

**A Study on  
FUND MANAGEMENT  
OF  
SIDDHARTHA BANK LIMITED**

**A Thesis**

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## RECOMMENDATION

This is to certify that the thesis

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*A Study on "FUND MANAGEMENT OF SIDHHARTHA BANK LIMITED"*

*has been prepared as approved by this Department in the prescribed format of the Faculty of Management. This thesis is forwarded for examination.*

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## VIVA-VOCE SHEET

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### **FUND MANAGEMENT OF SIDDHARTHA BANK LIMITED**

*and found the thesis is to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for master's degree in business studies (M.B.S.)*

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## **DECLARATION**

I hereby declare that this thesis entitled "**Fund Management of Siddhartha Bank Limited**" submitted to the office of the dean, faculty of management, T.U, is my original work in the form of partial fulfillment of the requirements for the Degree of Master of Business Studies (MBS) under the supervision and guidance of Associate Professor Mr. Surendra Keshar Amatya of Nepal Commerce Campus, Tribhuvan University.

December, 2014

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"**A Study on Fund Management of Siddhartha Bank Limited**", is the output of my sincere efforts for the partial fulfillment for the requirement of Master of Business Studies (MBS). Through this piece of work, I have attempted to present the clear picture of Siddhartha Bank Limited and hereby would like to assure that the research is perfectly satisfactory and complete despite the some limitations and shortcomings. Those shortcomings and limitations may be because off limited time frame and resources. I am solely responsible for every thing- errors, omissions, good work and findings.

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Last but not least, I do not want to state that this research report is completely and perfectly satisfactory. There may be some shortcomings. I am responsible for all these shortcomings. I am also thankful to my parents for their full help and support in each and every steps of my life. My every achievement is possible because of their effort, help and blessings.

May, 2014

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## Abbreviations

ABBS	=	Any Branch Banking Service
A.D.	=	Anno Domini (after the death of the Christ)
ATM	=	Automatic Teller Machine
B.S.	=	Bikram Sambat
BFI's	=	Bank and Financial Institutions
CAR	=	Capital Adequacy Ratio
C/D	=	Credit Deposit Ratio
CRR	=	Cash Reserve Ratio
C.V.	=	Coefficient of Variance
EPS	=	Earnings Per Share
etc	=	Et cetera
FY	=	Fiscal year
i.e.	=	That is
Lcy	=	Local Currency
LLC	=	Loan Loss Coverage
Ltd.	=	Limited
MBS	=	Master of Business Studies
MER	=	Management Efficiency Ratio
No	=	Number
NPAT	=	Net Profit After Tax
NPL	=	Non-performing Loan
NRB	=	Nepal Rasta Bank
P.Er.	=	Probable Error
r	=	Correlation Coefficient
ROA	=	Return on Assets
ROI	=	Return on Investment
ROE	=	Return on Equity
Rs	=	Nepalese Rupees
SBL	=	Siddhartha Bank
S.d.	=	Standard Deviation
SLR	=	Statutory Liquidity Ratio
TU	=	Tribhuvan University

# CHAPTER - I

## INTRODUCTION

### 1.1 Meaning of Fund Management

Fund management includes management of an enterprise's holdings, with the ultimate goal of maximizing the firm's liquidity and mitigating its operational, financial and reputation risk. Fund Management includes a firm's collections, disbursements, concentration, investment and funding activities. In larger firms, it may also include trading in bonds, currencies, financial derivatives and associated financial risk management.

Most of the larger banks have departments devoted to fund management and supporting their clients needs in this area. Until recently, larger banks had the stronghold on the provision of fund management products and services. However, smaller banks are increasingly launching and/or expanding their fund management functions and offerings, because of the market opportunity afforded by the recent economic environment (with banks of all sizes focusing on the clients they serve best), availability of (recently displaced) highly-seasoned Fund management professionals, access to industry standard, third-party technology providers' products and services tiered according to the needs of smaller clients and investment in education and other best practices.

For non-banking entities, the terms *Fund Management* and *Cash Management* are sometimes used interchangeably, while, in fact, the scope of fund management is larger (and includes funding and investment activities mentioned above). In general, a company's fund operation comes under the control of the CFO, Vice-President / Director of Finance or Treasurer, and is handled on a day to day basis by the organization's Fund managing staff, controller or comptroller.

In addition the fund function may also have a proprietary trading desk that conducts trading activities for the bank's own account and capital, an Asset Liability Management or ALM desk that manages the risk of interest rate mismatch and liquidity; and a transfer pricing or

pooling function that prices liquidity for business lines (the liability and asset sales teams) within the bank. Banks may or may not disclose the prices they charge for fund management products, however the Phoenix Hecht Blue Book of Pricing may be a useful source of regional pricing information

## **1.2 General Background of the Study**

In this era of globalization and economic liberalization, the economic activities are soaring up in the international market. Nepal doesn't have its own long history of the economic activities. About two century ago the barter system was prevailing everywhere in the country, even now in the remote areas the system is still in practice. Until the period of unification of modern Nepal by Prithvi Narayan Shah, there were only two trading partners namely India and Tibet. After the reunification, political instable was prevailing which was somehow controlled by the Rana whose regime begun in 1903 (B.S). During the beginning period of their regime, offices like Tejarath Adda and Mulukhi Khana were established in order to attract deposits and grant loans. But it was not sufficient for the economic development due to lacking of experienced manpower and new technology. As the time passed by their some increasing economic activities was seemed in the country which led to the establishment of first commercial bank of Nepal viz. Nepal Bank Limited in 1937.

Another revolution in banking of Nepal was establishment of Nepal Rastra Bank as central bank in 1956. Since then the development of banking raised to present boiling point. It has been playing the vital role in the aspects of insuring proper management to issue of Nepalese currency notes to make proper arrangement for the circulation of Nepalese currency throughout the Nepal and to stabilize the exchange rates of the Nepalese currency in order to ensure the convenience and economic interests of the general public.

Firstly, commercial banks were operated under 'Commercial Bank Act', 1974. This Act helped to emerge numbers of commercial banks. Now, commercial banks are operated under the directive of NRB Act, 2058. There is also Bank and Financial Institutions Act, 2006 to operate commercial bank and financial institutions. In the decade of 2040, different joint

venture banks started to operate in Nepalese money market, gradually the number is increased in the decade of 2050 and now the number is increasing enormously.

Financial sector has evolved as the biggest sector in the economy. There are altogether 198 financial institutions (Commercial banks, development banks and finance companies) in the country and currently more than 25,000 people employed in these BFIs. GDP of Nepal was around 1346 crore in 2012 according to preliminary estimate; out of these around 50% contribution was service sectors. One major sector is banking and financial sector, which helps to grow other sectors too or the success of other sectors also connected with banking and financial sector.

In this regards this research is concentrated into the fund management of some highly rated, highly performing and having huge profit banks. It tends to identify fund operation practices of Siddhartha Bank Limited. It is said that the banking sector mirrors the larger economy. Its linkage to all sectors makes it a proxy for what is happening in the economy as a whole. Indeed, the Nepalese banking sector today is at boiling point or doing best in these circumstances. Further, it cannot said that all the banks and financial institutions are doing well. The objective of this study is to analyze and distinguish some of the best performing commercial banks' performance through their financial statement specially cash flow of last five fiscal years. Again, this means that, this research is concentrated in the cash position and the flow of cash of high performing commercial banks in different fiscal years, so that the actual cash position of the economy could be identified.

Thus, the history of development of financial institutions in Nepal is not very long. Nepal Bank Ltd is the first commercial bank of Nepal, which was established in 1994 B.S. in semi-government sector. The second commercial bank is Rastriya Banijya Bank Ltd., which was established in 2022 B.S. in 100% government ownership. But after studying to the origin of modern banking, we come to know that "Bank DE RIALTO" which was established in 1587 A.D. is the first bank of the world in Venice, Italy.

### **1.3 Development of Banking Sector in Nepal**

The banking sector in Nepal started with the establishment of Nepal Bank Limited on 30<sup>th</sup> Kartik 1994. It is the oldest bank of Nepal. Its initial authorised capital was Rs 10 million and issued capital was Rs 25 lakhs, paid up capital was Rs 8 lakhs 42 thousand but now it has increased its capital.

Under the Nepal Rastra Bank Act, 2012 (1956) Nepal Rastra Bank was established in 14<sup>th</sup> Baisakh 2013 (1957) in Nepal. But this act has been repealed and the Nepal Rastra Bank Act, 2058 (2002) has been enacted by parliament. It is the central bank of Nepal. After the establishment of Nepal Rastra Bank, the first 5 years plan was introduced in the country to fulfil the need of the financial institution for achieving industrialization and development of the country. Nepal Industrial Development Corporation (2016) and Agricultural Development Bank (2024) were established under the special legal provision, Rastriya Banijya Bank was established in the government sector in 2022 under Banijya Bank Act, 2021 as per the recommendation of Nepal Rastra Bank.

### **1.4 Introduction of Siddhartha Bank Limited**

Siddhartha Bank Limited (SBL), established in 2002 and promoted by prominent personalities of Nepal, today stands as one of the consistently growing banks in Nepal. While the promoters come from a wide range of sectors, they possess immense business acumen and share their valuable experiences towards the betterment of the Bank.

Within a short span of time, Siddhartha Bank Limited has been able come up with a wide range of services that best suits its clientele. Siddhartha Bank has been posting growth in its portfolio size and profitability consistently since the beginning of its operations. The management of the bank has been thoroughly professional.

Siddhartha Bank has been able to gain significant trust of the customers and all other stakeholders to become one of the most promising commercial banks in the country in less than 10 years of its operation. The Bank is fully committed towards customer satisfaction. The range and scope of modern banking services the bank has been providing is an example

to its commitment towards customer satisfaction. It is this commitment that has helped the bank register quantum growth every year. And the bank is confident and hopeful that it will be able to retain this trust and move even further towards its mission of becoming one of the leading banks of the industry.

### **Vision**

Siddhartha Bank runs with a vision to be financially sound, operationally efficient and keep abreast with technological developments.

### **Mission**

The bank desires to be one of the leading banks fulfilling the interest of stakeholders and also aims to provide total customer satisfaction by way of offering innovative products and by developing and retaining highly motivated and committed staff. It directs all its efforts to move ahead with increased profits. The following mission statement is a guide to meet the vision of the bank:

- ) Be one of the leading banks in terms of profitability, productivity and innovation.
- ) Aim at total customer satisfaction by rendering efficient and diversified financial services through improved technology.
- ) Build a highly motivated and committed team of staff by nurturing a good work culture to achieve superior individual performance aiming to enhance organizational effectiveness.
- ) Be the place of pride to all its stakeholders.

### **Core Values of the Bank**

- ) Customer focus
- ) Shareholder prosperity
- ) Employee growth

## **1.5 Statement of the Problems**

The commercial banks have been operating well from their establishment. Their experience in international banking prompt and computerized services, professional attitude is the factor for their rapid progress. There have been growing from weakness and inefficiency of domestic commercial banks. These banks have succeeded to capture remarkable market share of Nepalese banking sectors of financial services in a relatively short period of time.

Inefficiency and weakness can be traced with the financial statement analysis in same aspects of this bank's financial performance. Banks provide only short-term credit. The margin ratio for providing loans is too high, which makes deposits unutilized though all the commercial banks are increasing their profit (Shrestha, 2009 p.7). However, Nepal is facing a lot of national as well as international problems such as: instability of politics, difficulty in collecting resources, declining of tourism industry, falling of manufacturing companies and garments etc. These areas are mainly affected by recent unfavorable international economic conditions. Therefore, these areas and recent unfavorable economic conditions are adversely affecting the investment of the banks. Against these problems, this research deals with the following issues:

- i. How far commercial banks as well as joint venture banks have been able to convert the mobilized deposits into investment?
- ii. How efficiently joint venture banks are managing their assets and liquidity ratio?
- iii. What is the relationship of investment with deposits and net profit?
- iv. To what extent these banks have been able to raise their profitability?
- v. To evaluate the trend of deposits and credit banks.

## **1.6 Objectives of the Study**

This research work is concerned with studying the fund management of Siddhartha Bank Limited. The main objective is to study and analyze the fund operation of Siddhartha Bank Limited. The following specific objectives have been framed to assist the basic objectives.

- i. To highlight the fund operation of the bank.

- ii. To evaluate and analyze the liquidity, profitability, capital adequacy, market risk and foreign exchange risk for its management of the bank.
- iii. To evaluate the trend of deposits and credit of the bank.
- iv. To analyze the trend of net profit and investment of the bank.
- v. To suggest recommendations for the better management of fund.

### **1.7 Significance of the Study**

Since the study unites the different financial and risk aspects of the bank. It would be useful to the concerned organization, institutions and general public to formulate strategies to utilize the opportunities and face the increasing threats. The stockholders who are concerned to the bank include shareholders, management, outsiders (general public, government, central bank etc.) and policy makers. Thus, the main importance of the study is:

- i. The study focuses on fund management of SBL and NRB's directives to the commercial banks.
- ii. This study will be valuable for the shareholders, management of the banks and board of directors
- iii. It will give a clear picture on how the bank is performing its important functions of fund operation.

It will provide information to the general public regarding success of the bank on the investments they have made.

### **1.8 Scope of the Study**

This study has attempted to cover the major component of fund operation. It aims to find out the liquidity position, capital adequacy, and various long-term or short-term risk. However, the major areas of this study are as follows

- i. Liquidity, profitability, capital adequacy, market risk and foreign exchange risk for its management of the bank.
- ii. Fund operation practices of the bank in respect to risk management motives.

- iii. Existing system of fund management of the bank.

### **1.9 Focus of the Study**

This study has focused on the fund management. It involves the management of sources and uses of funds for any type of organization in the broadest sense. However in the context of banks, the term fund management is to construct liquidity, investment portfolio, market risk and foreign exchange risk. It is necessary to know about the fund of the bank. This study is based on the sources and uses of funds which are important part of the bank. Fund operation management is a very important tool can be used in profit planning contributes to the managerial efficiency by assisting management to identify the possible future funds problem in advance and decide on policies and procedures to solve them. Every bank and financial institution needs to use funds projection to maintain optimum liquidity. Both excess and shortage of funds make a liquidity crisis to the bank which reduces the profit to be earned.

This study mainly focuses on the uses and sources of fund planning technique to maximize the profit and minimize the liquidity risk of SBL. The study is based on the data of FY 2065/66 to F Y 2069/70.

### **1.10 Limitations of the Study**

This study has been basically carried out for the requirement of the Master of Business Studies (MBS) Degree. So, it has different limitations and constraints which are presented as below

- i. This study depends upon the management of fund management of SBL.
- ii. This study has mainly been conducted on the basis of secondary data such as annual reports of SBL, NRB directives, BFI Act, journals, magazines and books.
- iii. The study has covered only the period of five fiscal years.

### **1.11 Organization of the Study**

The study has been organized into five.

## **Chapter One: Introduction**

This chapter contains general background, focus of the study, statement of the problem, objectives of the study, significance of the study, limitations of the study and organization of the study.

## **Chapter Two: Review of Literature**

It states the theoretical review different books, research paper and thesis reports.

## **Chapter Three: Research Methodology**

It includes research design, population and sample, sources of data, data gathering procedure and data analysis procedure.

## **Chapter Four: Presentation and Analysis of Data**

This chapter deals with the analysis of secondary data. First part of the chapter includes the analysis of fund, second part includes analysis of ratios, third part includes statistical analysis and fourth part includes trends statistical analysis. It also includes major findings of the study.

## **Chapter Five: Summary, Conclusion and Recommendation**

It states about the summary, conclusion and recommendations of the study.

At the end of the study, bibliography and appendices have also been incorporated.

## CHAPTER - II

### REVIEW OF LITERATURE

This chapter deals with the review of relevant literature study. This part is essential to know about the findings of other research which are appropriate to the study. The first part deals with the conceptual framework and the remaining parts consist of the review of books, reports, articles and dissertation.

#### 2.1 Conceptual Review

Fund management approach is important to goal achievement because of the increasing scope and complexity of banking. Fund management incorporates features of other approaches to market risk, liquidity, investment portfolio and foreign exchange risk management. It also incorporates management experience and judgment into the decision process. Successful fund management requires managers to take an overall rather than narrow functional view of the bank, provides the means to break down complex problems for decision making allows for changes in the banking environment and provides decisions perceived consistent with wealth maximization.

"Banking is the business of collecting and safeguarding money as deposits and lending of same. The banker's business is to take the debt of other people to offer his own in exchange and thereby to create money. He may be a dealer in debts, but in distress is only observe of wealth and it would be equally permissible to describe the banker (Geoffrey: 1945, p.81)."

Interactive nature of bank decisions is to break down this system of interrelationship into key variable, which affects the attainment of wealth maximization. While each

decision making should focus on the key variables wealth maximization. (1) Spread management (2) Liquidity management (3) Overhead cost control and (4) Capital management. Of these variables, the first two are probably most appropriate to relatively short decisions horizon of asset/liability management. They key variables assist management in establishing and carrying out policy in the major banking management, to obtain funds and maintain adequate liability, investment and capital (Olson: 1979, p.89).

Bradley and Crane express the views, "Potentially, the most important use of management science is in banking system oriented approaches to balance sheet management (Bradley & Crone: 1975, p.51)." Balance sheet management is concerned with the coordinated management of the entire balance sheet and its inter-relationship. It incorporates the concept of asset/liability management approaches. Balance sheet management facilitates improved overall profit planning and performance, while maintaining liquidity solvency and deposit safety in an uncertain world consistent with management policy and bank regulations.

Finally, the management achievement index for all the banks was computed to analyze their performance against the target set. Next findings on investment operation of commercial banks on the securities and the loans are the main assets portfolio to be stressed. The allocation of funds among the assets has been an objective of the management by maximizing profits and minimizing loss (cost). Returned from the investments and the risk involved in the loan made by the commercial banks in Nepal for investment in various sectors, priority sectors and secured loans the "loan loss ratio" and the "default" has been computed. The investment planning of commercial banks in Nepal is highly regulated by the central bank (Shrestha: 1995, p.18).

## 2.1.1 Concept of Fund Management

Fund management involves the management of sources and uses of funds for any organization in the broad sense. The scope of fund management is very wide and it covers every type of organization be it charitable, government or corporate.

However, in the context of banks, the term fund management is construed in terms of following four dimensions. They are market risk management, liquidity management, investment portfolio management and foreign exchange risk management.

**Market risk management:** It has four dimensions Interest rate risk, price risk, credit risk and event risk. Global money and currency markets are liberalized. Neither the exchange rates nor the interest rates are administered, but they move freely depending upon their demand and supply. This creates a lot of volatility in the interest rates of various currencies. This is Called interest rate risk. The price moves both ways in the market (up/down). Due to the continuous movement of prices of commodities/currencies, "price risk" arises. Credit risk arises due to possibility of payment default from the counter parties Major political events/natural calamities create the event risks

**Liquidity risk management:** The term 'Fund' denotes as the liquid assets of the bank. This includes cash, bank balance, money at call or short notice and investment. Thus fund management is concerned with planning and managing of the liquid assets of the bank. It has four aspects. i. Liquidity: Ability to meet immediate maturing liabilities, ii. Profitability: Related with return of the liquid assets, iii. Safety: Risk associated with Liquidity and iv. Nostro management.

**Managing liquidity risk in bank:** Managing the liquidity risk has been an integral part of the banking business. Risk can be defined as the degree of uncertainty of future return as well transactions. This uncertainty has varied dimensions and

therefore can be defined in different ways, presently on account of the severe competition, deregulation of interest rates both on lending as well as on deposits and other developments in various financial markets; banks have been increasingly exposed to various types of risks. These are liquidity risks, interest rate risks, market risks, settlement risks etc. Since these risks are inevitable elements of banking business, banks are required to design and use different strategies to take and manage various risks. One of the effective strategies which is recognized world-wide is introduction and implantation of effective assets liability management policy.

Banks are required to measure and manage their liquidity risks as many of their liabilities are payable on demand or at very short notice. Further, they must visualize and evaluate liquidity needs based on certain assumption) under different business scenarios. Liquidity represents the ability to deal with shortage of funds (i.e. to raise cash on short notice without paying high cost) and surplus of fund (i.e. to deploy funds in assets). Irrespective of the size of a bank, adequate liquidity is essential to meet commitments when due and to undertake new transactions when desirable. Considering the managing of liquidity risk each bank is required to have a suitable policy in this regard which must cover inter alia, objectives of liquidity management, framework for assessing and managing liquidity, funding strategies and internal norm including delegation of authority etc. The most vital aspects of managing liquidity risk viz. assessing and managing liquidity is discussed below.

***Investment Portfolio Management:*** Banks have both home currency and foreign currency liabilities (deposit). Most of their deposits are invested in the form of loans, advances and bills discounting. This is the assets class with highest risk and return. However for the purpose of liquidity/safety, banks also need to invest a part of their funds into government bonds, Fund bills and sometimes corporate bonds. While making such investments banks have to match the maturity of their liabilities and assets so that they can meet their obligation on time without suffering a liquidity crunch.

*Foreign exchange transactions:* Foreign exchange dealing is a business in which foreign currency is the commodity. As foreign currency is not a legal tender, it can't be used for settlements of debts in home currency, nevertheless it has value. The value of US Dollar in Nepalese markets is like the value of any other exchange dealings. Purchase and sales transaction: Any trading has two aspects; Purchase and sale. A trader has to purchase goods from his suppliers which he sells to his customers. Likewise the bank purchases as well as sells its commodity i.e. the foreign currency. Two points need to be kept in mind while talking of a foreign exchange transaction.

### **2.1.2 Definition of Bank**

Generally, an institution established by law that deals with money and credit is called bank. It is obvious that in common sense an institution involved in monetary transaction is called a bank. A bank simply carries out the work of exchanging money providing loans accepting and transferring the money.

According to U.S. Law "any institution offering deposits subject to withdrawal on demand and making loans of a commercial or business nature is a Bank".

While going through the banking history of Nepal, Nepal Bank Ltd was the first bank of Nepal established in 1994 B.S. After establishments of this bank other banks were also established like Nepal Rastra Bank, Rastriya Banijya Bank, Agricultural Development Bank, Nepal Industrial Development Bank. The process of the development of banking system in Nepal was not satisfactory up to 2040. No bank was opened during this period except extending the branches and sub branches of the banks, which were established up to this period. Nepal was observing the events that were taking place in the world also. Nepal was deeply studying and researching what sorts of programs, policies, law and regulation should be brought into practice. The country can't change its status by using only its own capital in the country without importing the new technology from foreign country and accordingly, law

and policy have been developed by the state to encourage the foreign investment on banking sector. From this the real mode of development of banking system started in Nepal. The competitions began to grow. Thus some banks are opened on the joint investment basis like; Nabil Bank Limited, Nepal Investment Bank Limited, Standard Chartered Bank Nepal Ltd. Himalayan Bank Ltd. Nepal Bangladesh Bank Ltd etc.

### **2.1.3 Concept of Commercial Bank**

Simply, commercial bank is a largest financial institution whose primary business is providing financial services to the people. Commercial banks are one of the major financial institutions, which help to mobilize the funds in the economy. It does not produce anything but transaction of money. It simply acts as a mediator between people who want to save their surplus money and those who need some money to operate their business or projects. It deal with money and attracts deposits. It acts as a mediator between the businessmen and helps transfer of funds from one location to another that might be national or international.

As per commercial bank act 1974,"A commercial bank means bank which deals in exchanging currency, accepting deposits, giving loans and doing commercial transaction."

According to Bank and Financial Institutions Act, 2063(2006); "A commercial bank is one which exchanges money, deposits money, accepts deposits, grant loan and advances and performs commercials banking functions and which is not a bank meant for co-operation, agriculture industries or for such specification."

Thus commercial bank is an institution that deals with money. It attracts deposits and it leads the same into various productive sectors analyzing the feasibility of the project. It also acts as a mediator between the businessmen and also helps to transfer of funds from one location to another that might be national or international.

"Principally speaking, a commercial bank accepts deposits and provides loans primarily to business firms thereby facilitating the transfer of funds in the economy (Abrol & Gupta: 1987, p.101)."

Although in the past, banks were considered to be acceptors of deposits and providers of loans, modern commercial banks work for the overall development of industries, trade and commerce, services as well as agriculture. There are four functions of the commercial bank which have been laid down by the American Institute of Banking. There are:

1. Receiving and handling deposits,
2. handling payments for its clients,
3. granting loans and investment and
4. Creating money by extension of credit.

A commercial bank is a dealer which deals with money as well as the substitutes for money such as cheques and bills of exchange. It also provides a variety of financial services.

#### **2.1.4 Factors Affecting the Fund Operation**

There are three major factors responsible for this:

- a. Lack of infrastructure to support fund transactions.
- b. Unavailability of global market fund products.
- c. Lack of expertise among the market players.

Above three weaknesses are dealt in following sections in relation to various areas of fund management:

- J Assets & Liability Management (ALM)
- J Foreign Exchange Management
- J Money Market Operations
- J Government Securities Operations

### **2.1.5 Role of Fund Management to handle Financial Crisis**

Until before sometimes, The Financial sector had been facing liquidity crunch. A problem related to the Liquidity crunch is basically known as financial crisis in banking sector. Banks borrow large amount of short-term deposit and reserve from individual, business and from other lending institution and then turn around and make long term credit available to their borrowing customers. In this situation, most banks faces imbalance between the maturity dates on their assets and the maturity dates attached to their liabilities. Rarely incoming cash flow from assets will exactly balance the cash flowing out to over liabilities.

A problem related to the maturity mismatch is that banks hold an unusually high proportion of liabilities subject to immediate payment, such as demand deposit, call account, inter-bank borrowing and money market borrowing. In this situation, banks must always stand ready to meet immediate cash demand that can be substantial at times, especially near to end of a week, at the first of certain season of the year.

Fund management (or Fund operations) includes management of an enterprise's holdings, with the ultimate goal of maximizing the firm's liquidity and mitigating its operational, financial and reputational risk. Fund Management includes a firm's collections, disbursements, concentration, investment and funding activities. In larger firms, it may also include trading in bonds, currencies, financial derivatives and the associated financial risk management.

Most of the larger banks have whole departments devoted to Fund management and supporting their clients needs in this area. Until recently, larger banks had the

stronghold on the provision of Fund management products and services. However, smaller banks are increasingly launching and/or expanding their Fund management functions and offerings, because of the market opportunity afforded by the recent economic environment (with banks of all sizes focusing on the clients they serve best), availability of (recently displaced) highly-seasoned Fund management professionals, access to industry standard, third-party technology providers' products and services tiered according to the needs of smaller clients, and investment in education and other best practices.

For non-banking entities, the terms '*Fund Management*' and '*Cash Management*' are sometimes used interchangeably, while, in fact, the scope of Fund management is larger (and includes funding and investment activities mentioned above). In general, a company's Fund operation comes under the control of the CFO, Vice-President / Director of Finance or Treasurer, and is handled on a day to day basis by the organization's Fund staff, controller or comptroller.

Bank Treasuries may have the following departments:

- ) A Fixed Income or Money Market desk that is devoted to buying and selling interest bearing securities.
- ) A Foreign exchange or "FX" desk that buys and sells currencies.
- ) A Capital Markets or Equities desk that deals in shares listed on the stock market.

In addition the Fund function may also have a Proprietary Trading desk that conducts trading activities for the bank's own account and capital, an Asset liability management or ALM desk that manages the risk of interest rate mismatch and liquidity; and a Transfer pricing or Pooling function that prices liquidity for business lines (the liability and asset sales teams) within the bank.

### 2.3 Review of Previous Thesis

Under this section an attempt has been made to examine and review of some related previous thesis as follows:

**Shrestha (2007)** has conducted a research on the topic of "*A case study of liquidity management of Nabil Bank*". He highlighted the aggregate performance and condition of Nabil Bank. In the aspect of liquidity position, cash and bank balance shows the more liquidity position. On his study, try to give clear picture of the liquidity management policies of concern banks by taking 5 years study period.

His major objectives were as under:

- ) To analyzes financial ratio and benefit of liquidity management.
- ) To highlight the financial ratio and liquidity trend of Nabil Bank Ltd.
- ) To provide suggestions for the future betterment.

**Limbu (2008)**, in his thesis, "*Credit management of Nabil Bank Limited*" highlighted that aggregate performance and condition of Nabil Bank in the aspect of liquidity position. Cash and bank balance to total deposit has fluctuating trend in 5 years study period. Cash and bank balance to current deposit is also fluctuating. The average mean of cash and bank balance to interest sensitive ratio is able to maintain good financial condition. The main objectives of research are as follows:

- ) To evaluate various financial ration of Nabil Bank.
- ) To analyze the portfolio of lending of selected sector of banks.
- ) To determine the impact of deposit in liquidity and its effect on lending practices.
- ) To offer suitable suggestions based on finding of his study.

**Khatri (2009)** in his study on "*Cash flow management of commercial banks*" describes that cash flow and liquidity management efficiency of listed high performing commercial banks of Nepal. It is also aimed to find out the relationship between cash flow management and liquidity crisis a raised in the financial market.

His major objectives were as under:

- ) To analysis the cash flow position of commercial banks of Nepal.
- ) To conduct comparative study of the annual cash flow statements of the banks.
- ) To examine the cash flows periodically due to changes in net assets, financial structure and different activities like operating, financing, investing and marketing.
- ) To analyze liquidity crisis in financial market
- ) To recommend the findings of the study to concern bodies and authorities, after analyzing cash flow position and liquidity problem of the banks.

**Gautam (2011)** has conducted thesis entitled "*A case study of liquidity management of commercial banks*" with special reference to Standard Chartered Bank, Himalayan Bank, Everest Bank & Nabil Bank. He highlighted the aggregate performance and condition of concern banks. In the aspect of liquidity position, cash and bank balance shows the more liquidity position. On his study, try to give clear picture of the liquidity management policies of concern banks by taking 5 years study period.

His major objectives were as under:

- ) To examine liquidity position of commercial banks of Nepal.
- ) To analyze the credit deposit ratio (CDR) and its impact on liquidity.

- ) To examine the different ratio regarding the liquidity risk management.

**Pokharel (2011)** in his study on *“Management of Deposit & Liquidity & Its’ Impact on Profitability of Joint Venture Bank”* describes that deposit mobilization, liquidity management and its impact in profitability.

His major objectives were as under:

- ) To assist the liabilities and assets structure of joint venture banks.
- ) To analyze the composition of assets and liabilities of joint venture bank in Nepal.
- ) To examine the utilization of assets.
- ) To evaluate the trend of deposits and loans of joint venture banks in Nepal.
- ) To evaluate liquidity, profitability, capital structure activity and capital adequacy position of joint venture banks in Nepal.
- ) To provide suggestions and recommendation on the basis of finding and analyses to improve the commercial banks.

**Adhikari (2011)** has conducted thesis entitled, *“Liquidity management of commercial banks in Nepal”* with reference to Everest Bank and Standard Chartered Bank Ltd. The main objective of the study is to analyze the liquidity position and the profitability of these two Banks.

His major objectives were as under:

- ) To analyze the liquidity management, deposit and investment position of the banks.

- ) To find out the relationship between deposit, investment, loans and advances and net profit.
- ) To find out the trend analysis of deposit, investment, loans and advances and net profit.
- ) To recommend for the improvement based on findings.

**The Major findings from the study were:**

There is no standard and uniform rate or ratio for maintaining liquid assets by the concern banks. The management may decide to maintain an appropriate level asset on own judgment and considering NRB circulars. Fund management decision should be made based on the relation to the source offends, practices and statutory obligation. Nepalese commercial banks are in over liquidity position and nearly average banks are able to manage it properly. Due to lack of favorable investment opportunity the liquidity position of commercial bank is increasing trend. Worldwide depression has not change liquidity positions of commercial banks in Nepal. Due to the political instability, nearly average banks have to face liquidity problem. NRB supervision and monitoring for liquidity management is at surface level and less effective. Most of the Nepalese commercial banks have not assessed the adequacy of both a bank's liquidity risk management framework and its liquidity position.

**2.4 Research Gap**

There are most of the researchers are concerned with liquidity management, cash management and fund mobilization of various banks as well as lending practice, financial performance, profitability analysis and others but there is not found research about the fund management of a Bank. In the context of Nepal, The fund

management is the one of the current and urgent issue in banking industry, which helps to solve the liquidity crisis by minimizing the risks and maximizing the profit.

Actually, a fund management strategy is determined by various factors. In this research various ratio are systematically analyzed and generated as well as NRB's rules and directives are produced while analyzing. Past researchers are not analyzed about the fund management and its impact on the profitability and overall operation of business and also ratios are not categorized according to nature. Here in this research all ratios are categorized according to their nature and area. This study emphasis the effect of fund management of SBL and has been centered to identify the responsible causes to analyze them and recommended practical suggestions for the betterment of SBL.

## **CHAPTER - III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter encompasses the process followed during the period of study to meet the target. Hence, the target refers to the fund management of SBL almost with the help of financial accounts and notes of accounts. The study also deals with the necessary suggestions for its reform for the betterment of its financial performance in the future. So research methodology describes the methods and process applied in the entire aspect of the study. Therefore, this chapter includes the following with regards to the methodology.

#### **3.2 Types of research**

This study included three types of research. They are descriptive, analytical and well as empirical.

- i. Descriptive research included surveys and facts for finding inquires of various kinds.
- ii. Analytical research has to used fact or information already available and analyzed these to make a critical evaluation of the material.
- iii. Empirical research is data based research coming up with conclusion, which is capable of being verified by observation.

#### **3.3 Research Design**

Research refers to a search of knowledge. A research design is the arrangement of conditions for collecting and analysis of data in a manner that aims to combine relevance of the research purpose with economy in procedure. This research has been used as a descriptive as well as a analytical. The study is based on the wide range of variables and factors influencing Fund

management of concern bank and data relating to financial analysis are presented in such manner that the research becomes more informative.

### **3.4 Population and Sample**

“The term ‘population’ or ‘universe’ means all the members of any well defined class of events of objective.” (Pant, 2002:75). The population refers to the organization of the same nature and its services and product in general. So, the total numbers of commercial banks in Nepal are population. There are 31 commercial banks in Nepal at the beginning of June, 2013.

“A sample portion chosen from the population for studying its properties is called sample and the number of units in the known as sample size. The method of selecting for study a small portion of the population to draw conclusion about the characteristics of the population (universe) is known as sampling.’ (Chaudhary, 2058:171).

The study of whole population is not possible due to lack of time, money, capacity and other resources. Thus, among 31 commercial banks, SBL has been chosen as sample bank. Likewise, financial statements of five years (FY 2065/66 to 2069/70 are selected as samples for the purpose of it.

### **3.5 Nature of Data**

To fulfill the research objective of this study mainly secondary data have been used, which is collected from the audited annual report of the concern bank’s websites ([www.siddharthabank.com.np](http://www.siddharthabank.com.np)) and authentic data published by NRB regarding with BFIs from the NRB as well as primary data is also collected to get result where necessary.

### **3.6 Sources of Data**

In this research, data have been collected from both primary and secondary sources. Primary data are gathered from interview and questionnaire with staff of different level and also from other related persons.

Secondary data were collected from different sources like balance sheet, profit and loss account, official reports, different budget and other related published or unpublished report of Siddhartha Bank.

### **3.7 Data Gathering Procedure**

To meet the objective of the study primary as well as secondary sources of data have been used. Including acts and bylaws most of the data are based on secondary sources. Since the entire research is based on the variables and factor influencing fund management of SBL, the secondary data have been used. Secondary data are taken from the company's annual reports of the company containing its balance sheet, income statement, cash flows statement and others, direct information from respective bank, economic journals, NRB's reports and other sources. Economic survey of different years published by Ministry of Finance NG,

Banking and financial statistics published by NRB, previous dissertation, publication and reports relating to commercial banks are collected.

### **3.8 Methods of Data Analysis**

The gathered data, especially the income statement and balance sheet of the banks will have been analyzed to get the desired objectives with the help of various financials as well as statistical tools. Besides these, some graph charts and tables will also have presented to analyze and interpret the findings of the study. The objectives of the study and availability of the data limit selection of the tools. To light out about the fund management of SBL, it will be mainly used tabular and graphical, financial and statistical tools for the conclusion and recommendation.

#### **3.8.1 Financial Analysis**

Financial Analysis is the process of identifying the financial strengths and weaknesses of the firm by properly establishing relationship between the items of balance sheet,, which represents snapshot of the firm's financial position at a moment in time and next, income

statement, that depicts a summary of the firm's profitability overtime (Van Horne and Wachowicz, 2003:120)

In financial analysis, ratio is used as a benchmark for evaluating the financial position and performance of a firm. Financial analysis is a technique of answering various questions regarding the performance of a firm in the past, present and future. As financial analytical tools, following ratios will be used.

### **3.8.1.1 Cash Reserve Ratio (CRR)**

Cash reserve ratio is a bank regulation that sets the minimum reserves each bank must hold to customer deposit and notes. These reserves are designed to satisfy withdrawal demands and would normally be in the form of fiat currency stored in a bank vault, or with a central bank. The reserve ratio is sometimes used as a tool in monetary policy, influencing the country's economy, borrowing and interest rates.

NRB has kept CRR of 5% for commercial banks for this fiscal year. NRB uses this method to drain out the excessive money from the banks or provide more liquidity. CRR is used as a tool in monetary policy, influencing the country's economy, borrowing and interest rates that work like brakes on the economy's money supply.

$$\text{CRR} = \frac{\text{NRB Balance}}{\text{Deposit} - \text{Margin Deposit}}$$

### **3.8.1.2 Cash and Bank Balance Ratio (C & B)**

We know that liquidity is capacity to meet the short term cash obligation by banks. In this regard banks are used to be maintaining some additional amount in their bank account or with themselves. This amount is used to be fulfilling day to day payments to their customers. This ratio is the relation between the deposit and cash with the bank. So, it can be analyzed that how much amount is getting used in day to day payments in relation to the deposit. It is better to maintain 6% of cash and bank balance to fulfill the daily cash requirements. This toll also supports managers to boost the cash management capacity of commercial banks.

$$C \ \& \ B \quad = \quad \frac{\text{Total Cash \& Bank Balance}}{\text{Total Deposits}}$$

### **3.8.1.3 Statutory Liquidity Ratio (SLR)**

SLR refers to the amount that all banks require to maintain in cash or in the form of gold or approved government securities. SLR is determined as percentage of total demand and percentage of time deposit liabilities. It is the amount which a bank has to maintain in the form: cash, gold valued at price not exceeding the current market price, approved government securities.

The objectives of SLR are, to restrict the expansion of bank credit, to expand the investment of the banks in government securities and to ensure solvency of banks. The commercial banks should maintain 15 % SLR ratio for this fiscal year in quarterly basis.

$$SLR \quad = \quad \frac{\text{Total Investment in govt. Securities}}{\text{Total deposits}}$$

### **3.8.1.4 Capital Adequacy Ratio (CAR)**

As per the directive issued by NRB, the bank capital has been categorized into two parts, core capital and supplementary capital. The total of these two capitals considers for calculating capital adequacy ratio. The capital adequacy ratio is based on total risk weighted assets. The sum of core capital and supplementary capital is measured to be total capital fund. For the purpose of calculation of capital fund, the risk weighted assets have been classified in two parts as on balance sheet items and off balance sheet items. The capital adequacy ratio would measure the total capital fund on the basis of total risk weighted assets. As per the rule of NRB commercial banks should maintain 10% capital adequacy and is mandatory.

$$CAR \quad = \quad \frac{\text{Total Capital Fund}}{\text{Total Risk Weighted Assets}}$$

### **3.8.1.5 Core Capital Ratio (CCR)**

As mentioned above, the bank capital has been categorized into two parts, core capital and supplementary capital. Out of these two capital core capital is to be considered for calculating core capital ratio. Core capital is that sort of capital which is provision for general purpose and is basic capital. It is known as name of TIRE-I according to Basel-I & II. It is based on total risk weighted assets. The core capital ratio would measure the core capital fund on the basis of total risk weighted assets. As per the rule of NRB commercial banks should maintain 5.5% capital Core capital. It can be calculated as under:

$$\text{CCR} = \frac{\text{Core Capital Fund}}{\text{Total Risk Weighted Assets}}$$

### **3.8.1.6 Non-Performing Loan Ratio (NPL)**

According to directive published by NRB, the loan and advance has been divided in two parts:- performing loan and non-performing loan. Performing loan consists of good or pass loan. Good or pass loan means that sort of loan whose time of payment made is not passed more than 3 months. On the other hand, non-performing loan includes the restructured loan, sub-standard loan, doubtful loan and bad loan. Under non-performing loan, the time of payment is passed above than 3 months. Non-performing loan ratio shows the relationship or ratio of sum of non-performing loan and total credit. Higher NPL ratio denotes higher non performing loan and it indicates not satisfied performance of lending and recovering credit. According to NRB directive, the banks should maintain NPL ratio less than 5%.

$$\text{NPL} = \frac{\text{Total Non-Performing Loans}}{\text{Total Loans \& Advances}}$$

### **3.8.1.7 Loan Loss Coverage Ratio**

Loan loss coverage ratio measures the capacity of cover of non-performing loan from the loan loss provision. Bank or financial institutions should make provision for future loan loss

according to loan category for their safeguard. As per provision, BFIs should make provision in the every quarter end. From that provision, loss should be covered if loss is occurred in the future. So, BFIs use to make sufficient provision according to loan's category and it can be allowed to adjust in profit and loss account. Higher ratio is better.

$$\text{Loan Loss Coverage ratio} = \frac{\text{Total Loan Loss Provision}}{\text{Total Non-performing Loans}}$$

### **3.8.1.8 Loan Loss Provision (LLP) Ratio**

Every bank or financial institution should make loan loss provision according to loan classification. For the purpose of making provision loan is divided into five categories: Pass loan, restructured loan, sub-standard loan, doubtful loan and bad loan. Loan loss provision is made with objective of meeting the future losses which reduces the future risks.

Loan loss provision (LLP) ratio shows the ratio of total loan loss provision on total loan and advance. It is the one of tools to analyze the credit risk and assets quality which helps to make plan to the stakeholders, investors etc.

$$\text{LLP} = \frac{\text{Total Loan Loss Provision}}{\text{Total Loan \& Advance}}$$

### **3.8.1.9 Total Credit to Deposit Ratio (C/D)**

C/D ratio is a tool which shows relation between deposit accepted and credit granted to the lenders by a bank. It is the proportion of loan-assets created by banks from the deposits received. The higher the ratio, the higher the loan-assets created from deposits. A high credited-deposit ratio could lead to a rise in interest rates. It determines the amount of total lending from the total deposit from the customers. This ratio directly shows the credit

performance of commercial banks. Credit is major source of generation of out-cash flow. Commercial banks used to grant credit charging high cost to risky areas to generate maximum cash flow. Management of cash from deposit and cash out flow to credit to generate more profit is strategic tactical job of commercial banks. Most of the effort of commercial banks is use to be concentrated to the credit deposit activity. Banks are generating about 60% to 70% income from credit. As per NRB, the commercial banks should maintain 80% C/D ratio for this fiscal year.

$$\text{C/D Ratio} = \frac{\text{Total Credit}}{\text{Total Deposit}}$$

#### **3.8.1.10 Earning Per Share (EPS)**

The main objective of every business organization is maximization or earning or profit. The earning per share (EPS) after income tax is one of the most important determinants of share's value because it measures the earnings power under each share. The income of each share is known as earning per share. It can be calculated by the following formula.

$$\text{EPS} = \frac{\text{NPAT - Preference dividend (If any)}}{\text{Total No. of equity shares}}$$

Where,

NPAT = Net profit after tax.

#### **3.8.1.11 Return on Equity (ROE)**

Return on equity is the ratio of net income to equity capital. It measures the rate of return of equity shareholders' investment. Objective of management is to generate the maximum return on shareholder's investment in the organization. Return on equity is therefore the best single measure of the company's success in fulfilling its goal. Increasing ratio of ROE is favorable for a company which shows that the net profit is increasing.

$$\text{ROE} = \frac{\text{NPAT}}{\text{Equity Shareholder's Fund}}$$

### **3.8.1.12 Return on Total Assets (ROA)**

Return on total assets is the ratio of net income after tax to total assets. It measures the return on all the company's assets after interest and taxes. Assets are held to earn income for their holding. Assets include all types of assets that might be banking or non-banking assets. In the BFIs have huge amount cover the loan and advance as assets by which employed for maximization earnings.

$$\text{ROA} = \frac{\text{NPAT}}{\text{Total Assets}}$$

### **3.8.1.13 Return on Investment**

The objective of the investment is to earn higher income to run business successfully. Return means earning which is main motto of the every business organization. It is one of the barometers of success.

Return on investment is the ratio of the net profit after tax to investment. It measures the strength of the investment to earn as well as denotes the whether the productive investment or not. Investment is holding assets with intention to earning income. Higher the ratio is favorable for company which indicates the higher capacity of investment and also increasing the return.

$$\text{ROI} = \frac{\text{NPAT}}{\text{Total Investment}}$$

### **3.8.1.14 Return on Loans & Advances**

Return on loan and advance is the ratio of the net profit after tax to loan and advance which shows the strength of loan and advance to earn profit. Bank and financial institutions have got

huge amount of loan and advance as assets which is provided from public deposits because the main function of BFIs are earn profit through lending credit by collecting deposits. RLA measures what times the loans and advances contribution to the profit. It can be calculated as under:

$$\text{Return on Loan \& Advance} = \frac{\text{NPAT}}{\text{Total Loans \& Advances}}$$

### **3.8.1.15 Management Efficiency Ratio (MER)**

Management Efficiency Ratio is a tool to indentify the contribution in net profit by each staff. It is the ratio of net profit after tax to no. of staffs employed. It measures the efficiency of management to earn income. Management decision, capacity, ability, skills and other factors will determine the level of earnings. That's why, it is one of the tools to examine the efficiency of the management to run business effectively and efficiently. It depends upon overall management skills. Every employee or staff has a vital role to success.

$$\text{MER} = \frac{\text{NPAT}}{\text{Total No. of Staffs}}$$

### **3.8.2 Statistical Analysis**

Statistics is a body of methods of obtaining and analyzing data in order to base decision on them. It is a branch of scientific method used in dealing with phenomena that can be described numerically either by counts or by measurements. Statistical methods are applicable to a very larger number of fields.

Statistical methods are the mathematical techniques used to facilitate the analysis and interpretation of numerical data secured from groups of individual or groups of observation from a single individual. The various statistical tools can be used to analyze data. The following tools are used:

### 3.8.2.1 Arithmetic Mean

Arithmetic mean or simply a 'mean' of a set of observation is the sum of all the observation divided by the number of observations. It is also known as the arithmetic average. It is one of the tools of measures of central tendency.

The most popular and widely used measures of representation from the entire data by one value are what most laymen call an 'average' and what the statisticians call the arithmetic mean. Its value is obtained adding together all the times and by dividing this total by the number of items. The formula to calculate mean is given by.

$$\text{Mean } (\bar{x}) = \frac{\sum X}{N}$$

Where,  $\bar{x}$  = Mean of the Values

$\sum x$  = Summation of the Values

N = No. of observations

### 3.8.2.2 Standard Deviation (S.D.)

The standard deviation is the absolute measure of dispersion in which the drawbacks present in other measures of dispersion are removed. It is said to be the best measure of dispersion as it satisfies most of the requisites of a good measure of dispersion.

Standard deviation (s.d.) is defined as the positive square root of the mean of the square of the deviations taken from the arithmetic mean. It is denoted by  $\sigma$ .

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{1}{N} \sum (X - \bar{X})^2}$$

### 3.8.2.3 Coefficient of Variation (C.V.)

Standard deviation is the absolute measure of dispersion. The relative measure of dispersion based on the standard deviation is known as the coefficient of standard deviation.

The coefficient of dispersion based on standard deviation multiplied by 100 is known as the coefficient of variance (C.V.). If  $\bar{X}$  be the arithmetic mean and  $\sigma$ , the standard deviation of the distribution, then the C.V. is defined by:

$$\text{Coefficient of variance (C.V.)} = \frac{\sigma}{\bar{X}} \times 100$$

### 3.8.2.4 Coefficient of Correlation

Correlation analysis is the statistical tool that we can use to describe the degree to which one variable is linearly related to other variables. Two or more variables are said to be correlated if change in the other of one variable appears to be related or linked with the change in the other variables.

“Correlation is defined as the relationship (association) between (among) the one dependent variable or factor and one (or more than one) independent variable(s) or factor(s). Correlation analysis deals with the association between two or more variables” (Simpson & Kalka, 1997)

“Correlation analysis is the statistical tools generally used to describe the degree to which one variable is related to another. On the basis theory of correlation one can study the comparative changes occurring in two related phenomena and their cause effect relation can be examined” (Kothaeri, 1981).

**The degree of relationship is measured by using following formula**

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}}$$

Where,  $r$  = correlation coefficient

$\Sigma X$  = Sum of the variable X

$\Sigma Y$  = Sum of variable Y

$\Sigma XY$  = Sum of products of X and Y

$N$  = Number of pairs of X and Y

### 3.8.3 Trend Analysis

Trend analysis implies straight line irrespective of the seasonal and cyclical swing and function trend analysis is used to measure the line of best fit or straight line is obtained or not. Trend analysis is also used to compare the overall performance of different study period. The term best fit is interpreted in accordance with the principle of least square which consists of minimizing the sum of the square of the deviation between the given observed value of the variables and their corresponding estimated values as given by the line of best fit. Absolute amount per unit of time can change by increasing or decreasing the trend value.

The analysis is also denoted by least squares liners trends analysis. Trend analysis describes the average relationship between two serious where the one serious related to time and other serious to the value of available. Among the various methods of determining trend of time series, the most popular and mathematical method is the least square method. Using this least square method, it has been estimated the future trend values of different variables. For the estimation of linear trends lines following formula can be used:

$$Y = a + bx \dots\dots\dots (i)$$

Where,

$y$  = Depended variable

$x$  = Independent variable

a = Y-intercept

b= Slope of the trend line

### **3.9 Research Procedure**

This research procedure includes the following steps for the study.

- i. Collection of various books and other publication relevant for the study.
- ii. Assimilation of useful secondary data.
- iii. Description and analysis of collect data in lights of theoretical basis.
- iv. Tabulation of data by using approved financial and statistical tools.
- v. Extraction of valuable conclusion and recommendation.

## CHAPTER - IV

### PRESENTATION AND ANALYSIS OF DATA

This chapter deals with the presentation, analysis and interpretation of data in order to fulfill the objectives of this study. This chapter includes analysis of ratios and statistical analysis which is connection with fund operation of SBL as well as management efficiency and foreign exchange management analysis. The motto of this chapter is to study, evaluate and analysis those major factors which are related to fund management of Siddhartha Bank Limited.

#### **4.1 Fund Operation of Bank**

Basically, fund management includes a firm's collections, disbursements, concentration, investment and funding activities. In BFIs, it is also included trading in bonds, currencies, financial derivatives and money market operation. In broad sense, it is the management of sources and uses of funds for any organization. The scope of fund management is very wide and it covers every types of organization be it charitable, government or corporate. It has basically following aspects or tools which are described.

##### **I. Management of market risk**

**Interest rate risk:** Global money and currency markets are liberalized. Neither the exchange rates nor the interest rates are administered, but they move freely depending upon their demand and supply. This creates a lot of instability in the interest rates of various currencies. This is called interest rate risk.

**Price risk:** The price moves both ways in the market (up/down). Due to the continuous movement of prices of commodities/currencies, “price risk” arises.

**Credit risk:** Credit risk arises due to possibility of payment default from the counter parties.

**Event risk:** Major political events/natural calamities create the event risks.

## **II. Management of liquidity**

**Cash management:** Cash management is important activity in bank and financial institutions as their major job is to generate earning by cash business or money business. BFIs take money from people and again lend to the people in higher cost and generate excess cash flow to meet the competitive profitability. Having analyzed the market situation and cash position, BFIs have to keep their liquidity to meet their future demand.

**Nestro management:** Banks have to open accounts with other banks both at home and abroad. Such accounts with other banks are called Nostro accounts. Funds are needed in these accounts for payment of demand draft, reimbursement of trade and other outing remittances. Overdraft may draw a very high penal interest.

**Safely mobilization of funds:** Safety mobilization of funds is essential and challenging job in this fraud era because we people are feel very hardship to return the amount taken and clever to deceive others. Therefore, a bank should analyze the Customer's Capacity, Creditability, Collateral, purpose, income resources, intention and other related factors to provide credit facility for safety lending funds. Otherwise, investment will be converted into bad or non-performing loan.

**Profitability through appropriate management of liquidity:** If the banks chose to hold all of their assets as liquid assets, their profits will be very low. Hence banks will try to minimize the volume of liquid assets to the extent possible.

## **III. Management of investment portfolio**

**Sector based:** There are different sectors for lending, so the BFIs must choose the appropriate sectors according to their safety, profitability and easier to liquidity management. But the bank should maintain sector wise investment which is prescribed by NRB. For example, deprive sector investment, agriculture loan, real estate loan, housing loan, hire purchase loan and so on. There is also maintaining limit of loan in different sectors.

**Long term and short term investment:** Before investing, the BFIs should decide the whether the investment is long term or short term and how it is recovered that should be clear to maintain liquidity or to safe from liquidity crisis. Time or period of lending is basically depending upon the deposit structure or composition of deposits nature and tenure. If bank has more short term or current and saving deposit rather than fixed and recurring deposit; it is better to lend fewer amounts in long term. If bank has higher danger deposit (a person hold huge amount, huge amount current and call account), bank should invest for short run. This is important job to analyze for investment decision of fund managers.

#### **IV. Management of foreign exchange risk**

**Transaction exposure:** Every entry and exit from a foreign exchange deal comes at a cost. In order to come the transaction risk, dealers try to square their position as soon as possible.

**Translation exposure:** This comes into effect for the MNC (Multinational Corporation) whose subsidiaries overseas maintain their books in foreign currencies.

**Accounting exposure:** This is related to the value of assets/liabilities in terms of foreign currency.

**Economic exposure:** This is related to economic value of assets in one country with respect to that of another country.

#### **V. Assets & Liability Management (ALM)**

In banking, *asset and liability management* is the practice of managing risks that arise due to mismatches between the assets and liabilities (debts and assets) of the bank. Banks face several risks such as the liquidity risk, interest rate risk, credit risk and operational risk. Assets liability management (ALM) is a strategic management tool to manage interest rate risk and liquidity risk faced by banks, other financial services companies and corporations. Banks manage the risks of asset liability mismatch by matching the assets and liabilities according to the maturity pattern or the matching the duration, by hedging and by securitization.

## **VI. Money Market Operations**

The money market is guided by monetary policy of NRB can be considered as one positive development in Nepal's. When the central bank's primary goal is to mop up excess liquidity from the market, keeping a conservative cap can be considered as a positive move. It includes the short term or less than one year negotiable instruments which provides liquidity or working capital for the banks. For example, interbank transaction (lending and borrowing), cheque, draft, bills of exchange, letter of credit, fund bills etc. are considered its instruments. Despite the problems, the Nepali Fund market along with its market players need to be positive and must welcome positive changes in the market.

## **VII. Government Securities Operations**

Government securities operations refer to the amount compulsory investment in government securities that is require to maintaining for liquidity management. The objectives of investment in government securities are, to restrict the expansion of bank credit, to augment the investment of the banks in government securities and to ensure solvency of banks. The commercial banks should investment 15% on deposit for this fiscal year in quarterly basis.

### **4.2 Financial Analysis**

Ratio analysis is one of the most commonly used techniques and most powerful tools of financial analysis. In financial analysis, a ratio is a benchmark for evaluating the financial position and performance of a firm. It is simple and meaningful techniques of measuring operating performance and evaluating managerial performance of a firm. The ratio analysis provides a basic root which reflects the norms of business operation to examine different accounting parameters. Ratios are calculated and compared with relevant firm of competitors in order to see whether the operating results are at a satisfactory level or not. Ratios help to summarize large quantities of financial data and to make qualitative judgment about the firm's performance.

The ratio analysis includes a wide range of examine from a specific aspect of a division or unit of the overall firm. The main objective of ratio analysis is to examine various aspects of

business and make sure that the operating results have not deviated from the state norms. Specifically, the objectives of ratio analysis are to examine (a) liquidity position (b) profitability (c) financial leverage (d) management efficiency and (e) capital adequacy. Different ratios can be calculated to examine each of these aspects; however ratios are classified in the following five sets.

- |                                |  |
|--------------------------------|--|
| A. Liquidity Ratios            | to examine liquidity position,   |
| B. Profitability Ratios        | to examine earning power   |
| C. Assets Quality Test Ratio   | to examine quality of assets,  |
| D. Capital Adequacy Ratios     | to examine the strength of the capital<br>adequacy of the available capital. |
| E. Management efficiency Ratio | to examine contribution of management for earning.                           |

#### **4.2.1 Liquidity analysis**

Liquidity of any business organization is directly related with the working capital or liquid assets and liquid liabilities of that organization. In other words, one of the main objectives of working capital management is keeping sound liquidity position. Bank is different organization which is engaged in mobilization of fund. Therefore, without sound liquidity position, bank is not able to operate its function. To measure the bank's solvency position or ability to meet its short-term obligation, various liquidity ratios are calculated and to know the trend of liquidity, trend analysis of major liquidity ratios have been calculated.

##### **4.2.1.1 Cash Reserve Ratio (CRR)**

Cash Reserve Ratio is a bank regulation that sets the minimum reserves each bank must hold to customer deposit and notes. These reserves are designed to satisfy withdrawal demands and would normally be in the form of fiat currency stored in a bank vault, or with a central bank. The reserve ratio is sometimes used as a tool in monetary policy, influencing the country's economy, borrowing and interest rates.

NRB has kept CRR of 5 % for commercial banks. NRB uses this method to drain out the excessive money from the banks or provide more liquidity. CRR is used as a tool in monetary

policy, influencing the country's economy, borrowing and interest rates that work like brakes on the economy's money supply.

**Table 4.1**  
**Position of Cash Reserve Ratio**

(Rs. in millions)

<b>FY</b>	<b>NRB Balance</b>	<b>T. Deposit- Margin deposit</b>	<b>Actual CRR</b>	<b>St. CRR</b>
2065/66	270.22	10110.40	2.67	5.5
2066/67	984.98	15741.04	6.26	5.5
2067/68	1027.47	20075.59	5.12	5.5
2068/69	1222.41	21419.99	5.71	5.5
2069/70	2925.08	25653.75	11.40	5.5
<b>Mean</b>	<b>1,286.03</b>	<b>18,600.15</b>	<b>6.23</b>	-
<b>S.D.</b>	<b>880.90</b>	<b>5,294.00</b>	<b>2.86</b>	-
<b>C.V.</b>	<b>68.50</b>	<b>28.46</b>	<b>45.91</b>	-

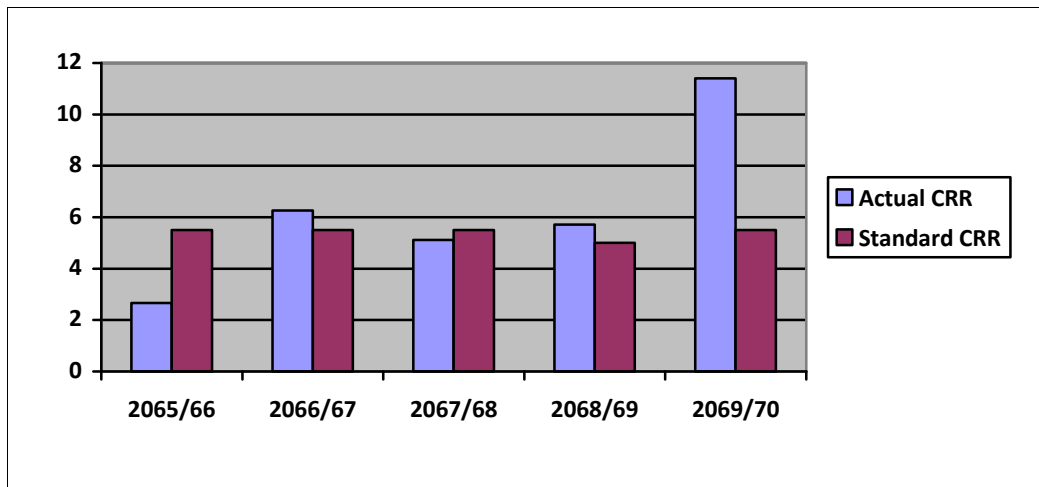
(Sources: Appendix-I)

Table No.4.1 shows that the balance with Nepal Rastra Bank, total deposit excluding margin deposit, actual cash reserve ratio and standard cash reserve ratio of SBL for five fiscal years. The highest balance with NRB is 2925.08 in year 2069/70 and lowest Balance with NRB is 270.22 in year 2065/66 with average balance 1286.03, which is fluctuating trend. The S.D. of NRB balance is 880.90 and coefficient of variance is 68.50%. Likewise, the trend of deposit is increasing, which average deposit, S.D. and coefficient of variance (C.V.) are 18600.15, 5294.00 and 28.46 considering five year respectively.

SBL is able to maintain standard level of CRR in year 2066/67, 2068/69 and 2069/70. But in other years SBL is not able to maintain standard rate of CRR. According to calculation, the average CRR, S.D. and CV are 6.23, 2.86 and 45.91 respectively. For the kind consideration, the above NRB balance uses to consider closing date of fiscal year but in practice CRR is calculated in weekly balance basis.

**Figure 4.1**

**Comparative analysis of Actual CRR and Standard CRR**



The figure No. 4.1 shows that the comparative analysis of Actual CRR and standard CRR is required to keep for maintaining liquidity of SBL. SBL is able to maintain standard level of CRR in year 2066/67, 2068/69 and 2069/70. But in other years SBL is not able to maintain standard rate of CRR. According to calculation, the average CRR, S.D. and CV are 6.23, 2.86 and 45.91 respectively.

**4.2.1.2 Cash and Bank Balance Ratio (C & B)**

We know that liquidity is capacity to meet the short term cash obligation by banks. In this regard banks are used to be maintaining some additional amount in their bank account or with themselves. This amount is used to be fulfilling day to day payments to their customers. This ratio is the relation between the deposit and cash with the bank. So, it can be analyzed that how much amount is getting used in day to day payments in relation to the deposit. It is better to maintain 6.5% of cash and bank balance to fulfill the daily cash requirements. This toll also supports managers to boost the cash management capacity of commercial banks.

**Table 4.2****Analysis of cash & bank balance to total deposit ratio**

(Rs. in millions)

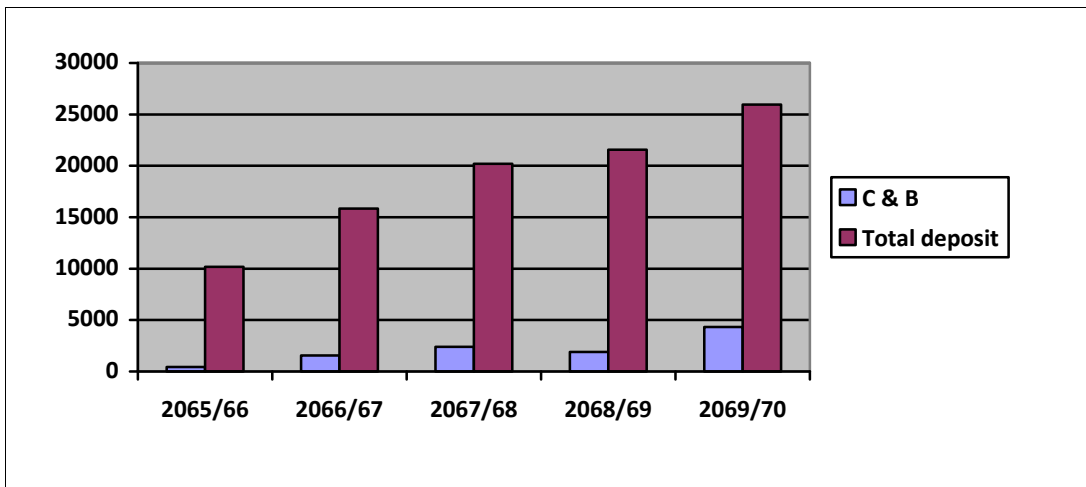
<b>FY</b>	<b>Cash &amp; Bank Balance</b>	<b>T. deposit-Margin deposit</b>	<b>C &amp; B Ratio</b>
2065/66	437.43	10191.44	4.29
2066/67	1,547.68	15854.80	9.76
2067/68	2,406.61	20197.03	11.92
2068/69	1,905.68	21575.65	8.83
2069/70	4,330.91	25948.51	16.69
<b>Mean</b>	<b>2,125.66</b>	<b>18,753.49</b>	<b>10.30</b>
<b>S.D.</b>	<b>1,278.64</b>	<b>5,357.76</b>	<b>4.05</b>
<b>C.V.</b>	<b>60.15</b>	<b>28.57</b>	<b>39.32</b>

(Sources: Appendix-II)

The table 4.2 shows that the actual cash and bank balances to total deposit ratio of SBL. The SBL has its highest ratio 16.69% in year 2069/70 and lowest ratio 4.29% in year 2065/66. In the other year during the study period in 2066/67 ,2067/68 and 2068/69 the level of cash and bank in relation to total deposit is 9.76%, 11.92% and 8.83% respectively. From the above analysis, it can be concluded that the average ratio of SBL is 10.30 that shows that its liquidity position for five in average maintained by SBL. Likewise S.D. of C & B ratio is 4.05 and coefficient of variation is 39.32%. It deals average cash and bank balance is not efficiently consistent. Higher the S.D. shows the higher fluctuation and vice versa. It is crucial importance for the company to keep careful watch over the cash movements to determine new cash flow because of variable and also to investigate the opportunities for the use of cash. The bar diagrams below shows the cash and bank balance position comparison with total deposits.

**Figure 4.2**

**Comparative analysis of cash & bank balance to total deposit**



The figure 4.2 shows the analysis of cash and bank balance to total deposit the maximum cash and bank balance is required to keep for maintaining liquidity of SBL. Generally cash and bank balance uses to increase with increase in total deposit but deposit is not only factors that influence in cash and bank balance. Here, maximum cash and bank balance is in the year 2069/70 and minimum cash and bank balance is in year 2065/66 with average Rs.2125.66 million.

**4.2.1.3 Statutory Liquidity Ratio (SLR)**

SLR refers to the amount that all banks require maintaining in cash or in the form of Gold or approved government securities. SLR is determined as percentage of total demand and percentage of time deposit liabilities. It is the amount which a bank has to maintain in the form: cash, gold valued at price not exceeding the current market price, approved Government securities.

The objectives of SLR are, to restrict the expansion of bank credit, to augment the investment of the banks in government securities and to ensure solvency of banks. The commercial banks should maintain 15% SLR ratio for this fiscal year in quarterly basis.

**Table4.3****Position of Statutory Liquidity Ratio (SLR)**

(Rs in millions)

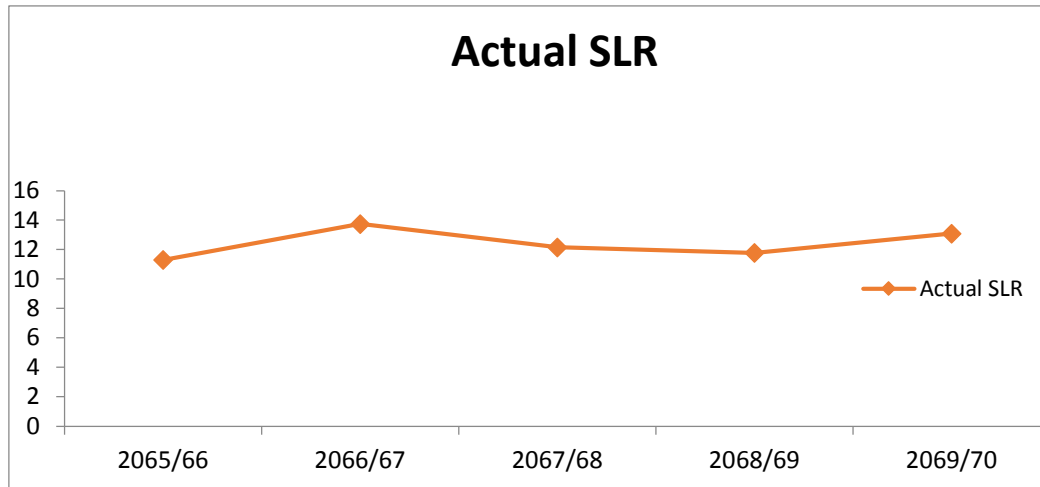
FY	Investment in Govt. Securities	Total deposit	Actual SLR	Standard SLR
2065/66	850.08	10191.44	11.28	-
2066/67	1693.57	15854.80	13.73	8
2067/68	1401.36	20197.03	12.14	15
2068/69	1795.36	21575.65	11.76	15
2069/70	2673.27	25948.51	13.08	15
<b>Mean</b>	<b>1682.73</b>	<b>18,753.49</b>	<b>12.40</b>	
<b>S.D.</b>	<b>594.38</b>	<b>721.52</b>	<b>0.89</b>	
<b>C.V.</b>	<b>25.38</b>	<b>30.81</b>	<b>7.15</b>	

(Source: Appendix-III)

Table No. 4.3 shows the investment in government securities and total deposit of SBL from fiscal year 2065/66 to 2069/70 with its ratio i.e. SLR. During the study period the highest investment is 2673.27 in year 2069/70 and lowest is 850.08 in year 2065/66. The mean, S.D. and CV of investment in government securities are 1682.73, 594.38 and 35.32% respectively.

The NRB started the provision of SLR from the fiscal year 2066/67 by announcing the 6% rate of SLR and according to provision commercial banks should maintain 8% in end of ashadh 2067. SBL is able to meet the standard SLR from the year to till date.

**Figure 4.3**  
**Trend analysis of actual SLR**



The figure 4.3 shows the trend of actual SLR of SBL. Here, actual CAR is fluctuating trend. It has trend of gradually decreasing.

#### **4.2.2 Capital Adequacy Analysis**

As per the directive issued by NRB, the bank capital has been categorized into two parts, core capital and supplementary capital. The total of these two capitals considers for calculating capital adequacy ratio

##### **4.2.2.1 Capital Adequacy Ratio (CAR)**

The capital adequacy ratio is based on total risk weighted assets. The sum of core capital and supplementary capital is measured to be total capital fund. For the purpose of calculation of capital fund, the risk weighted assets have been classified in two parts as on balance sheet items and off balance sheet items. The capital adequacy ratio would measure the total capital fund on the basis of total risk weighted assets. As per the rule of NRB commercial banks should maintain 15% capital adequacy and is mandatory.

**Table 4.4**  
**Position of Capital Adequacy Ratio**

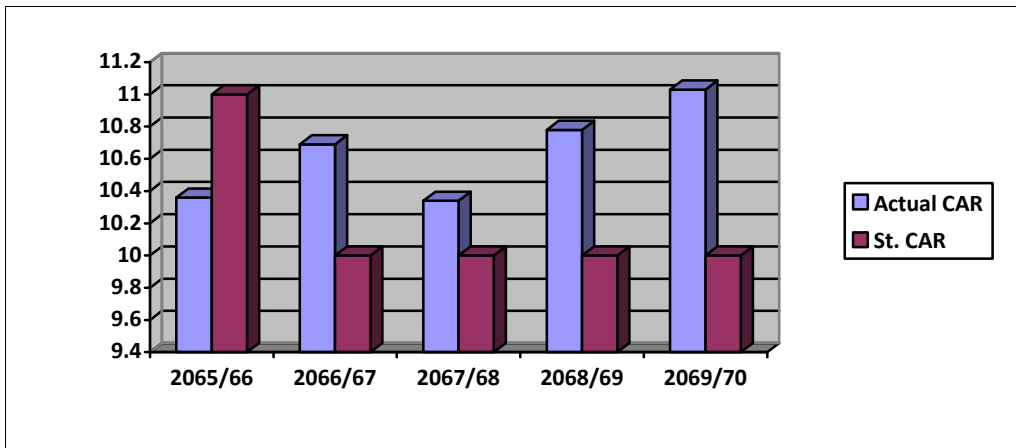
(Rs in millions)				
FY	Total Capital Fund	TRWA	Actual CAR	NRB Standard
2065/66	1147.73	11081.37	10.36	10%
2066/67	1625.46	15210.56	10.69	10%
2067/68	1983.99	19184.45	10.34	10%
2068/69	2340.62	21711.32	10.78	10%
2069/70	2908.07	26365.32	11.03	10%
<b>Mean</b>	<b>2,001.17</b>	<b>18,710.60</b>	<b>10.64</b>	<b>-</b>
<b>S.D.</b>	<b>601.25</b>	<b>5,258.88</b>	<b>0.26</b>	<b>-</b>
<b>C.V.</b>	<b>30.04</b>	<b>28.11</b>	<b>2.46</b>	<b>-</b>

(Source: Appendix-IV)

Table No. 4.4 shows the total capital fund and total risk weighted assets (TRWA) of SBL from fiscal year 2065/66 to 2069/70 with its ratio i.e. CAR. The trend of both total capital fund and total risk weighted assets are increasing. The mean or average, S.D. and CV of total capital fund are 2001.17, 601.25 and 30.04 respectively. Similarly, the mean or average, S.D. and CV of total risk weighted assets are 18710.60, 5258.88 and 28.11 respectively.

The BFIs should maintain CAR as prescribed by NRB and which is mandatory. SBL is able to maintain all year, which is just excess than standard.

**Figure 4.4**  
**Comparative analysis of actual CAR and standard CAR**



The figure 4.4 shows the trend of actual CAR of SBL and standard CAR. Here, actual CAR is fluctuating trend and actual CAR is less than standard in fiscal year 2065/66. CAR in last past three years with increasing rate and standard CAR last past three years is constant.

#### 4.2.2.2 Core Capital Ratio (CCR)

As mentioned above, the bank capital has been categorized into two parts; core capital and supplementary capital. Out of these two capital core capital is to be considered for calculating core capital ratio, Core capital is that sort of capital which is provision for general purpose and is basic capital. It is known as name of Tire-I according to Basel-I & II. It is based on total risk weighted assets. The core capital ratio would measure the core capital fund on the basis of total risk weighted assets. As per the rule of NRB, commercial banks should maintain 6% capital Core capital. It can be calculated as under:

**Table 4.5**  
**Position of Core Capital Ratio**

(Rs in millions)

FY	Core Capital Fund	Total Risk Weighted Assets	Actual CCR	St. CCR
2065/66	1049.68	11081.37	9.47	6%
2066/67	1257.07	15210.56	8.26	6%
2067/68	1581.57	19184.45	8.24	6%
2068/69	1965.77	21711.32	9.05	6%
2069/70	2155.67	26365.32	8.18	6%
<b>Mean</b>	<b>1,601.95</b>	<b>18,710.60</b>	<b>8.64</b>	<b>-</b>
<b>S.D.</b>	<b>415.53</b>	<b>5,258.88</b>	<b>0.52</b>	<b>-</b>
<b>C.V.</b>	<b>25.94</b>	<b>28.11</b>	<b>6.07</b>	<b>-</b>

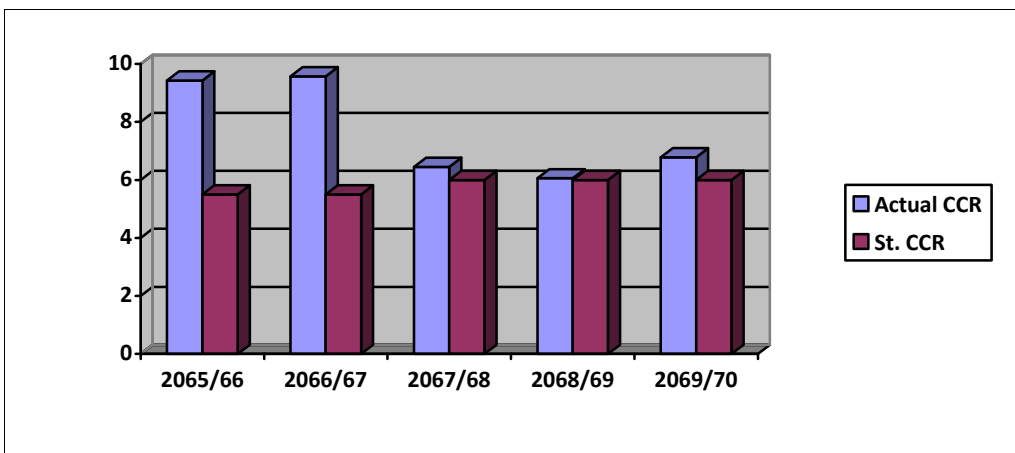
(Source: Appendix-V)

Table No. 4.5 shows the Core capital fund and total risk weighted assets of SBL from fiscal year 2065/66 to 2069/70 with its ratio i.e. CAR. The trend of both core capital fund and total risk weighted assets are increasing. The mean or average, S.D. and CV of core capital fund are 1601.95, 415.53 and 25.94 respectively. Similarly, the mean or average, S.D. and CV of total risk weighted assets are 18710.60, 5258.88 and 28.11 respectively.

The BFIs should maintain CCR as prescribed by NRB and which is mandatory. SBL is able to maintain whole during study periods or which is higher than standard CCR by NRB. The average or mean, S.D. and CV of CAR are 8.64, 0.52 and 6.07 respectively.

**Figure 4.5**

**Comparative analysis of actual CCR and standard CCR**



The figure 4.5 shows the trend of actual CCR and standard CCR of SBL. Here, both actual CCR and standard CCR are fluctuating trend. During the study periods actual CCR is higher than standard CCR.

### 4.2.3 Assets Quality Analysis

Bank and financial institutions have huge amount of loan and advance as assets. Loan and advance are mobilized from deposit received from the depositors. The difference between loan interest and deposit interest is called interest spread, which generates the profit for banks. It covers the around 70 to 80% income from interest income. The purpose of lending loan is get back loan amount with interest in prescribed schedule. If any loan client is unable to pay on timely. The bank should bear loss. Therefore, every bank should analyze the credit appraisal before providing credit facility to clients.

Assets quality analysis is related to quality of credit provided by bank, according to their performance, recoverable, provision for possible losses, payment trends, coverage from the provision, collateral etc. To know the position of bank, it should necessary to analyze and

study about quality of assets specially credit quality in terms of banks. The following ratios will be calculated as:

#### 4.2.3.1 Non-Performing Loan Ratio (NPL)

According to directive published by NRB, the loan and advance has been divided in two parts: Performing loan and Non-performing loan. Performing loan consists good or pass loan. Good or pass loan means that sort of loan whose time of payment made is not passed more than 3 months. On the other hand, Non-performing loan includes the restructured loan, Sub-standard loan, doubtful loan and bad loan. Under non-performing loan the time of payment is passed above than 3 months. Non-performing loan ratio shows the relationship or ratio of sum of Non-performing loan and total credit. Higher NPL ratio denotes higher non-performing loan and it indicates not satisfied performance of lending and recovering credit. According to NRB directive, the banks should maintain NPL ratio less than 5%.

**Table 4.6**  
**Position of Non-Performing Loan Ratio**

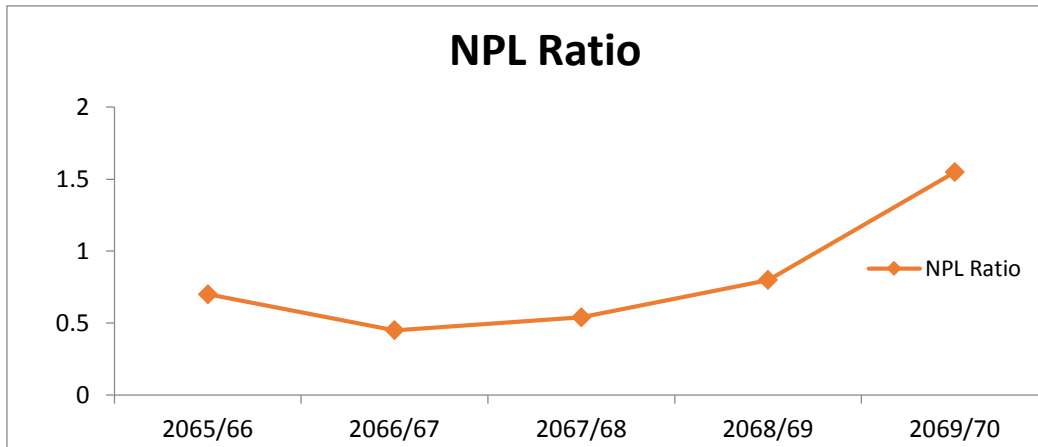
(Rs in millions)

<b>FY</b>	<b>Total NPL</b>	<b>Total Loan &amp; Advance</b>	<b>NPL Ratio</b>
2065/66	65.18	9335.60	0.70
2066/67	60.30	13328.62	0.45
2067/68	89.26	16653.85	0.54
2068/69	147.74	18384.03	0.80
2069/70	312.91	20217.58	1.55
<b>Mean</b>	<b>135.08</b>	<b>15,583.94</b>	<b>0.81</b>
<b>S.D.</b>	<b>94.19</b>	<b>3,862.23</b>	<b>0.39</b>
<b>C.V.</b>	<b>69.73</b>	<b>24.78</b>	<b>48.27</b>

(Source: Appendix-VI)

The above table shows that actual percentage of non-performing loan to total loan and advances in every study year is less than 5%, which indicates the good credit and recover policy of SBL. During the study period maximum NPL is 1.55% in year 2069/70 and minimum NPL in year 2066/67 with average 0.81%. And S.D. of NPL is 0.39 and coefficient of variance 48.27%, which shows the level of consistency, is more and satisfied level of NPL because NPL is less then prescribed NPL by NRB.

**Figure 4.6**  
**Trend Analysis of NPL Ratio**



Above figure shows the trend of actual non-performing loan to total loan and advance ratio every study year. The trend of NPL ratio is fluctuating but it is in decreasing way in overall, which is favorable for SBL.

#### **4.2.3.2 Loan Loss Coverage Ratio**

Loan loss coverage ratio measures the capacity of cover of Non-performing loan from the loan loss provision. Bank and financial institutions should make provision for future loan loss according to loan category for their safeguard. As per provision, BFIs should make provision in the every quarter end. From that provision, loss should be covered if loss is occurred in the future. So, BFIs use to make sufficient provision according to loan's category and it can be allowed to adjust in profit and loss account. Higher ratio is better.

**Table 4.7**

**Position of total loan loss provision and total NPL**

(Rs in millions)

FY	Total Loan Loss Provision	Total NPL	LLC Ratio
2065/66	145.19	65.18	222.76
2066/67	176.17	60.30	292.15
2067/68	241.50	89.26	270.57
2068/69	263.16	147.74	178.12
2069/70	389.72	312.91	124.55
<b>Mean</b>	<b>243.15</b>	<b>135.08</b>	<b>217.63</b>
<b>S.D.</b>	<b>84.81</b>	<b>94.19</b>	<b>61.00</b>
<b>C.V.</b>	<b>34.88</b>	<b>69.73</b>	<b>28.03</b>

(Source: Appendix-VII)

The above table shows the total loan loss provision and total non-performing loan in every study year with Loan loss coverage ratio. The LLC analysis whether total non-performing loan is covered from total loan loss provision or not. Here, maximum LLC ratio is 292.15% in year 2066/67 and minimum ratio is 124.55% in year 2069/70. To cover the NPL from provision, the ratio must be 100%. In last past three years SBL has been able to maintain and other are not. But, the average of last five fiscal years is 217.63, which is satisfied to meet future credit risk. The S.D. of LLC ratio is 61.00 and CV is 28.03%.

**Figure 4.7**

**Comparative analysis of total loan loss provision and total NPL**

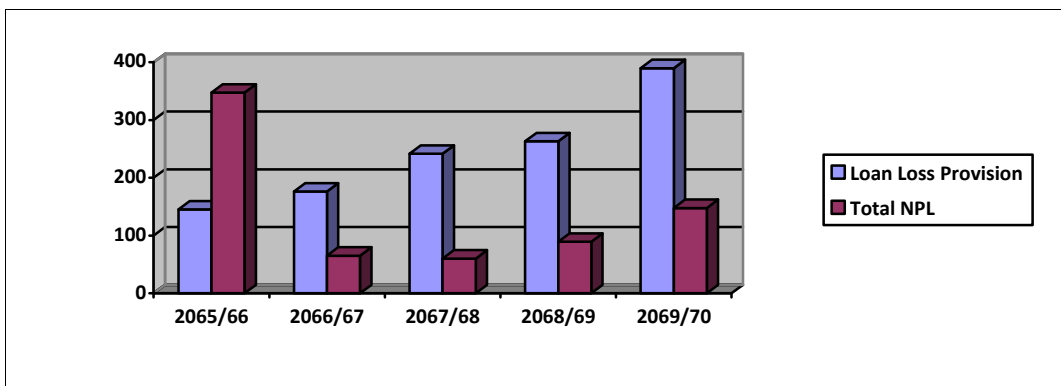


Figure No.4.7 shows the level of total non-performing loan with total loan loss provision is shown in every study year. Both on total non-performing loan with total loan loss provision

are fluctuating. Though there is favorable for SBL to cover future loss because last past three year are able to maintain higher provision than NPL or i.e. LLC ratio > 100%.

#### **4.2.3.3 Loan Loss Provision Ratio**

Bank or financial institution should make loan loss provision according to loan classification. For the purpose of making provision, loan is divided into five categories: Pass loan, restructured loan, sub-standard loan, doubtful loan and bad loan. Loan loss provision is made with objective of meeting the future losses which reduces the future risks.

Loan loss provision (LLP) ratio shows the ratio of total loan loss provision on total loan and advance. It is the one of tools to analyze the credit risk and assets quality which helps to make plan to the stakeholders, investors etc.

#### **4.2.3.4 Total Credit to Deposit Ratio (C/D)**

C/D ratio is a tool which shows relation between deposit accepted and credit granted to the lenders by a bank. It is the proportion of loan –assets created by banks from the deposits received. The higher the ratio, the higher the loan-assets created from deposits. A high credited-deposit ratio could lead to a rise in interest rates. It determines the amount of total lending from the total deposit from the customers. This ratio directly shows the credit performance of commercial banks. Credit is major source of generation of out-cash flow. Commercial banks used to grant credit charging high cost to risky areas to generate maximum cash flow. Management of cash from deposit and cash out flow to credit to generate more profit is strategic tactical job of commercial banks. Most of the effort of commercial banks is use to be concentrated to the credit deposit activity. Banks are generating about 60% to 70% income from credit. As per NRB, the commercial banks should maintain 80% C/D ratio for this fiscal year.

**Table 4.8**  
**Position of total credit and total deposit**

(Rs in millions)

FY	Total Credit	Total Deposit	C/D Ratio
2065/66	9335.60	10191.44	91.60
2066/67	13328.62	15854.80	84.07
2067/68	16653.85	20197.03	82.46
2068/69	18384.03	21575.65	85.21
2069/70	20217.58	25948.51	77.91
<b>Mean</b>	<b>15,583.94</b>	<b>18,753.49</b>	<b>84.25</b>
<b>S.D.</b>	<b>3,862.23</b>	<b>5,357.76</b>	<b>4.44</b>
<b>C.V.</b>	<b>24.78</b>	<b>28.57</b>	<b>5.26</b>

(Source: Appendix-VIII)

Table No. 4.8 shows the total credit and total deposit of SBL from fiscal year 2065/66 to 2069/70 with its ratio i.e. C/D ratio. The trend of total credit is increasing and trend of total deposit is fluctuating. The mean or average, S.D. and CV of total credit are 15583.94, 3862.23 and 24.78 respectively. Similarly, the mean or average, S.D. and CV of total deposit are 18753.49, 5357.76 and 28.57 respectively.

As per NRB, BFIs should maintain less than 80% C/D ratio, which is mandatory. SBL is not able to maintain whole during study periods except in year 2069/70. The average or mean, S.D. and CV of CAR are 84.25% 4.44% and 5.26% respectively.

**Figure 4.8**  
**Comparative analysis of credit and deposit**

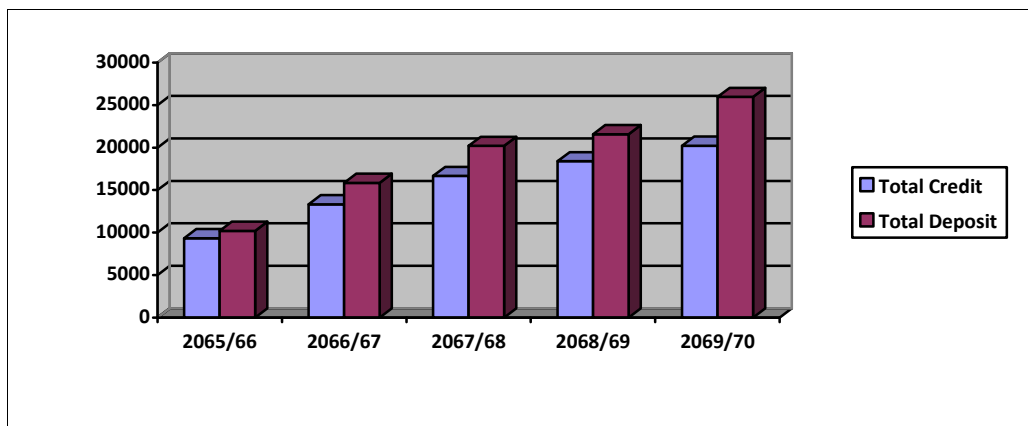


Figure No. 4.8 shows the comparative position of total credit with total deposit is shown in every study year. The trend of total credit is increasing and trend of total deposit is fluctuating. Despite of financial crisis and highly competitive market, we can say that the SBL is doing in both credit and deposit because it is increasing trend in overall year.

#### 4.2.4 Profitability Analysis

Profitability analysis is the analysis of the overall efficiency of banks in terms of profit and financial performance. The higher profitability ratios indicate the better performance. It is one of the important tools to analyze the profitability of any types of business firms. Under this, the following profitability ratio will be calculated:

##### 4.2.4.1 Earning Per Share (EPS)

The main objective of every business organization is maximization or earning or profit. The Earning per share (EPS) after income tax is one of the most important determinants of share's value because it measures the earnings power under each share. The income of each share is known as earning per share. It can be calculated by the following formula.

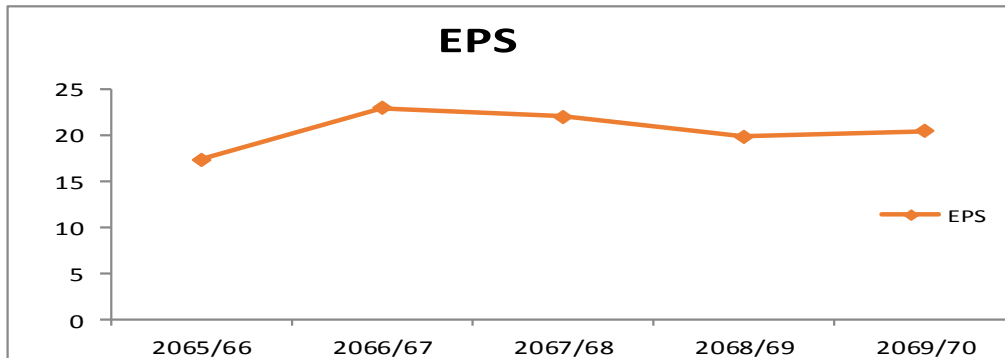
**Table 4.9**  
**Position of earning per share**

(Rs in millions)			
FY	NPAT	No. of Equity Share	EPS
2065/66	143.17	8280000	17.29
2066/67	217.92	9522000	22.89
2067/68	240.85	10950300	21.99
2068/69	311.42	15711300	19.82
2069/70	329.90	16192443	20.37
<b>Mean</b>			20.47
<b>S.D.</b>			1.93
<b>C.V.</b>			9.44

(Source: Appendix-IX)

Table No. 4.9 shows that the earning per share in yearly basis is found fluctuating trend. The highest EPS is 22.89 in year 2066/67 and lowest is 17.29 in year 2065/66 with average EPS 20.47. The S.D. of EPS is 1.93 and C.V. of EPS is 9.44%.

**Figure 4.9  
Trend Analysis of EPS**



The above diagram shows that the SBL's earning per share is fluctuating trend and average EPS, S.D. and coefficient of variance is 20.47, 1.93 and 9.44 respectively. It shows the EPS is higher consistent. Likewise, EPS trend is fluctuating.

#### 4.2.4.2 Return on Equity (ROE)

Return on equity is the ratio of net income to equity capital. It measures the rate of return of equity shareholders' investment. Objective of management is to generate the maximum return on shareholder's investment in the organization. Return on equity is therefore the best single measure of the company's success in fulfilling its goal. Increasing ratio of ROE is favorable for a company which shows that the net profit is increasing.

**Table 4.10  
Position of NPAT and shareholder's fund**

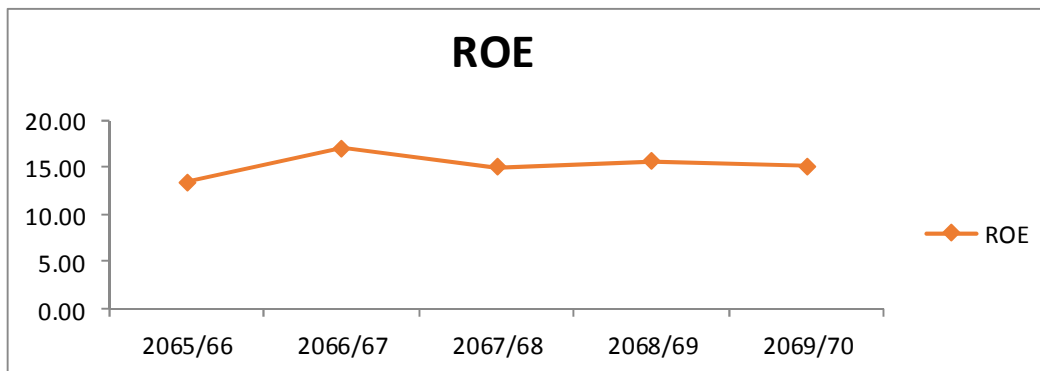
(Rs in millions)

FY	NPAT	Shareholder's Fund	ROE
2065/66	143.17	1068.35	13.40
2066/67	217.92	1278.74	17.04
2067/68	240.85	1603.54	15.02
2068/69	311.42	1988.40	15.66
2069/70	329.90	2183.27	15.11
<b>Mean</b>	<b>248.65</b>	<b>1,624.46</b>	<b>15.25</b>
<b>S.D.</b>	<b>67.34</b>	<b>418.08</b>	<b>1.17</b>
<b>C.V.</b>	<b>27.08</b>	<b>25.74</b>	<b>7.69</b>

(Source: Appendix-X)

The return on equity is around 14% for SBL. The table shows the return on equity varies from 13.40%, 17.04%, 15.02%, 15.66% and 15.11% from the fiscal year 2065/66 to 2069/70 with average return 14.25%. Likewise, S.D. is 1.17 and coefficient of variance is 7.69%. Return on equity is fluctuating trend. The following bar diagram shows the position of return on equity.

**Figure 4.10**  
**Trend Analysis of ROE**



The above diagram shows that the SBL's return on equity is increasing trend and also shows the ROE is higher consistent. Likewise, shareholder's fund of SBL is increasing trend. And ROE is fluctuating trend, where the highest ROE is in year 2066/67 and lowest ROE is in year 2065/66 and average considering five year is 14.25, S.D. is 1.17 and C.V. is 7.69%.

#### **4.2.4.3 Return on Total Assets (ROA)**

Return on total assets is the ratio of net income after tax to total assets. It measures the return on all the company's assets after interest and taxes. Assets are hold to earn income for their holding. Assets include all types of assets that might be banking or non-banking assets. In the BFIs have huge amount cover the loan and advance as assets by which employed for maximization earnings.

**Table 4.11**  
**Position of Return on Total Assets**

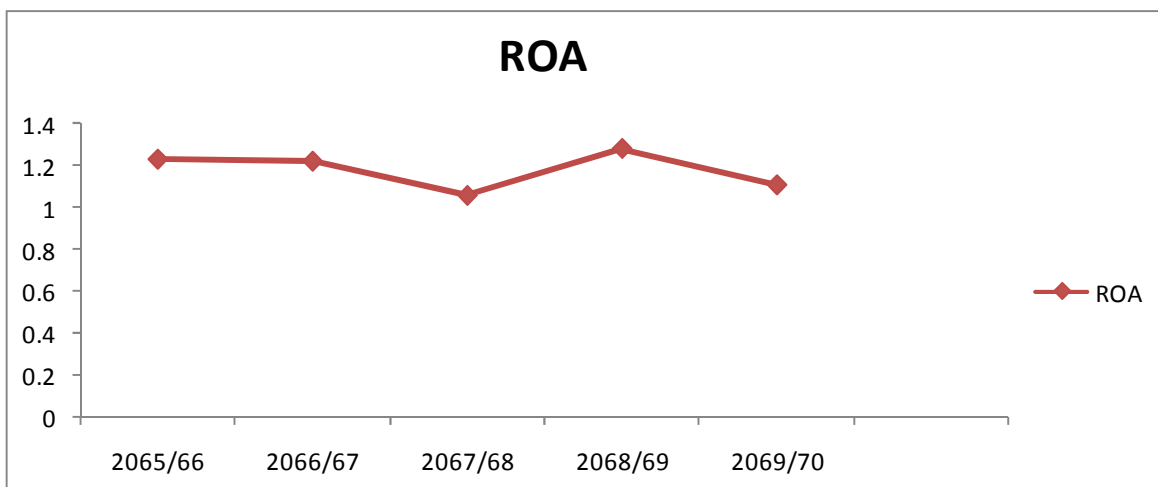
(Rs in millions)

<b>FY</b>	<b>NPAT</b>	<b>Total Assets</b>	<b>ROA</b>
2065/66	143.17	11668.36	1.23
2066/67	217.92	17881.75	1.22
2067/68	240.85	22802.43	1.06
2068/69	311.42	24405.87	1.28
2069/70	329.90	29628.73	1.11
<b>Mean</b>	<b>248.65</b>	<b>21,277.43</b>	<b>1.18</b>
<b>S.D.</b>	<b>67.34</b>	<b>6,094.62</b>	<b>0.08</b>
<b>C.V.</b>	<b>27.08</b>	<b>28.64</b>	<b>6.86</b>

(Source: Appendix-XI)

The return on total assets is around 1.15% for SBL. The table shows the return on position of net profit after tax and total assets with its ratio i.e. return on total assets (ROA). Both return net profit after tax and total assets are increasing trend. The following bar diagram shows the position of net profit after tax and investment of SBL.

**Figure 4.11**  
**Trend Analysis of Return on Total Assets**



The above diagram shows that the SBL's both net profits after tax and total assets are increasing trend and average or mean, S.D. and coefficient of variance of NPAT are 248.65, 67.34 and 27.08 respectively. Likewise, average or mean, S.D. and coefficient of variance of total assets are 21277.43, 6094.62 and 28.64 respectively. The trend of ROA is fluctuating but

increasing in overall. The average or mean, S.D. and coefficient of variance of ROA are 1.18, 0.08 and 6.86 respectively.

#### 4.2.4.4 Return on Investment (ROI)

The objective of the investment is to earn higher income to run business successfully. Return means earning which is main motto of the every business organization. It is one of the barometers of success.

Return on investment is the ratio of the net profit after tax to investment. It measures the strength of the investment to earn as well as denotes the whether the productive investment or not. Investment is holding assets with intention to earning income. Higher the ratio is favorable for company which indicates the higher capacity of investment and also increasing the return.

**Table 4.12**  
**Position of Return on Investment (ROI)**

(Rs in millions)

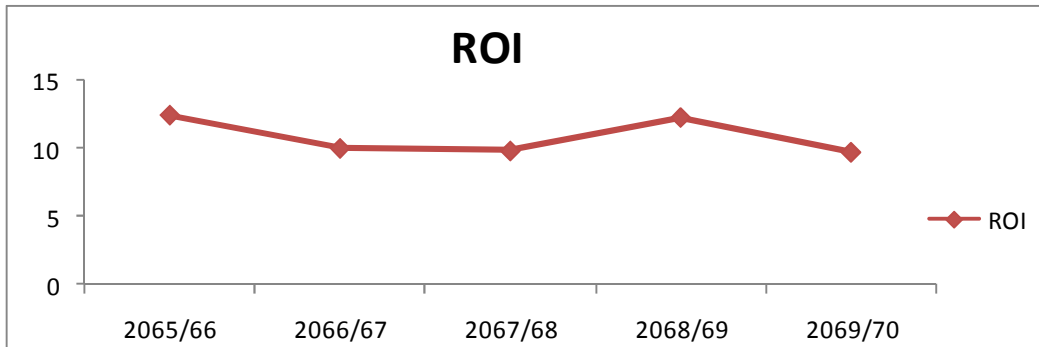
<b>FY</b>	<b>NPAT</b>	<b>Investment</b>	<b>ROI</b>
2065/66	143.17	1150.10	12.45
2066/67	217.92	2176.43	10.01
2067/68	240.85	2452.48	9.82
2068/69	311.42	2537.91	12.27
2069/70	329.90	3392.87	9.72
<b>Mean</b>	<b>248.65</b>	<b>2,341.96</b>	<b>10.86</b>
<b>S.D.</b>	<b>67.34</b>	<b>721.52</b>	<b>1.23</b>
<b>C.V.</b>	<b>27.08</b>	<b>30.81</b>	<b>11.36</b>

(Source: Appendix-XII)

The return on investment is around 11% for SBL. The table shows the return on investment varies from 12.45%, 10.01%, 9.82%, 12.27% and 9.72% from the fiscal year 2065/66 to 2069/70 with average return 10.86%. Likewise, S.D. is 1.23 and coefficient of variance is 11.36%. Return on investment is fluctuating trend. The following bar diagram shows the position of net profit after tax and investment of SBL.

**Figure 4.12**

**Trend Analysis of Return on Investment (ROI)**



The above diagram shows that the SBL’s ROI is fluctuating trend, which is not favorable for SBL though overall return of the SBL is increasing trend.

**4.2.4.5 Return on Loan & Advance**

Return on loan and advance is the ratio of the net profit after tax to loan and advance which shows the strength of loan and advance to earn profit. Bank and financial institutions have got huge amount of loan and advance as assets which is provided from public deposits because the main function of BFIs are earn profit through lending credit by collecting deposits. RLA measures what times the loan and advances contribution to the profit. It can be calculated as under:

**Table 4.13**  
**Position of return on loan and advance**

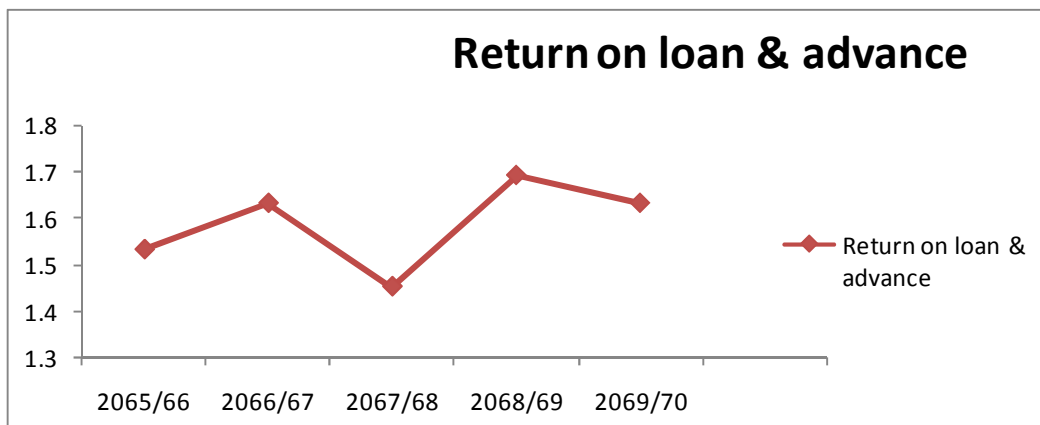
(Rs in millions)

FY	NPAT	Total Loan & Advance	Return on Loan & Advance Ratio
2065/66	143.17	9335.60	1.53
2066/67	217.92	13328.62	1.63
2067/68	240.85	16653.85	1.45
2068/69	311.42	18384.03	1.69
2069/70	329.90	20217.58	1.63
<b>Mean</b>	<b>248.65</b>	<b>15,583.94</b>	<b>1.59</b>
<b>S.D.</b>	<b>67.34</b>	<b>3,862.23</b>	<b>0.09</b>
<b>C.V.</b>	<b>27.08</b>	<b>24.78</b>	<b>5.52</b>

(Source: Appendix-XIII)

Table No. 4.13 shows the net profit after tax and total loan and advance with its ratio. The trend of both the net profit after tax and total loan and advance are increasing and trend of return on total loan and advance ratio is fluctuating. The following bar diagram shows the trend of return on total loan and advance of SBL.

**Figure 4.13**  
**Trend Analysis of Return on loan and advance**



The above diagram shows that the SBL's return on loan and advance is fluctuating trend but increasing in overall, which is favorable aspect for SBL. And average NPAT, S.D. and coefficient of variance is 3.00, 0.23 and 7.58% respectively.

#### **4.2.5 Management Efficiency Analysis**

Efficiency denotes capacity, ability, management skills, earning power etc. Management efficiency analysis is the analysis of management capacity and ability to earn income and to run business effectively in competitive today's market. Management efficiency reflects its market share, profit, financial position, market goodwill and others. Contribution of management will be analysis under this topic.

##### **4.2.5.1 Management Efficiency Ratio (MER)**

Management Efficiency Ratio is a tool to identify the contribution in net profit by per staff. It is the ratio of net profit after tax to no. of staffs employed. It measures the efficiency of

management to earn income. Management decision, capacity, ability, skills and other factors will determine the level of earnings. That's why; it is one of the tools to examine the efficiency of the management to run business effectively and efficiently. It depends upon overall management skills. Every employee or staff has a vital role to success.

#### **4.2.5.2 Market Risk Management Analysis**

There are four dimensions of market risks:

**Interest rate risk:** Global money and currency markets are liberalized. Neither the exchange rates nor the interest rates are administered, but they move freely depending upon their demand and supply. This creates a lot of volatility in the interest rates of various currencies. This is called interest rate risk.

**Price risk:** The price moves in the market both ways (up/down). Due to the continuous movement of prices of commodities/currencies, "price risk" arises.

**Credit risk:** Credit risk arises due to possibility of payment default from the counter parties.

**Event risk:** Major political events/natural calamities create the event risks.

#### **4.2.5.3 Investment Portfolio Management Analysis**

Banks have both home currency and foreign currency liabilities (deposit). Most of their deposits are invested in the form of loans, advances and bills discounting. This is the assets class with highest risk and return. However for the purpose of liquidity/safety, banks also need to invest a part of their funds into government bonds, Fund bills and sometimes corporate bonds.

While making such investments, banks have to match the maturity of their liabilities and assets so that they can meet their obligation on time without suffering a liquidity crunch.

#### **4.2.5.4 Foreign Exchange Risk Management Analysis**

Banks buy and sell foreign exchange to the public. To carry out this function, banks have to keep sufficient stocks of foreign exchange. These are kept in the form of bank account abroad.

Subject to the rules and regulations of Nepal Rastra Bank and foreign exchange and money market dealers association of Nepal (FEDAN), banks have to quote rates for foreign exchange to be purchased and sold to their customers. Subject to these regulation rates quoted would depend upon the rates prevailing in the international/inter-bank market.

**Foreign exchange risk: There are four types of risk exposures in foreign exchange market**

***Transaction exposure:*** Every entry and exit from a foreign exchange deal comes at a cost. This is due to continuously changing market rates. Suppose if you buy Euro 100,000.00 in the morning at the rate 1.2200 against USD, you have to pay USD 122,000.00 for this. Now after one hour if you want to sell back the euro market rates will not be same. It may have gone up or down or it may be same. If it has gone up to say 1.2300, now you will get back USD 123,000.00, so you made a profit of USD 1000.00. If it goes down to 1.2100, you will lose USD 1000.00 this is how the transaction risk arises. In order to come the transaction risk, dealers try to square their position as soon as possible.

***Translation exposure:*** This comes into effect for the MNC (Multinational Corporation) whose subsidiaries overseas maintain their books in foreign currencies.

***Accounting exposure:*** This is related to the value of assets/liabilities in terms of foreign currency.

***Economic exposure:*** This is related to economic value of assets in one country with respect to that of another country.

#### **Tools to manage foreign exchange risks**

***Forward contract:*** In forward contract buyer/sellers agree to buy/sell a currency/commodity at a fixed rate on future date.

**Swaps:** Swaps are used to hedge both exchange rate risk and interest risks. In a swap transaction currencies are bought and sold back at a rate is predetermined based on the interest differentials of the currencies involved.

**Options/futures:** In case of option/futures they are traded through an exchange and are traded in standard lots. Options and futures provide an excellent hedging opportunity without having to payback a heavy cancellation change like in forward contract (KFA Banking Course).

### **4.3 Statistical Analysis**

Statistics is a body of methods of obtaining and analyzing data in order to base decision on them. It is a branch of scientific method used in dealing with phenomena that can be described numerically either by counts or by measurements. Statistical methods are applicable to a very larger number of fields.

Statistical methods are the mathematical techniques used to facilitate the analysis and interpretation of numerical data secured from groups of individual or groups of observation from a single individual. The various statistical tools can be used to analyze data. The following tools are used:

#### **4.3.1 Coefficient of Correlation Analysis**

Correlation analysis is the statistical tool that we can use to describe the degree to which one variable is linearly related to other variables. Two or more variables are said to be correlated if change in the other of one variable appears to be related or linked with the change in the other variables. The relationship between age, height and weight are studied by correlation. It analysis the covariance between two or more variables and correlation analysis deals to determine the degree of relationship between two or more variables. It refers the closeness of the relationship between two or more variables. Correlation says just degree of the relationship between two or more variables. It does not tell us anything about cause and which is the effect.

Correlation is defined as the relationship (association) between (among) the one dependent variable or factor and on or more than one independent variable(s) of factor(s). “Correlation analysis deals with the association between two or more variables”. (Simpson & Kafka, 1997)

“Correlation analysis is the statistical tools the generally used to describe the degree to which one variable is related to another. On the basis theory of correlation one can study the comparative changes occurring in two related phenomena and their cause effect relation can be examined” (Kothari, 1981)

“Correlation is an analysis of the co-variation between two or more variables”. AM Title (Gupta, 1984)

Correlation analysis attempts to determine the degree of relationship between variables”. (Ya Lun Chou, 1998)

Karl pearson’s measure, known as pearsonian correlation coefficient between two variables (series) X and Y, Usually denoted by r (X, Y) or  $r_{xy}$  or simply r is a numerical measure of linear relationship between them. Of the several mathematical methods measuring correlation, the Karl Pearson’s method popularly known as personian coefficient of correlation is mostly widely used in practice. The personian coefficient of correlation is denoted by the symbol r.

**The degree of relationship is measured by using following formula.**

$$\text{Co-efficient of correlation } r = \frac{\sum XY - \frac{\sum X \sum Y}{Z}}{\sqrt{\sum X^2 - \frac{(\sum X)^2}{Z}} \sqrt{\sum Y^2 - \frac{(\sum Y)^2}{Z}}}$$

Where,

r = correlation coefficient

X = Sum of the variable X

Y = Sum of variable Y

$XY = \text{Sum of products of X and Y}$

$N = \text{Number of pairs of X and Y}$

The Karl Pearson coefficient of correlation (r) always fall between -1 to +1. The value of correlation in minus signifies the negative correlation and in plus signifies the positive correlation. As the value of correlation reaches near to the value of zero, it is said that there is no relationship between the variables.

#### **4.3.1.1 Correlation Coefficient between Deposit and Credit**

Deposit have played very a vital role in performance of a banks and similarly credit or loan and advances are played very important to mobilize the collected deposit. Coefficient of correlation between deposit and credit measures the degree of relationship these two variables. In this analysis, deposit is independent variable (X) and credit is dependent variable (Y). The main objectives of calculation coefficient of correlation (r) between these two variables is to justify whether deposit are significantly used as credit in proper way or not. The following table shows the coefficient of correlation, coefficient of determination, probable error and six times of probable error during the fiscal year 2065/66 to 2069/70.

**Table 4.14**

#### **Coefficient of correlation between total deposit and credit**

<b>Particulars</b>	<b>r</b>	<b>R<sup>2</sup></b>	<b>P.Er</b>	<b>6P.Er</b>	<b>Remarks</b>
<b>SBL</b>	<b>0.99</b>	<b>0.98</b>	<b>0.01</b>	<b>0.06</b>	<b>Significant</b>

(Source: Appendix-XIV)

From the above table, we found that coefficient of correlation between deposit and credit of SBL is 0.99. It shows that the high degree of positive relationship between these two variables. The correlation coefficient of both banks is significant because the correlation coefficient is greater than the relative value of 6P.Er. In other words there is significant relationship between deposits and credit.

#### 4.3.1.2 Correlation Coefficient between Total Deposit and Total investment

The coefficient of correlation between deposit and investment measures the degree of relationship between these two variables or deposit is significantly utilized or not. In this correlation analysis, deposit is independent variable (X) and investment is dependent variable (Y). The main objectives of calculation coefficient of correlation (r) between these two variables is to justify whether deposit are significantly used as credit in proper way or not.

**Table 4.15**

##### **Coefficient of correlation between total deposit and total investment**

<b>Particulars</b>	<b>r</b>	<b>R<sup>2</sup></b>	<b>P.Er</b>	<b>6P.Er</b>	<b>Remarks</b>
<b>SBL</b>	<b>0.98</b>	<b>0.96</b>	<b>0.01</b>	<b>0.06</b>	<b>Significant</b>

(Source: Appendix-XV)

From the above table, it is found that coefficient of correlation between total deposit and total investment of SBL is 0.98. It denotes the high degree of positive correlation, in addition Coefficient of determination of SBL is 0.96, which implies only 96 % of total investment, is covered by total deposits sources. The correlation coefficient is higher than 6 P.Er, so the correlation coefficient is significant. It refers that there is significant relationship between total deposit and total investment of SBL. From the above analysis, the conclusion can be drawn in the case of SBL that has high degree of positive correlation between total deposit and total investment.

#### 4.3.1.3 Correlation Coefficient between Investment and Net Profit

The coefficient of correlation between total investment and net profit measures the degree of their relationship. In the correlation analysis, investment is independent variable (X) and net profit (Y) is dependent variable.

**Table 4.16**

**Correlation Coefficient between Investment and Net Profit**

<b>Particulars</b>	<b>r</b>	<b>R<sup>2</sup></b>	<b>P.Er</b>	<b>6P.Er</b>	<b>Remarks</b>
<b>SBL</b>	<b>0.94</b>	<b>0.88</b>	<b>0.04</b>	<b>0.24</b>	<b>Significant</b>

(Source: Appendix-XVI)

From the above calculation table shows that the correlation coefficient between total investment and net profit of SBL is 0.94, which means there is positive correlation between total investment and net profit. In addition, coefficient of determination of SBL is 0.88, which implies only 88% is contributed by total investment to earn profit. This correlation is significant at all due to coefficient of determination is higher than Probable error.

**4.3.1.4 Correlation Coefficient between Credit and NPL**

The coefficient of correlation between credit and NPL measures the degree of relationship between these two variables. In this correlation analysis, Credit is independent variable (X) and NPL is dependent variable (Y).

**Table 4.17**

**Correlation Coefficient between Credit and NPL**

<b>Particulars</b>	<b>r</b>	<b>R<sup>2</sup></b>	<b>P.Er</b>	<b>6P.Er</b>	<b>Remarks</b>
<b>SBL</b>	<b>0.78</b>	<b>0.61</b>	<b>0.12</b>	<b>0.72</b>	<b>Insignificant</b>

(Source: Appendix-XVII)

From the above table, it is found that coefficient of correlation between Credit and NPL of SBL is 0.78. It denotes the negative correlation between Credit and NPL; in addition, Coefficient of determination of SBL is 0.61, which implies only 61% of NPL is covered by credit. The correlation coefficient is greater than 6 P.Er, so the correlation coefficient is insignificant. It refers that there is insignificant relationship credit NPL of SBL. From the above analysis, the conclusion can be drawn in the case of SBL that has positive correlation between credit and NPL.

## 4.4 Trend Analysis

Trend analysis plays a vital role in the analysis and interpretation of financial statement. Trend in general terms, signifies a tendency. It helps in forecasting and planning future operation. Trend analysis is a statistical tool, which shows the previous trend of the financial performance and forecasts the financial results of the firms.

The analysis is also denoted by least squares linear trends analysis. Trend analysis describes the average relationship between two series where the one series related to time and other series to the value of available. Among the various methods of determining trend of time series, the most popular and mathematical method is the least square method. Using this least square method, it has been estimated the future trend values of different variables.

### 4.4.1 Trend Analysis of Deposit

Deposits are the important factors for mobilizing other factors by lending credit facility to earn profit in banking sector. It is considered as a barometer of success some extent because without deposit banks will not be able to lend its customer for earning profit. It is important sources of the lending for generating its profit. Here, with the objectives of analysis deposit trend five years deposits of SBL are shown with its trends as follows:

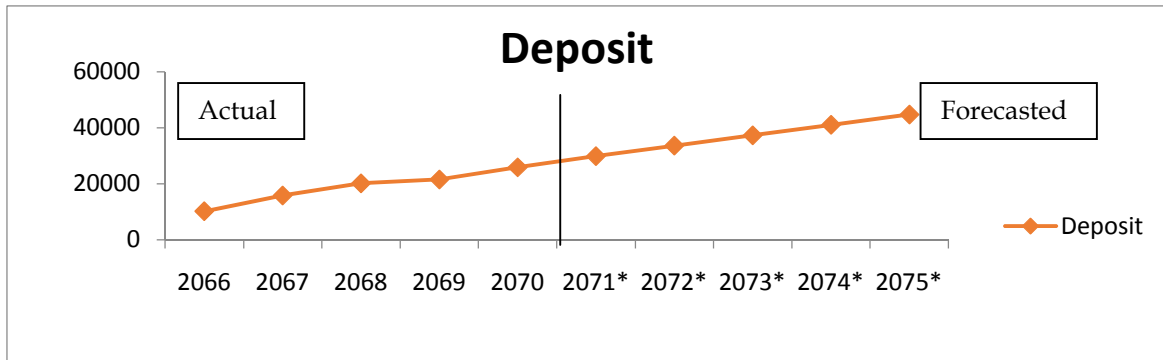
**TableNo.4.18**  
**Trend Value of Deposit of SBL 2066 to 2075**

(Rs in millions)

<b>Years</b>	<b>Deposit</b>
2066	10191.44
2067	15854.80
2068	20197.03
2069	21575.65
2070	25948.51
2071*	29923.99
2072*	33647.49
2073*	37370.99
2074*	41094.49
2075*	44817.99

(Source: Appendix -XVIII), \* Forecasted value

**Figure 4.14**  
**Trend Value Analysis of Deposit of SBL**



According to above table, we can conclude the total deposit of SBL has increasing which has shown in figure. From taking the 5 previous years data we can forecast the total deposit trend value will be increasing or it has increasing trend of deposits and will same. Here, we forecast for next 5 years or 2071 to 2075. So, we can say that the SBL is being able to expance its services despite of the financial crisis and increasing trend of banks' number. It is one of the successes of SBL in the deposit point of view.

#### **4.4.2 Trend Analysis of Credit**

Lending is one of the major functions of bank as well as very sensitive too. Before providing credit facility, bank should prepare credit appraisal, evaluate and analyze the related other documents by the clients. In the analysis banks found the genuine customer then credit facility will be provided. Credit trend is basically depends upon deposit and capital. If the trend of deposit and capital are increased the credit will also increase and vice versa. Here, the trend of credit of SBL will be presented as under for analysis for five fiscal years.

**Table 4.19**

**Trend Value of Credit 2066 to 2075**

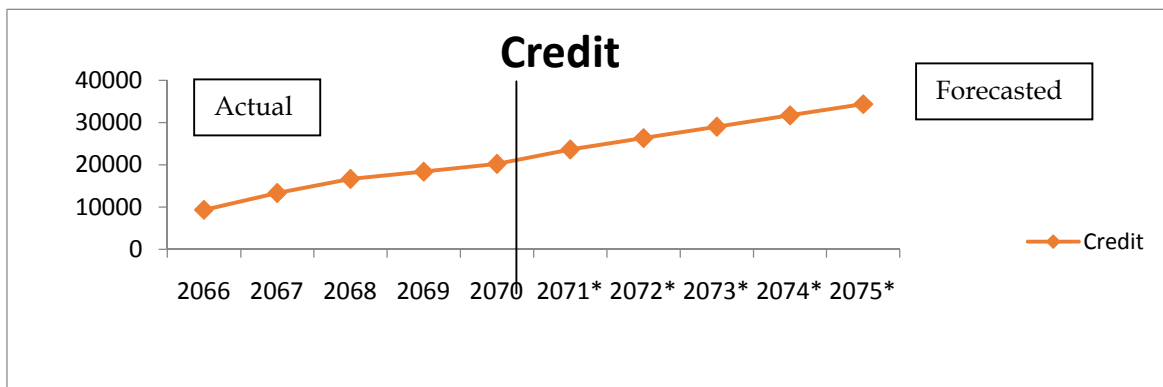
(Rs in millions)

<b>Years</b>	<b>Credit</b>
2066	9335.60
2067	13328.62
2068	16653.85
2069	18384.03
2070	20217.58
2071*	23629.76
2072*	26311.7
2073*	28993.64
2074*	31675.58
2075*	34357.52

(Source: Appendix -XIX), \* Forecasted value)

**Figure 4.15**

**Trend Value Analysis of Credit**



The above table and figure show that the credit of SBL is increasing trend. From the analysis of trend of credit of SBL by considering the last five years actual trend value of credit we can

say that the trend value analysis of credit SBL is increasing rapidly and it seems bank has aggressive strategies in respect of credit. SBL is able mobilize its fund in effective way.

#### **4.4.3 Trend Analysis of Net Profit**

Profit maximization is main aim of the every business firm and it is connection with success of business firm. Banking is also one of the services oriented business sector, which requires earning profit to existence in the competitive market situation. The trend values of net profit have been calculated for five fiscal years of SBL as follows

**Table 4.20**

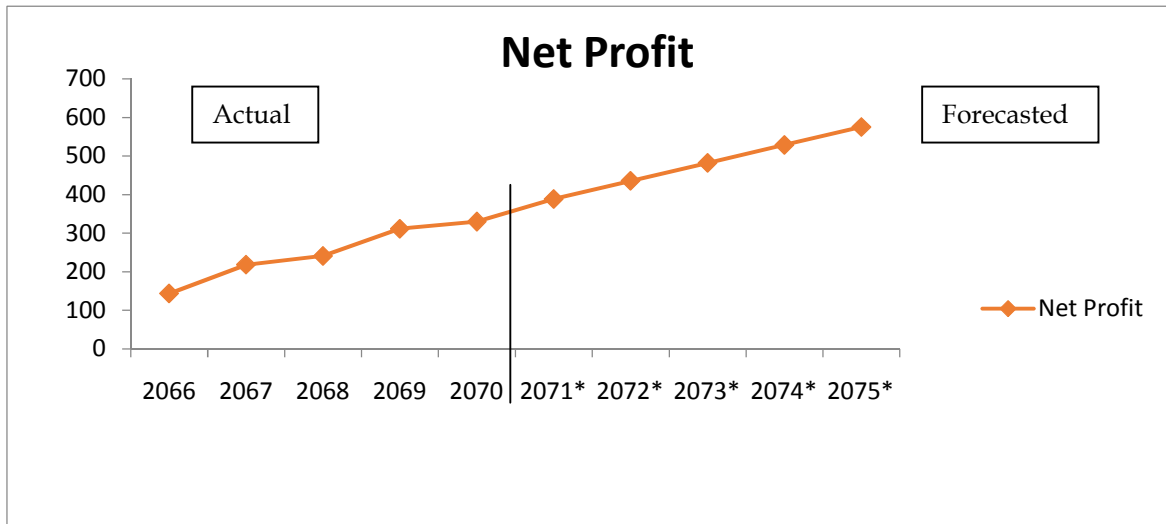
**Trend Value of Net Profit 2066 to 2075**

(Rs in millions)

<b>Years</b>	<b>Net profit</b>
2066	143.17
2067	217.92
2068	240.85
2069	311.42
2070	329.90
2071*	388.75
2072*	435.45
2073*	482.15
2074*	528.85
2075*	575.55

(Source: Appendix -XX), \* Forecasted value)

**Figure 4.16**  
**Trend Value Analysis of Net Profit**



The table 4.20 and figure 4.16 show that the profit of SBL has increasing trend. Its increasing trend is moderate. Above statistics, shows that SBL has able to maintain its increasing trend and can forecast it will be increasing trend in upcoming days too. Here, we have forecasted for next 5 years net profit of SBL is increasing trend. So, we can say that net profit trend of SBL indicate that the future of SBL is bright.

#### **4.4.4 Trend Analysis of Investment**

The objective of investment is getting future return. The trend values of investment of SBL have been calculated for five years as under.

**Table 4.21**

**Trend Value of Investment 2066 to 2075**

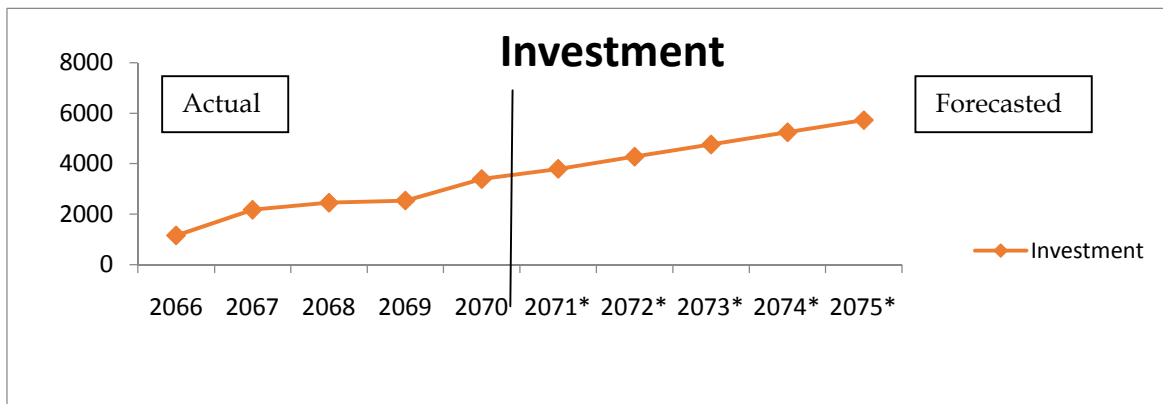
(Rs in millions)

<b>Years</b>	<b>Investment</b>
2066	1150.10
2067	2176.43
2068	2452.48
2069	2537.91
2070	3392.87
2071*	3796.06
2072*	4280.76
2073*	4765.46
2074*	5250.16
2075*	5734.86

(Source: Appendix -XXI), \* Forecasted value

**Figure 4.17**

**Trend Value Analysis of Investment**



From the analysis of above table and figure the investment of SBL has fluctuation trend but in overall trend of investment in increasing. Huge amount of funds are mobilized as credit lending by the banking industry and small amount of funds are mobilized as an investment especially for the purpose of SLR and liquidity. So, the SBL has least of funds are employed as investment and its trend is not also rapidly increasing trend, which is shown by above table and trend of investment.

#### **4.5 Major Findings**

On the basis of overall analysis, we have found following major problems.

1. SBL is unable to generate income by efficient operation of fund management.
2. The bank is not to focus small but large scale deposit customers that can be create liquidity problem.
3. The SBL is not providing free fund transfer facility and ABBS facility.
4. According to study, actual CCR is higher than required that increase the cost of capital.
5. SBL has been unable to maintain SLR as per prescribed by NRB since last three years.
6. SBL has maintained higher CRR in year 2069/070 i.e.  $11.40 > 5.00$ .
7. Trend of earning per share and return on investment are fluctuating.
8. Trend of return on assets, return on equity and deposits are not increasing as per expected.
9. Non-performing loan ratio is increasing, which is unfavorable for SBL.
10. The bank is not being able to extend its branches for providing banking service to mass of people to generate surplus cash inflow.

# CHAPTER - V

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

### 5.1 Summary

As per Bank and Financial Institution Act, 2063 “A class commercial bank means bank which deals in exchanging currency, accepting deposits, lending loans and doing commercial transaction”. Commercial bank came into existence mainly with the objectives of collecting the idle funds, mobilizing them into productive sector and causing an overall economic development. The commercial banking in Nepal started from 1937AD (30<sup>th</sup> Kartik 1994 BS) with the establishment of Nepal Bank limited.

This thesis analyses the responsibilities taken on by financial departments in Fund management, seeking to corroborate empirically the existence of a broader concept of fund management that brings together not only liquidity management but also more strategic tasks, such as management of fund surpluses, deficit management and financial risk management. Or it includes management of an enterprise's holdings, with the ultimate goal of maximizing the firm's liquidity and mitigating its operational, financial and reputational risk. Fund management includes a firm's collections, disbursements, concentration, investment and funding activities. In larger firms, it may also include trading in bonds, currencies, financial derivatives and the associated financial risk management.

As far as described in the research fund management of some highly rated, highly performing and have huge profit banks and tends to identify fund operation practices of Siddhartha Bank. It is said that the banking sector mirrors the larger economy. It's linkage to all sectors make it a proxy for what is happening in the economy as a whole. Indeed, the Nepal banking sector today is at boiling point or doing the best in these circumstances. Further, it can't be said that all the banks and financial institutions are doing well. The objective of this study is to analyze and evaluate performance of SBL's through their Fund operation especially considering the last five fiscal years. Again, this means that, this research is concentrate in the fund

management of SBL in different time, fiscal years and situation, so that the actual position and performance of the SBL could be identified.

Some statistical and financial tools have been applied to examine the facts and descriptive techniques have been adopted to evaluate the fund management of concern bank. After completion of the basic analysis required for the study, the final and most important task of the researcher is to enlist findings issue and gaps of the study and give suggestions for further improvement. The main objectives of this research are not only point out faults and errors but also to provide sound directions for further improvement.

## **5.2 Conclusions**

Commercial banks have proved as resources for achieving rapid economic development of any country. Being a soul of the economic development, Nepalese commercial banks face several problems related to maintain efficient fund management. They are still working under traditional approach. They need to achieve innovative approach of banking thereby, bringing professionalism in their business. Nepali banking sector has witnessed some innovative products in loans and deposits following various reforms started some years ago, but unfortunately, fund management continues to be elementary. Fund departments of most of the banks in Nepal are limited to fund management and foreign exchange management rather than operating as independent profit centers. This does not allow the banks to explore into more innovative and sophisticated global fund products, which is hindering the revenue maximization avenues of the banks. There are three major factors responsible for this: a. Lack of infrastructure to support Fund transactions, b. Unavailability of global market fund products and c. Lack of expertise among the market players. It is better for commercial banks to follow below suggestions. They can certainly have better achievement to the modern innovative and competitive banking scenario.

## **5.3 Recommendations**

On the basis of overall analysis and findings of the study we have made the following recommendations has been suggested for the further improvement and/or development of banking business of Siddhartha Bank Limited.

1. The bank should increase its annual income by efficient operation of fund management.
2. The bank has better to focus small but large scale deposit customers.
3. The SBL has to provide free fund transfer facility and ABBS facility.
4. Actual CRR is higher than required rate so, maintain ideal rate for better management of fund.
5. According to study, actual CRR is higher than in year 2069/070. So, SBL is suggested to keep sufficient CRR for their liquidity maintain to be safe from future liquidity crisis.
6. SBL is unable to maintain SLR since last three years. So, SBL should maintain SLR as per prescribed by NRB for its effective management of liquidity.
7. NRB has strictly notified to BFIs to maintain C/D ratio is equal to or less than 80%. But SBL is not able to maintain this ratio before FY 2069/070 because of this the liquidity problem may face in upcoming days as well as penalty will be paid to NRB. So, it's necessary to maintain as per prescribed by NRB.
8. EPS and ROI should maintain static rate rather than fluctuating and try to increase it.
9. For the improvement of ROE and ROA, SBL should invest profitable projects by reducing its cost of capital
10. The deposit trend of SBL is fluctuating though it is increasing in overall. It is favorable for SBL but last year's deposit increasing percentage is not better than year 2067/68 in comparatively. Therefore, it's suggestion for SBL to do deposit marketing and expand services by using and innovating different sort of marketing schemes, services, facility, and product to large scale by covering all types of customers and markets segments.

11. The bank has better flow of credit so it should attract more saving from the depositors and deploy the cash to generate more cash inflow.
12. The bank should extend its branches and more savings and should previous services to more people to generate surplus cash inflow.
13. SBL has better interest paying capacity so it should increase interest rates to reduce the liquidity crisis. According to the bankers of SBL the bank is not success to provide remittance service widely and increases in interest rates can strengthen liquidity position and can attract remittance to the bank account.

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## Appendix-I

### Calculation of CRR, mean, standard deviation and coefficient of variance

(In millions)

Years	NRB Balance(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	Deposit- Margin(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	CRR( X)	$x Z \bar{x}$	$(x Z \bar{x})^2$
2065/6 6	270.22	(1,015.8 1)	1,031,876. 16	10110.40	(8,489.7 5)	72,075,922.9 8	2.67	12.66	12.66
2066/6 7	984.98	(301.05)	90,631.76	15741.04	(2,859.1 1)	8,174,532.86	6.26	0.00	0.00
2067/6 8	1027.47	(258.57)	66,857.06	20075.59	1,475.44	2,176,911.39	5.12	1.24	1.24
2068/6 9	1222.41	(63.62)	4,047.57	21419.99	2,819.84	7,951,475.07	5.71	0.28	0.28
2069/7 0	2925.08	1,639.05	2,686,491. 30	25653.75	7,053.60	49,753,216.5 3	11.40	26.74	26.74
	6,430.16	Total	3,879,903. 85	93,000.77	Total	140,132,058. 83	31.16	40.92	40.92
<b>Mean</b>	<b>1,286.03</b>			<b>18,600.15</b>			<b>6.23</b>		
	<b>S.D.</b>		<b>880.90</b>	<b>S.D.</b>		<b>5,294.00</b>	<b>S.D.</b>		<b>2.86</b>
	<b>C.V.</b>		<b>68.50</b>	<b>C.V.</b>		<b>28.46</b>	<b>C.V.</b>		<b>45.91</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

**Calculation of mean, standard deviation ( ) and Coefficient of variance (C.V.) can be calculated by using following formula.**

**For, Cash Reserve Ratio (CRR)**

$$\begin{aligned} \text{Mean } (\bar{x}) &= \frac{X}{N} \\ &= \frac{31.16}{5} = 6.23 \end{aligned}$$

$$\text{Standard Deviation ( ) } = \sqrt{\frac{1}{N} \sum (X - \bar{X})^2}$$

$$= \sqrt{\frac{1}{5} \times 40.92} = 2.86$$

$$\text{Coefficient of variance (C.V.)} = \frac{s}{\bar{X}} \times 100$$

$$= \frac{2.86}{6.23} \times 100 = 45.91\%$$

Similarly, mean, standard deviation ( ) and Coefficient of variance (C.V.) can be calculated by using above formula for others too.

## Appendix-II

### Calculation of C&B, mean, standard deviation and coefficient of variance

(In millions)

Years	Cash & Bank(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	Total Deposit(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	C&B(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$
2065/6 6	437.43	(1,688.23)	2,850,127.29	10191.44	(8,562.04)	73,308,610.09	4.29	(6.01)	36.08
2066/6 7	1,547.68	(577.98)	334,063.19	15854.80	(2,898.69)	8,402,388.09	9.76	(0.54)	0.29
2067/6 8	2,406.61	280.95	78,931.78	20197.03	1,443.54	2,083,818.40	11.92	1.62	2.62
2068/6 9	1,905.68	(219.98)	48,392.08	21575.65	2,822.17	7,964,633.77	8.83	(1.47)	2.15
2069/7 0	4,330.91	2,205.25	4,863,118.74	25948.51	7,195.02	51,768,313.85	16.69	6.39	40.86
	10,628.31	Total	8,174,633.08	93,767.43	Total	143,527,764.19	51.46	Total	81.99
<b>Mean</b>	<b>2,125.66</b>			<b>18,753.49</b>			<b>10.30</b>		
	<b>S.D.</b>		<b>1,278.64</b>	<b>S.D.</b>		<b>5,357.76</b>	<b>S.D.</b>		<b>4.05</b>
	<b>C.V.</b>		<b>60.15</b>	<b>C.V.</b>		<b>28.57</b>	<b>C.V.</b>		<b>39.32</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

### Appendix-III

#### Calculation of SLR, mean, standard deviation and coefficient of variance

(In millions)

Years	Investment in Govt. securities(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	Total Deposit(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	SLR(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$
2065/66	850.08	(1,191.86 )	1,420,529.22	10191.44	(8,562.04)	73,308,610.09	11.28	(1.11)	1.24
2066/67	1693.57	(165.53)	27,399.38	15854.80	(2,898.69)	8,402,388.09	13.73	1.33	1.77
2067/68	1401.36	110.52	12,214.74	20197.03	1,443.54	2,083,818.40	12.14	(0.26)	0.07
2068/69	1795.36	195.95	38,397.99	21575.65	2,822.17	7,964,633.77	11.76	(0.64)	0.40
2069/70	2673.27	1,050.91	1,104,417.65	25948.51	7,195.02	51,768,313.85	13.08	0.68	0.46
	11,709.78	Total	2,602,958.97	93,767.43	Total	143,527,764.1 9	61.99	Total	3.93
<b>Mean</b>	<b>1682.73</b>			<b>18,753.49</b>			<b>12.40</b>		
	<b>S.D.</b>		<b>594.38</b>	<b>S.D.</b>	<b>721.52</b>	<b>3,322.42</b>	<b>S.D.</b>		<b>0.89</b>
	<b>C.V.</b>		<b>25.38</b>	<b>C.V.</b>	<b>30.81</b>	<b>19.73</b>	<b>C.V.</b>		<b>7.15</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

## Appendix-IV

### Calculation of CAR, mean, standard deviation and coefficient of variance

(In millions)

Years	T. Capital Fund(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	Total RWA(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	CAR(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$
2065/66	1147.73	(853.44)	728,356.76	11081.37	(7,629.23)	58,205,174.81	10.36	(0.28)	0.08
2066/67	1625.46	(375.72)	141,162.66	15210.56	(3,500.04)	12,250,312.20	10.69	0.05	0.00
2067/68	1983.99	17.18	295.23	19184.45	473.85	224,531.36	10.34	(0.30)	0.09
2068/69	2340.62	339.44	115,221.41	21711.32	3,000.71	9,004,262.90	10.78	0.14	0.02
2069/70	2908.07	906.89	822,456.36	26365.32	7,654.72	58,594,713.78	11.03	0.39	0.15
	10,005.86	Total	1,807,492.43	93,553.02	Total	138,278,995.05	53.20	Total	0.34
<b>Mean</b>	<b>2,001.17</b>			<b>18,710.60</b>			<b>10.64</b>		
	<b>S.D.</b>		<b>601.25</b>	<b>S.D.</b>		<b>5,258.88</b>	<b>S.D.</b>		<b>0.26</b>
	<b>C.V.</b>		<b>30.04</b>	<b>C.V.</b>		<b>28.11</b>	<b>C.V.</b>		<b>2.46</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

## Appendix-V

### Calculation of CCR, mean, standard deviation and coefficient of variance

(In millions)

Years	Core capital(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	Total RWA(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	CCR(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$
2065/66	1049.68	(552.27)	305,003.04	11081.37	(7,629.23)	58,205,174.81	9.47	0.83	0.69
2066/67	1257.07	(344.88)	118,942.08	15210.56	(3,500.04)	12,250,312.20	8.26	(0.38)	0.14
2067/68	1581.57	(20.38)	415.42	19184.45	473.85	224,531.36	8.24	(0.40)	0.16
2068/69	1965.77	363.82	132,362.23	21711.32	3,000.71	9,004,262.90	9.05	0.41	0.17
2069/70	2155.67	553.72	306,601.63	26365.32	7,654.72	58,594,713.78	8.18	(0.47)	0.22
	8,009.75	Total	863,324.39	93,553.02		138,278,995.05	43.21	Total	1.38
<b>Mean</b>	<b>1,601.95</b>			<b>18,710.60</b>			<b>8.64</b>		
	<b>S.D.</b>		415.53	<b>S.D.</b>		<b>5,258.88</b>	<b>S.D.</b>		<b>0.52</b>
	<b>C.V.</b>		25.94	<b>C.V.</b>		<b>28.11</b>	<b>C.V.</b>		<b>6.07</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/70)

## Appendix-VI

### Calculation of NPL ratio, mean, standard deviation and coefficient of variance

(In millions)

Years	Total NPL(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	Total Loan(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	NPL Ratio(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$
2065/6 6	65.18	(69.90 )	4,885.77	9335.60	(6,248.34 )	39,041,753.17	0.70	(0.11)	0.01
2066/6 7	60.30	(74.77 )	5,591.22	13328.62	(2,255.32 )	5,086,451.42	0.45	(0.36)	0.13
2067/6 8	89.26	(45.82 )	2,099.59	16653.85	1,069.91	1,144,716.29	0.54	(0.27)	0.07
2068/6 9	147.74	12.66	160.38	18384.03	2,800.10	7,840,533.81	0.80	(0.00)	0.00
2069/7 0	312.91	177.8 3	31,623.4 3	20217.58	4,633.65	21,470,682.83	1.55	0.74	0.55
	675.38	Total	44,360.3 9	77,919.69		74,584,137.52	4.04	Total	0.76
<b>Mean</b>	<b>135.08</b>			<b>15,583.94</b>			<b>0.81</b>		
	<b>S.D.</b>		<b>94.19</b>	<b>S.D.</b>		<b>3,862.23</b>	<b>S.D.</b>		<b>0.39</b>
	<b>C.V.</b>		<b>69.73</b>	<b>C.V.</b>		<b>24.78</b>	<b>C.V.</b>		<b>48.27</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

## Appendix-VII

### Calculation of LLCR, mean, standard deviation and coefficient of variance

(In  
millions)

Years	LLP(X)	$x Z\bar{x}$	$(x Z\bar{x})^2$	Total NPL(X)	$x Z\bar{x}$	$(x Z\bar{x})^2$	LLCR(X)	$x Z\bar{x}$	$(x Z\bar{x})^2$
2065/6 6	145.19	(97.96)	9,595.84	65.18	(69.90)	4,885.77	222.76	5.13	26.29
2066/6 7	176.17	(66.97)	4,485.43	60.30	(74.77)	5,591.22	292.15	74.52	5,553.56
2067/6 8	241.50	(1.65)	2.73	89.26	(45.82)	2,099.59	270.57	52.94	2,802.44
2068/6 9	263.16	20.01	400.60	147.74	12.66	160.38	178.12	(39.51)	1,560.65
2069/7 0	389.72	146.57	21,482.18	312.91	177.83	31,623.43	124.55	(93.08)	8,664.31
	1,215.74	Total	35,966.77	675.38		44,360.39	1,088.15	Total	18,607.25
<b>Mean</b>	<b>243.15</b>			<b>135.08</b>			<b>217.63</b>		
	<b>S.D.</b>		<b>84.81</b>	<b>S.D.</b>		<b>94.19</b>	<b>S.D.</b>		<b>61.00</b>
	<b>C.V.</b>		<b>34.88</b>	<b>C.V.</b>		<b>69.73</b>	<b>C.V.</b>		<b>28.03</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

## Appendix-VIII

### Calculation of C/D ratio, mean, standard deviation and coefficient of variance

Years	Total Credit(X)	(In millions)							
		$x Z \bar{x}$	$(x Z \bar{x})^2$	Total deposit(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	C/D(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$
2065/6 6	9335.60	(6,248.34 )	39,041,753.1 7	10191.44	(8,562.04 )	73,308,610.09	91.60	7.35	54.06
2066/6 7	13328.62	(2,255.32 )	5,086,451.42	15854.80	(2,898.69 )	8,402,388.09	84.07	(0.18 )	0.03
2067/6 8	16653.85	1,069.91	1,144,716.29	20197.03	1,443.54	2,083,818.40	82.46	(1.79 )	3.21
2068/6 9	18384.03	2,800.10	7,840,533.81	21575.65	2,822.17	7,964,633.77	85.21	0.96	0.92
2069/7 0	20217.58	4,633.65	21,470,682.8 3	25948.51	7,195.02	51,768,313.85	77.91	(6.34 )	40.14
	77,919.69	Total	74,584,137.5 2	93,767.43		143,527,764.1 9	421.25	Total	98.36
<b>Mean</b>	<b>15,583.94</b>			<b>18,753.49</b>			<b>84.25</b>		
	<b>S.D.</b>		<b>3,862.23</b>	<b>S.D.</b>		<b>5,357.76</b>	<b>S.D.</b>		<b>4.44</b>
	<b>C.V.</b>		<b>24.78</b>	<b>C.V.</b>		<b>28.57</b>	<b>C.V.</b>		<b>5.26</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

## Appendix-XI

### Calculation of EPS, mean, standard deviation and coefficient of variance

(In millions)

Years	NPAT(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	No of Shares	EPS(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$
2065/66	143.17	(105.48)	11,125.48	8280000	17.29	(3.18)	10.12
2066/67	217.92	(30.73)	944.62	9522000	22.89	2.41	5.82
2067/68	240.85	(7.80)	60.88	10950300	21.99	1.52	2.31
2068/69	311.42	62.76	3,939.43	15711300	19.82	(0.65)	0.43
2069/70	329.90	81.25	6,601.52	16192443	20.37	(0.10)	0.01
	1,243.25	Total	22,671.93		102.37	Total	18.69
<b>Mean</b>	<b>248.65</b>				<b>20.47</b>		
	<b>S.D.</b>		<b>67.34</b>		<b>S.D.</b>		<b>1.93</b>
	<b>C.V.</b>		<b>27.08</b>		<b>C.V.</b>		<b>9.44</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

## Appendix-X

### Calculation of ROE, mean, standard deviation and coefficient of variance

(In millions)

Years	NPAT(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	Shareholder's Fund(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	ROE(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$
2065/6 6	143.17	(105.48)	11,125.48	1068.35	(556.12)	309,264.92	13.40	(1.85)	3.41
2066/6 7	217.92	(30.73)	944.62	1278.74	(345.72)	119,520.58	17.04	1.79	3.22
2067/6 8	240.85	(7.80)	60.88	1603.54	(20.92)	437.64	15.02	(0.23)	0.05
2068/6 9	311.42	62.76	3,939.43	1988.40	363.94	132,454.38	15.66	0.41	0.17
2069/7 0	329.90	81.25	6,601.52	2183.27	558.81	312,269.16	15.11	(0.14)	0.02
	1,243.25	Total	22,671.93	8,122.31		873,946.69	76.23	Total	6.87
<b>Mean</b>	<b>248.65</b>			<b>1,624.46</b>			<b>15.25</b>		
	<b>S.D.</b>		<b>67.34</b>	<b>S.D.</b>		<b>418.08</b>	<b>S.D.</b>		<b>1.17</b>
	<b>C.V.</b>		<b>27.08</b>	<b>C.V.</b>		<b>25.74</b>	<b>C.V.</b>		<b>7.69</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

## Appendix-XI

### Calculation of ROA, mean, standard deviation and coefficient of variance

(In millions)

Years	NPAT(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	Total Assets(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	ROA(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$
2065/66	143.17	(105.48)	11,125.48	11668.36	(9,609.07)	92,334,262.25	1.23	0.05	0.00
2066/67	217.92	(30.73)	944.62	17881.75	(3,395.68)	11,530,626.94	1.22	0.04	0.00
2067/68	240.85	(7.80)	60.88	22802.43	1,525.00	2,325,629.51	1.06	(0.12)	0.01
2068/69	311.42	62.76	3,939.43	24405.87	3,128.44	9,787,163.28	1.28	0.10	0.01
2069/70	329.90	81.25	6,601.52	29628.73	8,351.30	69,744,276.05	1.11	(0.06)	0.00
	1,243.25	Total	22,671.93	106,387.14		185,721,958.03	5.89	Total	0.03
<b>Mean</b>	<b>248.65</b>			<b>21,277.43</b>			<b>1.18</b>		
	<b>S.D.</b>		<b>67.34</b>	<b>S.D.</b>		<b>6,094.62</b>	<b>S.D.</b>		<b>0.08</b>
	<b>C.V.</b>		<b>27.08</b>	<b>C.V.</b>		<b>28.64</b>	<b>C.V.</b>		<b>6.86</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/70)

## Appendix-XII

### Calculation of ROI, mean, standard deviation and coefficient of variance

(In millions)

Years	NPAT(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	Investment(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$	ROI(X)	$x Z \bar{x}$	$(x Z \bar{x})^2$
2065/6 6	143.17	(105.48)	11,125.48	1150.10	1,150.10	1,322,720.3 5	12.45	1.59	2.54
2066/6 7	217.92	(30.73)	944.62	2176.43	2,176.43	4,736,837.9 6	10.01	(0.84)	0.71
2067/6 8	240.85	(7.80)	60.88	2452.48	2,452.48	6,014,636.8 7	9.82	(1.03)	1.07
2068/6 9	311.42	62.76	3,939.43	2537.91	2,537.91	6,440,984.2 5	12.27	1.42	2.00
2069/7 0	329.90	81.25	6,601.52	3392.87	3,392.87	11,511,554. 17	9.72	(1.13)	1.28
	1,243.25	Total	22,671.93	11,709.78		30,026,733. 60	54.28	Total	7.60
<b>Mean</b>	<b>248.65</b>			<b>2,341.96</b>			<b>10.86</b>		
	<b>S.D.</b>		<b>67.34</b>	<b>S.D.</b>		<b>721.52</b>	<b>S.D.</b>		<b>1.23</b>
	<b>C.V.</b>		<b>27.08</b>	<b>C.V.</b>		<b>30.81</b>	<b>C.V.</b>		<b>11.36</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

### Appendix-XIII

#### Calculation of ROLA, mean, standard deviation and coefficient of variance

(In millions)

Years	NPAT(X)	$x \bar{Zx}$	$(x \bar{Zx})^2$	T Loan(X)	$x \bar{Zx}$	$(x \bar{Zx})^2$	ROLA(X)	$x \bar{Zx}$	$(x \bar{Zx})^2$
2065/6 6	143.17	(105.48)	11,125.48	9335.60	(6,248.34)	39,041,753.17	1.53	(0.05)	0.00
2066/6 7	217.92	(30.73)	944.62	13328.62	(2,255.32)	5,086,451.42	1.63	0.05	0.00
2067/6 8	240.85	(7.80)	60.88	16653.85	1,069.91	1,144,716.29	1.45	(0.14)	0.02
2068/6 9	311.42	62.76	3,939.43	18384.03	2,800.10	7,840,533.81	1.69	0.11	0.01
2069/7 0	329.90	81.25	6,601.52	20217.58	4,633.65	21,470,682.83	1.63	0.04	0.00
	1,243.25	Total	22,671.93	77,919.69		74,584,137.52	7.94	Total	0.04
<b>Mean</b>	<b>248.65</b>			<b>15,583.94</b>			<b>1.59</b>		
	<b>S.D.</b>		<b>67.34</b>	<b>S.D.</b>		<b>3,862.23</b>	<b>S.D.</b>		<b>0.09</b>
	<b>C.V.</b>		<b>27.08</b>	<b>C.V.</b>		<b>24.78</b>	<b>C.V.</b>		<b>5.52</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

## Appendix-XIV

### Calculation of correlation coefficient between Total deposit and total credit of SBL

(In millions)

Year	Total Deposit(X)	Total Credit(Y)	XY	X <sup>2</sup>	Y <sup>2</sup>
2065/66	10191.44	9335.60	95,143,193.27	103,865,469.04	87,153,385.13
2066/67	15854.80	13328.62	211,322,607.11	251,374,632.40	177,652,151.49
2067/68	20197.03	16653.85	336,358,336.93	407,919,996.67	277,350,783.84
2068/69	21575.65	18384.03	396,647,536.81	465,508,844.75	337,972,672.76
2069/70	25948.51	20217.58	524,616,110.57	673,324,952.21	408,750,726.61
	X= 93,767.43	Y= 77,919.69	XY= 1,564,087,784.68	X <sup>2</sup> = 1,901,993,895.08	Y <sup>2</sup> =1,288,879,719.83

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

*Correlation coefficient can be calculated by using following formula,*

$$r = \frac{\sum XY - \frac{\sum X \sum Y}{n}}{\sqrt{\left(\sum X^2 - \frac{(\sum X)^2}{n}\right) \left(\sum Y^2 - \frac{(\sum Y)^2}{n}\right)}}$$

$$= \frac{1564087784.68 - \frac{93767.43 \times 77919.69}{5}}{\sqrt{\left(1901993895.08 - \frac{(93767.43)^2}{5}\right) \left(1288879719.83 - \frac{(77919.69)^2}{5}\right)}}$$

$$= \frac{514110066.85}{517322148.90}$$

$$= 0.99$$

The value of Correlation coefficient 'r' shows that there is high degree positive correlation between total deposit and total credit. Computation of probable error as follows.

$$P.Er . X 0.6745 \mid \frac{1 Z (0.99)^2}{\sqrt{5}}$$

$$X 0.6745 \mid \frac{1 Z 0.98}{2.2360}$$

$$X 0.6745 \mid 0.0089$$

$$X 0.006$$

*Similarly, correlation coefficient can be calculated by adopting above formula and procedure.*

### Appendix-XV

#### Calculation of correlation coefficient between total deposit and total investment of SBL

(In millions)

Year	Deposit(X)	Investment(Y)	XY	X <sup>2</sup>	Y <sup>2</sup>
2065/66	10191.44	1150.10	11,721,133.46	103,865,469.04	1,322,720.35
2066/67	15854.80	2176.43	34,506,823.96	251,374,632.40	4,736,837.96
2067/68	20197.03	2452.48	49,532,723.05	407,919,996.67	6,014,636.87
2068/69	21575.65	2537.91	54,757,055.61	465,508,844.75	6,440,984.25
2069/70	25948.51	3392.87	88,039,858.36	673,324,952.21	11,511,554.17
	<b>X= 93,767.43</b>	<b>Y= 11,709.78</b>	<b>XY= 238,557,594.44</b>	<b>X<sup>2</sup>=1,901,993,895.08</b>	<b>Y<sup>2</sup>=30,026,733.60</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

## Appendix-XVI

### Calculation of correlation coefficient between investment and net profit of SBL

(In millions)

Year	Investment(X)	Net Profit(Y)	XY	X <sup>2</sup>	Y <sup>2</sup>
2065/66	1150.10	143.17	164,662.65	1,322,720.35	20,498.50
2066/67	2176.43	217.92	474,278.02	4,736,837.96	47,487.30
2067/68	2452.48	240.85	590,673.29	6,014,636.87	58,007.65
2068/69	2537.91	311.42	790,343.80	6,440,984.25	96,979.48
2069/70	3392.87	329.90	1,119,307.69	11,511,554.17	108,834.11
	<b>X= 11,709.78</b>	<b>Y=1,243.25</b>	<b>XY=3,139,265.46</b>	<b>X<sup>2</sup>=30,026,733.60</b>	<b>Y<sup>2</sup>= 331,807.04</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

## Appendix-XVII

### Calculation of correlation coefficient between total loan and non-performing loan of SBL

(In millions)

Year	Loan(X)	NPL(Y)	XY	X <sup>2</sup>	Y <sup>2</sup>
2065/66	9335.60	65.18	608,480.36	87,153,385.13	4,248.24
2066/67	13328.62	60.30	803,747.29	177,652,151.49	3,636.37
2067/68	16653.85	89.26	1,486,449.11	277,350,783.84	7,966.56
2068/69	18384.03	147.74	2,716,076.63	337,972,672.76	21,827.42
2069/70	20217.58	312.91	6,326,215.63	408,750,726.61	97,910.54
	<b>X=77,919.69</b>	<b>Y=675.38</b>	<b>XY= 11,940,969.03</b>	<b>X<sup>2</sup>=1,288,879,719.83</b>	<b>Y<sup>2</sup>= 135,589.13</b>

(Source: Annual report of SBL from the fiscal year 2065/66 to 2069/070)

## Appendix-XVII

### Calculation of trend value of total deposit for the period ending 2071 to 2075 of SBL

(In millions)

Year	Deposit(y)	X (t-x)	X <sup>2</sup>	XY	Year	X(t-2068)	Y = a + bx
2066	10191.44	(2.00)	4.00	(20,382.88)	2071*	3	29923.99
2067	15854.80	(1.00)	1.00	(15,854.80)	2072*	4	33647.49
2068	20197.03	-	-	-	2073*	5	37370.99
2069	21575.65	1.00	1.00	21,575.65	2074*	6	41094.49
2070	25948.51	2.00	4.00	51,897.01	2075*	7	44817.99
	<b>Y = 93,767.43</b>		<b>X<sup>2</sup> = 10.00</b>	<b>XY = 37,234.99</b>			

(Source: Annual report of SBL from the year 2066 to 2070), \* Forecasted value

**The equation of straight line trend is,**

$$Y = a + bx \text{ ----- eq (i)}$$

By solving following equations, we can get the value of a and b:

$$Y = na + b \sum x \text{ ----- eq (ii)}$$

$$XY = a \sum x + b \sum x^2 \text{ ----- eq (iii)}$$

Putting the value of X, Y, X<sup>2</sup> and XY in the equation (ii) and (iii), it will get the value of a and b,

**Since,**  $\sum X = 0$

Therefore,  $a = Y/n = 93767.43/5 = 18753.49$

$$b = \frac{\sum XY}{\sum X^2} = \frac{37234.99}{10} = 3723.5$$

Now, Substituting the value of **a** and **b** in equation of straight line trend or equation (i).

**For up-coming year 2071,**

$$Y = a + bx \text{ ----- eq (i)}$$

$$\begin{aligned} Y_{2071} &= 18753.49 + 3723.5 \times 3 \\ &= 29,923.99 \end{aligned}$$

Similarly, we can forecast the deposit for the period ending 2064 to 2068 of SBL as well as credit, net profit and investment by adopting above formula and procedure too.

**Appendix-XIX**

**Calculation of trend value of total credit for the period ending 2071 to 2075 of SBL**

(In millions)

Year	Credit (y)	X (t-x)	X <sup>2</sup>	XY	Year	t-2068	Y = a + bx
2066	9335.60	(2.00)	4.00	(18,671.20)	2071*	3	23629.76
2067	13328.62	(1.00)	1.00	(13,328.62)	2072*	4	26311.7
2068	16653.85	-	-	-	2073*	5	28993.64
2069	18384.03	1.00	1.00	18,384.03	2074*	6	31675.58
2070	20217.58	2.00	4.00	40,435.17	2075*	7	34357.52
	<b>Y = 77,919.69</b>		<b>X<sup>2</sup> = 10.00</b>	<b>XY = 26,819.39</b>			

(Source: Annual report of SBL from the year 2066 to 2070), \* Forecasted value

## Appendix-XX

### Calculation of trend value of net profit for the period ending 2071 to 2075 of SBL

(In millions)

Year	Net Profit (y)	X (t-x)	X <sup>2</sup>	XY	Year	t-2068	Y = a + bx
2066	143.17	(2.00)	4.00	(286.35)	2071*	3	388.75
2067	217.92	(1.00)	1.00	(217.92)	2072*	4	435.45
2068	240.85	-	-	-	2073*	5	482.15
2069	311.42	1.00	1.00	311.42	2074*	6	528.85
2070	329.90	2.00	4.00	659.80	2075*	7	575.55
	<b>Y = 1,243.25</b>		<b>X<sup>2</sup> = 10.00</b>	<b>XY = 466.95</b>			

(Source: Annual report of SBL from the year 2066 to 2070), \* Forecasted value

## Appendix-XXI

### Calculation of trend value of investment for the period ending 2071 to 2075 of SBL

(In millions)

Year	Investment(Y)	X (t-x)	X <sup>2</sup>	XY	Year	t-2068	Y = a + bx
2066	1150.10	(2.00)	4.00	(2,300.19)	2071*	3	3796.06
2067	2176.43	(1.00)	1.00	(2,176.43)	2072*	4	4280.76
2068	2452.48	-	-	-	2073*	5	4765.46
2069	2537.91	1.00	1.00	2,537.91	2074*	6	5250.16
2070	3392.87	2.00	4.00	6,785.74	2075*	7	5734.86
	<b>Y = 11,709.78</b>		<b>X<sup>2</sup> = 10.00</b>	<b>XY = 4,847.03</b>			

(Source: Annual report of SBL from the year 2066 to 2070), \* Forecasted value