capital and liabilities	8.18448	Total assets	8.18448

Balance sheet 2013 (€ In million)

Capital and liabilities	Amount	Assets	Amount
Shareholders fund:		Fixed assets	0.33664
Share capital 0.19816		Current assets	8.18496
Reserve and profit/loss 0.50456		Investment	0.9852
	0.70816	Preliminary	0.00792
Debt funds:			
Long term debts 6.32832			
Current liabilities 2.47784			
	8.80616		
Total capital and liabilities	9.15432	Total assets	9.15432

Balance sheet 2014 (€ In million)

Capital and liabilities	Amount	Assets	Amount
Shareholders fund:		Fixed assets	0.34224
Share capital 0.19816		Current assets	8.54752
Reserve and profit/loss 0.54392		Investment	1.03072
	0.74216	Preliminary expenses	
Debt funds:			
Long term debts 6.99808			
Current liabilities 2.18024			
	9.17832		
Total capital and liabilities	9.92048	Total assets	9.92048

Balance sheet 2015 (€ In million)

Capital and liabilities	Amount	Assets	Amount
Shareholders fund:		Fixed assets	3.56136
Share capital 0.19816		Current assets	8.91848
Reserve and profit/loss 3.3028		Investment	1.11704
	3.98896	Preliminary Expenses	
Debt funds:			
Long term debts 7.3876			
Current liabilities 2.22032			
	9.60792		
Total capital and liabilities	13.59688	Total assets	13.59688

Balance sheet 2016 (€ In million)

Capital and liabilities		Amount	Assets	Amount
Shareholders fund:			Fixed assets	3.69704
Share capital	0.19816		Current assets	13.44848
Reserve and profit/loss	4.14168		Investment	1.11712
		4.33984	Preliminary expenses	
Debt funds:				
Long term debts	11.19608			
Current liabilities	2.72672	13.9228		
Total capital and liabilities		18.26264	Total assets	18.26264

Balance sheet 2017 (€ In million)

Capital and liabilities		Amount	Assets	Amount
Shareholders fund:			Fixed assets	0.17424
Share capital	0.19816		Current assets	12.7804
Reserve and profit/loss	4.67368		Investment	1.21432
		4.87184	Preliminary expenses	
Debt funds:				
Long term debts	10.6456			
Current liabilities	2.0619	12.8508		
Total capital and liabilities		17.72264	Total assets	17.72264

Balance sheet 2018 (€ In million)

Capital and liabilities		Amount	Assets	Amount
Shareholders fund:			Fixed assets	11.14536
Share capital	0.19816		Current assets	14.02264
Reserve and profit/loss	12.36808		Investment	3.53424
		12.56624	Preliminary expenses	
Debt funds:				
Long term debts	3.08656			
Current liabilities	12.90544	16.136		
Total capital and liabilities		28.70224	Total assets	28.70224

BIBLIOGRAPHY

Awale, Surendra(2006), *Comparative Evaluation of Capital Structure between Salt Trading Corporation Limited and National Trading Limited,* An Unpublished MBS thesis

Bajracharya,Subarna Lal(1990), *Cash Management in Nepalese Public Enterprises,* An unpublished Ph.D. Thesis Delhi Universities

Bhandari, Puja(2006), *A Study on Cash Management in Nepalese Manufacturing Companies with Special Reference to Dabur Nepal Pvt. Ltd. and Uni-liver Nepal Ltd*, An unpublished MBS Thesis

Baumol, W.J., *The Transaction Demand for Cash*, an Inventory Theoretic approach quarterly journal of economic LXV (Nov 1952)

Chaudhary Arun Kumar and Sharma Puskar Kumar (2058), Statistical *Methods*, for M.B.S, M.B.A and M.P.A.

Economic Survey (2003/2004), H.M.G, Ministry of Finance

Fred, J.and Copeland, C., *Managerial Finance*, Ed.9th2002, Harcourt Brace Journorich College

Khan, M.Y and Jain, P.K (1986), *Financial Management*, Tata Mc-Graw Hill Publishing Company Limited.

Kothari, C.R., *Research Methodology: Method and Techniques*, Willeg Eastern Limited, New Delhi, 1989

Levin and Rubin (2002), *Statistics for Management*, 7th edition, New Delhi: Prentice Hall of India

McKinnon, R.I., 1963. Optimum currency areas. *The American economic review*, *53*(4), pp.717-725.

Miller, M.H. and Orr, D., 1966. A Model of the Demand for Money by Firms. *The Quarterly journal of economics*, *80*(3), pp.413-435.

Mulapeti, Sabita(2005), *A Study on Cash Management of Nepalese Public Enterprises, A Case Study of Royal Drug LTD*, An unpublished MBS Thesis, TU, Kathmandu

National Trading Limited,(2018), Annual Report

Neupane, Kiran(2060),*A Study of Cash Management in Nepalese Publi Enterprises, a Case Study of Salt Trading Corporation Limited*

Panday ,I .M (1994), *Financial Management,* Vikash Publishing House Pvt.

Poudel, Rajan B. and friends (2006), *Fundamental of Financial Management*, Asmita Books Publishers & Distributors, Kathmand

Pardhan, Bijaya (1997), *A Study of Cash Management of Salt Corporation Limited*, An unpublished M.B.A Thesis

Salt Trading Corporation Limited,(2018), Annual Report

Shrestha,Manohar Krishma (2004), *Receivables Management in Selected Listed*

Solman A,Gursewald Donald(1964), *Managerial Finance*, New Delhi, John Wiley Inc.

Statistical Yearbook of Nepal (2004), H.M.G, Thapathali, Kathmandu, Nepal.

Subedi, Sundar Mani (2006), *A Study on Cash Management of Selected Nepalese Manufacturing Companies*, *An* unpublished MBS thesis

Van Horne, James.C, *Corporate Financial Management*, New Delhi Prentice Hall of India Pvt. Ltd, 1974.

Van Horne, James.C, *Financial Management Policy*, New Delhi;

Wolff, Howard K. and Pant, P.R, *Social Science Research and Thesis Writing*, Kathmandu: Buddha Academic Enterprises Pvt. Ltd, 2002.