CHAPTER-1

Introduction

1. Background of the study

1.1. General background

Nepal, a landlocked country of the south Asia, is bordered on the north by Chinese Tibet and the Himalayan and bounded by India to the east, south and west. Its territory; which has an area of 56,827 square miles (147,181 square kilometers), extends roughly 500 miles (800 kilometers) from east to west and 90 to 150 miles from north to south. Lacking substantial resources for economic development, and hampered nations in the world. It has population of more then 23 million. Per capita income of Nepali is US$ 269.49% of the Nepalese are under absolute poverty. The economy is heavily dependent on imports of basic materials and on foreign markets for its forest and agricultural products. Nepal is basically an agricultural country. Agricultural provides employments to over 80% of labor force and contributes about 40% of gross domestic product. Agricultural production technologies are primitive and the production system is subsistence based. Today, foreign employment and other industrial development are the major sources of income besides agriculture. In the economic development of a country financial institution can be considered as the catalyst. The development process of a country involved the mobilization and development of resource. Development of trade, commerce and industry are the prime requisite for the attainment of the economic, political and social goals. To fulfill the purpose of planning, financial functions more often dominates the other functions.

The development of any country depends upon its economic development. Thus the primary goal of any nation including Nepal is need of rapid economic development to promote the welfare of the people and the nation as well. This requires the productivity activities, which in turn is the result of the investment venture in productive enterprises. The establishment of these enterprises needs a huge amount of fund. Existing enterprises and companies within

the economy can be viewed as productivity enterprises, which need long term and short-term investment for their operation, growth and existence.

To enhance economic growth and solving the problem of underdeveloped economy is widely depending in the nature of its economic infrastructure. One of the basic elements of achieving a self-reliant growth of the economic development is an accelerated growth rate of investment or capital formation in economy. The proper mobilization and utilization of domestic resources became indispensable for any developing countries aspiring for a sustainable economic development. Development of a trade, industry and commerce are prime requisite for the attainment of economic, social and political goals of any country.

The reason behind Nepal underdeveloped economy is not due to lack of resource but due to not proper utilization of the available resources. Nepal being listed among least developed country which is trying to embark upon the path of economic growth rate and all sectors of economy. Even though, the process of economic development depends upon various factors. However, economists are now convinced that capital formation and its proper utilization play a paramount role for the rapid economic development. Hence, investment portfolio is one such tool that helps for proper utilization of resources. Today each and every managerial decision-making based on financial analysis. It covers the acquisition, utilization, control and administration of fund. Finance is concerned with the conversion of capital funds to meet the financial need of business organization. Financial management led to the decision making most skillfully. In a short period, the field of finance has developed considerably; securities raise funds in capital market that certainly help to expand the national economy. The network of the well-organized financial system of the country has great bearing in capital formation. It collects scattered financial resources from the mass and invests them among those engaged in commercial and economic activities of the country. To develop well established economic activity of any country can hardly be carried forward without the assistance and support of financial institutions. Commercial Banks are major financial institutions which occupy quite and important place in the framework of every economic because of they provide capital for the development of industry, trade and business. All the economic activities are greatly influenced by the commercial Banking business of that country thus; commercial Banks have become the heart of financial system. Mobilization

and utilization of domestic resource is the key factor to develop the economic of that country which can achieve through the help of commercial Banks. To make the role of commercial Banks more effective and efficiently government and respective organization should come up with sound investment policy, which will lead quality and quantity of investment and eventually will contribute to the economic growth of country.

1.1.1. Overview of national economy and Banking: **(Economic survey-HMG minister of finance 2004/05)**

With the view to provide the general economy and Banking scenario of the country for the fiscal year 2004/2005, I have extracted here some relevant information from the economic survey for the year published by his majesty's government of Nepal. The related data for the year as well as corresponding past year is based on the first eight months.

1. **Economic growth rate:**

The law and order situation of the country did not improve in this year too. However, some improvement in certain economy indicators has been pointed out in the economic survey. In the review period, the economic growth of the country is estimated to be 3.6% against the growth rate of 2.7%in FY2061/062.

2. Per capita income:

The total gap at current procedures' price is estimated to reach at RS 494.88 billion compared to RS 454.93 billon in the last year. Considering the population growth rate of 2.2% per capita income is estimated to Rs.19384 compared to Rs. 18577 in the last year.

3. **Utilization of resources:**

The ratio of total consumption to gap is expected to be 87.8% against 88.4% in the last year .the ratio to total investment to GDP is expected to be 26.7% against 25.8%in the last year. Similarly, the ratio of total gross domestic savings (gds).

To GDP is expected to be12.2%as against 11.6% in the last year. As a result of positive gap between domestic saving and gross investment, saving-investment gap increased to 14.5% in FY 2004/05 from 14.2%in the previous year.

4. Capital formation:

Formation of fixed capital is estimated to have grown at the constant rate of about 605%during both fiscal years. Due to some obvious impending disturbances the private sector capital formation recorded 6.5% increase against 12.4% growth of FY 2004/05. However, despite some binding constraints public sector fixed capital formation rose by 6.5% compared to decline of 2.5% in the previous year.

5. Foreign trade:

The total volume of foreign trade reached to RS 122.96 billion from RS 113.98 billion showing as increase of 7.88% over the previous year. The share of total foreign trade with India and other countries stand at 57.68% and 42.32% respectively (previous year 55.53% and 44.47%). Total export increased by 3.8% and stood at RS 35.09 billion of which export to India was RS 20.90 billion (increased by 13.5% over last year) and RS 14.19 billion to other countries (decreased by7.7% over the last year) total import increased by 9.6% reaching a level of RS 87.87billion from RS 80.19 billion during the corresponding period of previous year. Import from India decreased by 11.54 %(stood at RS 50.03 billion) and from other countries increased by 7.1 %(reached to RS 37.84billion)

6. Banking

Total deposit of commercial Banks increased by 6.8% and reached to RS 2165.11 billion. Total loans and advances of the commercial Banks increased by 7.1% and reached to RS 2161.56 billion. Loans to private sector increased by 6.1%compared to 9.5% rise in the same period of FY 2004/05.

1.1.2. Effects on the Bank's activities due to the internal and external factors: (Economic Survey-HMG Minister of Finance, 2004/05)

The Banking sector continued to be competitive in this year too. The weighted average rate of 91 days Treasury bills improve slightly by 0.3%over the same period last year. Last year this figure was 3.5%.

Cost of deposit of the Bank for the year reduced to 4.23% against 5.15% of the last year. The weighted average of return on total interest earning assets improved to 8.21% from7.76% over the last year. This resulted to an increase in an average spread of the Bank to 3.98%in this compared to 2.61%in the last year.

During the eight month of the last financial year as mentioned in the economic survey 2004/05, a mixed trend of exchange rate of Nepalese currency with major foreign currencies was observed. Nepalese currency appreciated by 2.1% against the US dollar but it depreciated against all other international currencies.

Loan demand remained stagnant due to the slackness witnessed in the economy. The board is of the view that the Banking sector will be facing further severe challenges if the law and situation is not improved, the imbalance in the development vis-à-vis revenue expenditure of the government continues, the high liquidity position of the Bank continues.

Nepal Rasta Bank's directive on consortium has come into effect. New Banks and financial institutions ordnance, 2061 has come into effect from 2061/04/21 in place of earlier ordinance of the year 2060. Commercial Bank act 2031 has been replaced. As per new provisions, it requires that the Bank must reapply for the licensee to work under the ordnance within two years. The board will ensure that the same is done within the period given by the ordinance.

Nepal has entered in the South Asia free trade area (SAFTA), as has also joined economic cooperation (BIMST-EC). Nepal has become the member of the world trade organization (WTO). We have to shape our plans and strategies accordingly.

1.2 History of Banking Development:

History tells us that it was the merchant who first evolved the system of Banking by trading in commodities than money. Reviewing the history we can find that present day Banker three ancestor of particular note. One the merchant and other were lender and the goldsmith. Lending and borrowing are almost as old as money itself …but modern Banking sowed its seed in medieval Italy. The Bank of Venice founded in 1157AD .was the first Banking institutions. Subsequently, Bank of Barcelona (1401) and Bank of Genoa (1407) were established. The Lombard migrated to England and other parts of Europe from Italy are regarded for the development and expansion of the modern Banking.

Though Bank of England was established in 964 as a joint stock Bank and later on it became the first Bank in the world in 1844, the growth of Bank accelerated only after the introduction of banking act, 1833 in United Kingdom as it allowed to open join stock commercial Banking system development in the lending countries of the world.
Though the modern Banking system is a very recent origin in Nepal to compare to other development nations, some operations alike to Banking were known and have been practice even in ancient times.

Prior to the established to Nepal Bank limited; there were no organized financial institutions in Nepal. During the primeministership of Ranoddip Singh around 1877 AD a number of economic and financial reforms were introduced. The establishment of the "Tejarath Adda "fully subscribed by the government in the Katmandu valley was one of them. In the overall development of the Banking system in Nepal the "tejarath Adda "may be regarded as the father of modern Banking institution and for a quite a long time it tended a good service to government servant as well as to the general public. However the installation of "kausi Tosha khana" as a Banking agency during the regime of king Prithivi Narayan shah could also lie claim to be regarded as the first step towards imitating Banking development in Nepal.

The inception of Nepal Bank ltd. (NBL) in 1937 was a landmark in the field of banking financial sector in Nepal. It was established under the special Banking act.1936 having elementary function of commercial Bank as a semi government organization without existence of a central Bank in the country. The first central Bank named as the Nepal Rastra Bank (NRB) was established in 26th April 1955n objective of supervising protecting and directing the functions of commercial Banking activities. Another commercial Bank fully owned by the government known as Rastriya Banijya Bank (RBB) got established in 1966. Later on large number of commercial Banks has been into operation till date.

At present there are 23 Banks including other Banking and non-Banking financial institutions. They are Nepal Bank ltd, Rastriya Banijya Bank, Nepal Arab Bank ltd, Nabil Bank , Nepal Investment Bank ltd, Standard Chartered Bank ltd, Himalayan Bank ltd, Nepal SBI Bank ltd, Everest Bank ltd, Nepal Bangladesh Bank ltd, Lumbini Bank ltd, Bank of Kathmandu, Nepal Credit and Commerce Bank, Nepal industrial and commercial Bank ltd, Machhapuchere Bank ltd, Kumari Bank ltd, Laxmi Bank ltd, Siddartha Bank ltd, Global Bank, Clean Energy Bank, Sunrise Bank, Citizen Bank, Bank of Asia Nepal. NBL and RBB were the first commercial Banks to be established in Nepal and continued to enjoy duopoly until the Banking industry was liberalized in the 1980s. Together the Banks dominate Nepal's Banking industry. RBB and too lesser extended Nepal Bank Ltd have reputation for poor service, uncommercial outlook and politically motivated activities. Both are suggested by the Barents reports to be technically insolvent suffering from large incidence of bad debts and being particularly susceptible to scams. Now these two Banks have been given to foreign companies in management contract.

During the mid 80s the policy of liberization was adopted, which attracted the foreign Banks to come in Nepal. In 1984 Nabil Bank ltd. was established Asia the first joint venture Bank. After the restoration of democracy in 1990, Nepal adopted democratic constitution that was launched as the best social-legal document in the world. Further the economic liberalized with a view of enhancing private sector participation in various spheres. As consequences, as in the most to the countries, Nepalese financial sector is largely dominated by the

Banking sector. Under the commercial Banking sphere, majority occupied by large number of joint venture Banks.

Nepal Arab Bank ltd. Nepal Indosuez Bank ltd. (Nepal investment Bank ltd), Nepal Grindalys Bank ltd (which now standard chartered Bank ltd), Himalayan Bank ltd. Nepal SBI Bank ltd, Nepal Bangladesh Bank ltd. Everest Bank ltd, Bank of Katmandu ltd, Bank of Ceylon (which is now Nepal credit commerce Bank ltd) was established as joint venture Bank.Laxmi Bank Ltd. the commercial Bank with the investment by Nepalese investor as now made an agreement with HATTON NATIONAL BANK of Srilanka under the technical service agreement as a joint venture by taking 10-15% share from this Bank "over remaining Lumbini Bank ltd, Nepal industrial and commercial Bank Ltd. are established as a private sector commercial Bank by Nepalese investors.

Shristi Sharma,(2005),in her article,*"Lending Operation of Commercial Banks in Nepal,"* has discussed about the commercial Banks that Quantitatively operative commercial Banks although are giving some choosing right of Banking service but overall competitive environment have not been created yet. NRB and NBL have lost their faith to the public. Which are now in reconstruction process through privatization (management contract). In urban areas standard chartered Bank, Himalayan Bank ltd and Nabil Bank ltd has been dominating the segment of commercial Banking." on the other hand there are some Banks from other country whose domestic Banking system are not properly supervised by their home country central Banks. Where the institutions are carrying out in some cases, quite questionable Banking activities". In regard of other Nepalese private commercial Banks some of them are not far from the cities. But it is not the time to evaluate the performance of some recent originated young commercial baking's financial activities**.**

1.3. Introductions of Commercial Banks and Investment Portfolio:

Commercial Banks are the main institutions, which are meant to collection and utilization of small-scattered saving of the people. The commercial Banks utilize the collection resources by financing production Contribution and consumption and even to the need of the government. Commercial Bank's credit in the desired sectors constitutes the significant part

of their activities. The commercial Banks play an important role in the modern economic. The accepting the deposits from individuals and institutions and providing loans to the needy person and business are its two important functions. Besides that it performs many other services or function such as payment of subscriptions, insurance of credit instruction, purchase and sells of securities, remittance of money and assist in foreign trade etc.

In the developing countries there is always shortage of the fund for the development activities. There is need in the development in all sectors. It is not possible to handle and develop all the sectors by the government alone at a time. Private people also can't undertake large business because the per capita income of the people very low.

In the context of Nepal commercial Banks are the only financial institutions, which can play very important role in the resource mobilization for the economic development in the country. Commercial Bank occupies greater role in the economic development by generating the saving towards the desired sectors from one place to another place, communicating with its branches and agencies in different parts of the country and the world and advising to the commercial people.

“Banks collect money from those who have it to spare or who are saving it out of their income and lend this money out against goods or security to those who require it**.”(Crowther; 1965:56)**

“Commercial Banks are the only institutions that accept demand deposit; their role is to furnish short-term funds to business, agriculture, and government though the year they have become veritable depart stores of finance. Their functions include substantial activity in the granting of intermediate term credit though term loan and long-term credit through leasing and the acquisition of governments bond and mortgages. Other services includes acceptance of time and saving deposit and the making consumer loans.”**(Robiheck and Coheman; 1967:6)**

“Commercial Banks are a corporation, which accept demand deposit subject to check, and make short-term loans to business enterprise regardless of the scope of other services.”**(American Institute of Banking; 1972:345-346)**

Investment operation is very risky one. Investment policy is one fact of overall spectrum of policies that guide Banks investment operation. A healthy development of any Banks depends heavily upon its investment policy. Commercial Banks must mobilize its deposit and other fund to profitable, secured, stable and marketable sector that it can earn a handsome profit as well as it should be secured and can be converted into cash wherever needed. Investment policy provides the Bank several inputs through which they can handle their investment operation efficiently ensuring that maximum return with minimum risk, which ultimately leads to the Bank to the path of success. Thus investment is the most important functions of commercial Banks. It is long-term commitment of Bank in certain and risk environment. It is very challenging task for commercial Banks. So a Banks has to be very cautions while investing funds in various sectors i.e. investment portfolio. The success of a Bank heavily depends upon the proper management of it’s invest able funds.

"A portfolio simply represents practice among investor of having their funds in more than one asset. The combination of investment asset is called a portfolio.”**(Fred and Brigham; 1989:343)**

Portfolio is defined as the composite set of ownership rights to financial assets in which the investor wishes to invest. Portfolio are thus, composed of securities and their expected return and risk of their component securities.

Portfolio management (investment) of Bank assets basically means allocation of finds to different components of Banking assets having different degrees of risk and varying rates of return in such a way that balance the conflicting goal of maximum yield and minimum risk. In the process of portfolio management (investment) of Bank assets, Commercial Banks must follow the rules and regulation as well as different issued by central Banks, minister of finance, ministry of law and other while mobilizing its funds. So, the Banks should invest its fund in legal securities only. Several principal such as length of time, their purpose,

profitability guides the loan provided by commercial Banks, safety etc. These fundamental principles of commercial Banks investment are fully considered while making investment portfolio. The investment portfolio should be carefully analyzed. So that investment should ensure minimum risk and maximum return. So, CBs should incorporate several elements such as regulatory environment, the availability of funds, the selection of risk, investment portfolio balance term structure of the liabilities etc.

Hence the Banks should never invest its funds in those securities, which are subject is too much depreciation and fluctuation because a little difference may causes great loss. The Bank should accept that type of securities, which are commercial, marketable, stable, transferable, and high market price.

1.4 Objectives of investment portfolio:

Primary objectives

1) To minimize risk
2) To maximize return

Secondary objectives

1) Regular return
2) Stable income
3) Appreciation of capital
4) Ever liquidity
5) Easy marketability
6) Safety of investment
7) Tax benefit

1.5 Portfolio management polices:

Every company has embraced different policy of management of investment portfolio. Some of the common types of policies that are usually followed in the portfolio management:

1. *Aggressive policy:* In aggressive the market is strong and rising. Common stocks will be best outlets for the portfolio in a rising market and more is placed on yield of securities.

2. *Defensive policy*: Risk averted investor would like to adopt this type of policy According to this policy more emphasis lays on safety of principal of money. Bonds and preferred stock are defensive type of securities.

3. *Aggressive –Defensive policy:* Aggressive defensive policy is the combination of risky financial assets his policy provides hedge against a rise and fall in the stock market. In the event of the market buoyancy, the common stock will carry the portfolio up& fetch a large income. If the market is caught in recession, risk free financial assets portion will preclude the portfolio from experiencing a complete loss of principal.

1.6 Profiles of the Banks under study:-

Nabil Bank Ltd:–

Nabil Bank Limited was established on July 12th 1984 under technical services agreement with Dubai Bank Limited, Dubai, which was later merged with Emirates Bank Ltd. Dubai, Nabil Bank is the first and major joint venture Bank in the country with key points of representation all over the kingdom of Nepal. Dubai Bank Ltd. (DBL) was the initial foreign joint venture partner with 50 % equity investment. The share owned by DBL sere transferred

to Emirates Bank International Ltd. (EBIL). Dubai, later on EBIL sold its entire stock to National Bank Ltd, Bangladesh (NBLB). Hence 50% shares, financial institutions have taken 20% and remaining 30% were issued to general public of Nepal.

NABIL is amongst the most successful joint venture organizations in Nepal registering strong growth is balance sheet footings as well as profits year after year. At present many branches of the Bank are operating in different parts of the country.

Authorized Capital Rs. 5000000.00.00
Issued Capital Rs. 491654400.00
Paid -Up Capital Rs. 491654400.00
Incorporation year- B.S. 2041 A.D. - 1984
Par Value/ Share Rs. 100 & Rs. 0

Table:1

CHANGES IN PAID -UP CAPITAL (Rs. In Million)

Year	Before	After
00-01	392.80	491.65
01-02	491.65	491.65
02-03	491.65	491.65
03-04	491.65	491.65
04-05	540.50	540.50
05-06	540.50	540.50

Source: Annual Report, Nabil Bank Ltd. 2000-2006

The following facilities have been providing by the Nabil Bank

- Tele banking
- Credit card facilities

- SWIFT
- Deposit Locker
- Western Union money transfer
- ATM
- International Trades and Bank Guarantee

Standard Chartered Bank Nepal Ltd.

Standered Chartered Bank Nepal Ltd. was established in 1985 as a second foreign joint venture Bank under the Company Act 1964. The Bank has been providing modern Banking service to the people which are operating different parts of the country. Initially ANZ Grindalays Bank PLC London was the foreign joint venture partner with 50% equity investment. Now, the Bank has been running with standard Chartered, UK by the virtue of takeover of ANZ Grindalys Bank by Standard Chartered Banking group. Standard Chartered Banking Group possesses equal percentage of equity as hold by ANZ. Among the remaining 50% equity share of SCB Nepal Ltd. 33.34% share held by Commercial Bank and 16.66% share issue to general public and other financial institution. The Bank provides a complete range of personal, Commercial and corporate Banking and related financial service through help of different branches all over the country. In the summary we can present Standard Chartered Bank Ltd. in the following ways.

Authorized Capital Rs. 1.000000000
Paid -Up value/share Rs. 100 & Rs. 0
Issued Capital Rs. 500000000.00
Paid -Up Capital Rs. 374640400
Incorporation Year -B.S. 2042 A.D. 1985
Par value/share Rs. 100& 0 listing
Date B.S. 03-21-45 A.D. 1988

Table:2

CHANGES IN PAID -UP CAPITAL (Rs. In Million)

Year	Before	After
0-01	339.55	339.55
01-02	339.55	339.55
02-03	339.55	339.55
03-04	339.55	374.6
04-05	374.6	446.9
05-06	446.9	446.9

Source: Annual Report, Standard Chartered Bank Ltd. 2000-2006

The following facilities have been providing by the Bank:

- Credit Cards
- Tele Banking
- Any Branch Banking
- ATM(Automatic Teller Machine
- VISA Card
- 24 Hours Banking
- Fund transfer services-Local and international drafts ,swifts
- Safe deposit lockers
- Foreign Exchange services
- Priority Banking, home banking
- Auto loan, Home loan, Personal loan
- SMS Banking
- Corporate employee accounts

Nepal Investment Bank Ltd:

Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd, was established in 1986 as a joint venture between Nepalese and French Partners. The French partner (holding 50% of the capital of NIBL was Credit Agricole Indosuez, a subsidiary of one the largest Banking group in the world.

With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of Banks, professionals, industrialists and businessmen, has acquired on April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd.

The name of the Bank has been changed to Nepal Investment Bank Ltd. upon approval of Bank's Annual General Meeting.

Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

- A Group of companies holding 50% of the capital
- Rashtriya Banijya Bank holding 15% of the Capital.
- Rashtriya Beema Sansthan holding the same percentage.
- The remaining 20% being held by the General public (which means that NIBIL is a Company listed on the Nepal Stock Exchange).

Authorized Capital Rs. 5900000000.00
Paid-Up value/share Rs. 100 & Rs. 0
Issued Capital Rs. 259293000.00
Paid -Up Capital Rs. 255293000.00
Incorporation year -B.S.: 2042 A.D., 1985
Par value/share Rs. 100 & Rs. 0
Listing Date - B.S. 05/08/44 A.D.

Table:3

CHANGES IN PAID -UP CAPITAL (Rs. In Million)

year	Before	After
00-01	135.35	169.98
01-02	169.98	169.98
02-03	169.98	295.29
03-04	295.29	295.29
04-05	295.29	340.20
05-06	340.20	340.20

Source:Annual Reports,Nepal Investment Bank Ltd.2000-2006

The following facilities have been providing by the Bank:

- Credit Cards
- Tele Banking
- Any Branch Banking
- ATM(Automatic Teller Machine)
- VISA Card
- Fund transfer services-Local and international drafts ,swifts
- Safe deposit lockers
- Priority Banking,home banking
- Auto loan,Home loan,Personal loan

Himalayan Bank Ltd:–

Himalayan Bank ltd is a joint venture Bank with HABIB Bank ltd of Pakistan was established in 1992 under the company Act, 1964, this is the first joint venture Bank managed by Nepali chief executive. The operation of the Bank started from 1993 Feb. HBL

was listed, main objectives of the Bank is to provide modern Banking facilities like tale Banking to the business, industrialists and other professionals and to provide loans on agriculture, Commerce and industrials sector. The bank is also providing its banking facilities by establishing branches in different regions and parts of the country.

Authorized Capital Rs. 1000000000.00
Paid-Up value/share Rs. 100 & Rs. 0
Issued Capital Rs. 650000000.00
Paid -Up Capital Rs. 536250000
Incorporation year -B.S.: 2048 A.D., 1992
Par value/share Rs. 100 & Rs. 0
Listing Date - B.S. 2048 A.D.:-1992

Table:4

CHANGES IN PAID -UP CAPITAL (Rs. In Million)

year	Before	After
00-01	240	300
01-02	300	390
02-03	390	429
03-04	429	536
04-05	429	536
05-06	536	580

Source:Annual Report,Himalayan Bank ltd.2000-2006.

The following facilities have been providing by the Nabil Bank

- Tele banking
- Credit card facilities
- SWIFT
- Deposit Locker

- ATM
- Personal Loan
- Fund transfer services

1.7 Statement of the problem

Financial system of Nepal is still in its preliminary stage of development. Small and fast growing financial sector comprises of commercial Banks and other financial institutions like development Banks, finance companies, cooperatives, insurance etc. So far, development of financial services is uneven. In some regions of the country, fast and advanced Banking services are available while other regions are fully deprived of banking services. The lack of knowledge on financial risk, interest rate risk, management risk, business risk, liquidity risk, default risk, interest rate risk, management risk, purchasing risk etc. Granting loan against insufficient deposit, overvaluation of goods pledged, land and building mortgaged, risk averting decision regarding loan recovery an negligence in recovery of overdue loan are some of the basic lapses and the result of unsound investment policy sighted in the banks. Profit is only possible if the bank makes proper and safe investment. Bank collects money from depositors and makes profit by making proper investment in the form of loan and advances and investment in government securities and bonds and other investment. Bank shares its profit to shareholder in the form of dividend. A bank must make profit to survive in the competitive market.

The country is going through an economic downtrend. The atmosphere in the market is gloomy. Over whelming view among businessman is that the market is not expanding Manufacturing sector is not growing. Investment in manufacturing sector is decreasing though the profitability of the every Commercial Banks is in increasing trend.

Market Competition is increasing, many commercial Banks have been operating with new schemes to attract deposit from the limited depositors, many financial institutions have also been establishing day by day. Not only this detoriting economic has also affected the income level of the people though the deposit sector of the Bank is also seems in increasing trend.

At present Nepalese Commercial Banks do not seem to be capable to invest their fund in more profitable sectors where there is risk .They are found to more interested in investment in less risky and liquid sectors i.e. treasury bills, development bonds, national saving etc.
The credit extended by CBs to agriculture and industrial sector is not satisfactory to meet the growing need of present day. Even if' NRB has made it's mandatory to invest in priority sector like agriculture, small scale industries and service. All CBs have not yet financing full 12% of their loan to this sector CBs is not able to fulfill customer's expectation till now. There is raised criticism that CBs have served only richer communities not the poor. The branches of Banks are mostly confined in the capital city and other urban area. They are interested to same big industrial and commercial house.

This has directly had negative impact on economic growth these are main reasons for the CBs and on the whole national economy as well. Thus, present study will make a modest attempt to analyze the deposit and investment portfolio of Nepalese Commercial Banks. The research problem identified as follows:

1. How the Commercial Banks are increasing their profitability?
2. How are they collecting their deposit?
3. How are they managing their increasing deposit in different sector?

1.8 Objective of the study:

1. To analyze the change in proportion of deposit and investment using concept of index.
2. To analyze Risk and return on investment.
3. To measure the performance of individual Banks by using utilization of deposit in Investment portfolio.

1.9 Needs and Significance of the Study:

Commercial Banks have pivotal role in collection of dispersed small savings and transforming them into meaningful capital investment. The success and prosperity of the Banks relies heavily upon the successful investment of collected resource to the productive sectors of economy. Hence, the main significance of this study portfolio analysis on investment of commercial Bank is to help how to minimize risk on investment and maximize return through portfolio analysis. Similarly, the study of commercial Bank or investment trend, risk and return pattern, portfolio management, credit management, structural change, in deposit and investment effect on investment decision by earning, the internal weakness of the Banks and furnish the ideas for improvement. A few studies have been made on the investment portfolio management of commercial Bank. Most of the studies made up to present are related to financial performance evaluation, capital structure analysis, dividend policy, risk and return etc. only few student have been able study on this topic .so the present study will be of substantial importance for investor, planner, researcher, student, and policy maker to meet their personal and organizational objective by identifying the various weakness prevailing in the investment and provide package of suggestions of it's improvement, finally it contribute to the national economy by means of institutional development. It is expected that this work will be helpful to decision makers maximize the value of their organization.

1.10. Limitations of the Study:

This study is simply a partial fulfillment of MBS degree, which has to be finished within limited period. Hence, this study is not a comprehensive study and it focused to analyze the certain aspects of commercial Banks. This study is only focused on portfolio investment. Return, risk and percentage change in deposit and in investment over the years. Some of the limitations of this study are as follows:

1. There are many parts of financial sectors but the present study concern only on CBs.

2. This study mainly based on secondary data collected from different sources and the study period begins from 2000/01 to 2005/06. Hence this study covers 6 years period.
3. This study does not examine the factors affecting risk and return on investment in different sectors.
4. Although CBs are facing many problems but the present study focuses only in the problem related to deposit mobilization.
5. Due to unavailability of necessary relevant data of other commercial Banks, only 4 commercial Banks are taken in this study.

1.11. Organization of the Study

The study is carried out to different stages and procedures. So, it needed a well organized in the following chapters in order to make the study easy to understand. The whole study is divided into five chapters.

First chapter is the introductory chapter. It consists of the following topics.

1. General Background.
2. History of Bank
3. Statement of the problem
4. Objectives
5. Need and Significance of The Study
6. Profile of Concerned Banks
7. Limitation of the Study.
8. Organization of the Study

Second chapter deals with review of literature and review of theoretical background of the relevant fields as well as the major findings of the previous studies in the relevant field, which are concerned to the subject matter. It consists of following topics.

1. Conceptual Review
2. Review of Articles/ Journals
3. Review of previous studies and research papers
4. Review of thesis

Third chapter is concerned with research methodology. It consists of following topics.

1. Introduction
2. Research Design
3. Population and Sample
4. Nature and Sources of data Collection
5. Data Processing Procedures
6. Tools and Techniques of Analysis

Fourth chapter is concerned with data presentation. From this chapter, there is highly study begin about the related field. The important part of the study in which all the relevant collected data are analyzed and interpreted. This is an analyzing chapter where different financial ratios related to the Deposit and Investment Portfolio of Concerned Nepalese Commercial Banks are Presented.This chapter also include the major findings of the study.

Sixth chapter is the last chapter of the study and it is associated with the Summary, Conclusion and Recommendation for improving the future performance of the sample banks.

The Bibliography and Annexes is also included beside the above chapters.

CHAPTER-II

REVIEW OF LITERATURE

2. INTRODUCTION

This chapter is considered to the review of major related literature about analysis of deposit and the investment portfolio in more details and descriptive manner . It provides the foundation for developing a comprehensive theoretical framework to the field of research in order to explore the facts for the reporting purpose. In introductory chapter that has already highlighted upon the commercial banks growth and performances and problems in term of their investment operation. Every possible effort has been made to grasp knowledge and information that is available from libraries, concerned commercial banks and other information bureaus. This chapter helps to take adequate feedback to broaden the information based and input to my study conceptual frame work given by difference authors, research scholars etc in this chapter and review from books, annual reports, articles, newspaper etc. In addition to independent studies carried out by well experts and others are also taken into consideration.This chapter is divided into following parts.

2.1 Conceptual Review
2.2 Review of articles/Journals
2.3 Review of thesis

2.1 Conceptual Review

Commercial Bank act, 2031, has defined commercial bank in the following ways. Commercial Bank means a bank which operates currency exchange transactions accepts deposits, provide loan and performs dealing relating to commerce and other than those banks which have been specified for the co-operative, agriculture, industry of likely any other specific objective. The commercial Banks are established under the commercial

Bank Act, 2031 in Nepal that has been amended regularly. It has been amended for six times till today. Now Commercial Bank Act, 2049 is active.

2.1.1 Feature of Sound Lending Policy

There are basically five principles

1. Liquidity
2. Profitability
3. Safety and security
4. Suitability
5. Dispersal

1. Liquidity: Liquidity refers to that states of position of a bank that pronounces its capacity to meet of its obligations. In other words, it refers to the capacity of bank to pay cash against deposits. As we know that a large part of bank deposits are withdrawn on demand and hence the bank must be prepared with sufficient degree of liquidity of its assets. Therefore, liquidity generally refers to the cash or any assets that can be converted into cash immediately. On the other hand banking is a serious business. Once the confidence is lost in depositor's eye, they may withdraw all their deposits within a brief period without giving any chance the bank to manage. Even the best bank can hardly survive in situation.
Confidence depends upon the ability of the bank to meet the readily demands for cash made by customers. Hence, the liquidity position of a bank is such an important factor that it must be able to meet its cash requirement either by its cash in vault or by the help of converting its assets into cash incase of demand for such from its customers. There is not liquid i.e.; they can't save the purpose of liquidity when required.

2. Profitability: Commercial Banks invest on those sectors that derive the maximum income. Hence, the investment or granting of loan and advances by them are highly influenced by profit margin. Generally, the profit of commercial Bank depends upon the interest rate of the bank, volume of loan provided, time period of loan, and nature of investment on different securities. Ambition of profit to commercial bank seem reasonable as the bank has to cover

all the expenses and make payment in the form of dividend to the shareholders who contributed to build up the banks capital and interest to the depositors. For this, the bank calculates the cost of fund and likely return, if the spread is enough irrespective of risk involved and absorbs its liquidity obligation, it will go ahead for investment. A good bank is one who invests most of its fund in different earning assets standing safely from the problem of liquidity i.e, keeping cash resources to meet day-to-day requirement of the depositors.

3. Safety and Security: Bank must take care while investing funds. It should never invest its fund in those securities, which are too volatile. Since, a small change causes a great loss. Similarly, the businessman who is bankrupt at once or earns million in a minute should not be financed at all. Only commercial, durable, marketable and high market valued securities should be accepted. For this purpose, MAST should be followed.

M- Marketable

A- Ascertainable

S- Stability

T- Transferability

Bank should never forget that its fund basically consists of money borrowed from customers on various accounts such as current account, saving account, calls deposits account etc. Bank deals with customer's money. Hence, it must take care the banking of public while investing and providing loan received in the form of deposits. The risk and return involved must be analyzed thoroughly so that depositor's money is advanced safely where the risk of loss does not exist. The 3 "C" should be followed in arriving the decision regarding the advances of fund. The 3 "C" stand for character, capacity and capital.

4. Suitability: Bank should always know that why a customer needs loan because if the burrower misuse the loan granted by bank he will never be able to repay loan. In order to avoid such circumstances advances should be allowed to selected and suitable borrowers and it should demand all the essential detailed information about the scheme of the project in which bank is lending for. Bank must keep in mind the overall development plan of the nation and the credit policy of the concerned authorities i.e., Central bank

5. Dispersal: Diversification of loan should be based on the large number of borrowing customers may benefit from the banker fund. Dispersion reduces the risk of recovery. The bank must not invest the funds in specific sector but to the various sectors so that when something goes wrong in one particular sector others will be recovered.

2.1.2 Some Important Terms

1. Deposits
2. Loans and advances
3. Investment on Government Securities
4. Investment on other Company's shares & debentures
5. Other uses of fund
6. Off balance sheet activities

1. Deposits: Deposit means the amount deposited in a current, saving or fixed account of a bank or financial institution. Deposit is the main source of fund that a bank usually uses for the generation of profit. Therefore, the efficiency of the bank depends on its ability to attract deposits. Deposit being the borrowed amount from the depositors or from the general public, it constitutes the liability of a bank. The management of the bank is always influencing it through deliberate policy action. The deposits of a bank are affected by various factors. They are as follows:

- Types of customers
- Physical facilities of bank
- Management accessibility of customers
- Types and ranges of services offered by the bank
- Interest rate paid by one deposit

In addition to the above, the prevailing economic condition expert a decisive influence on the amount of deposit the bank receives. Basically there are three types of deposits: current, saving and fixed.

2. Loan and advances: This is the primary source of income and most profitable assets to a bank. A bank is always willing to lend as more as possible since they constitute the larger part of revenue. But bank has to be more careful while providing loans and advances since they may not be realized at short period of time. And sometimes they turn into bad debt. Therefore, it is wise not to rely on them at the time of emergency for all banks. A commercial bank hardly lends money for a long period of time. It lends money for a short period of time that can be collected at a short period of time. The commercial banks are never bounded to provide long-terms loans because it has synchronize the loans and advances with the nature of deposits they receive. Loans and advances are provided against the personal security of the immovable and movable properties. Banks provide the loans in the various forms: overdraft, cash credit, direct loans and discounting bills of exchange.

3. Interest on Government securities, shares and debentures: Commercial Bank makes investment on Government securities, shares and debentures and earns some interest and dividend. This is the secondary source of income to the bank.

4. Investment on other companies shares and debentures: Commercial bank invests their excess funds to the shares and debenture of other company. They generally do so when there is excess of funds than required and there is no alternatives opportunity to make investment in the profitable sector. Now a day, the commercial banks of Nepal have purchased shares and debentures of regional development bank, NIDC and other development banks etc.

5. Other use of fund: Commercial bank must maintain the bank balance with NRB as prescribed by the bank in Nepal. Similarly, they have to maintain the cash balance in local currency in the vault of the bank. Again, some part of the fund has to be used for the bank balance in foreign bank

6. Off-balance activities: Off-balance sheet activities cover the contingent liabilities. These activities are not recognized as sheet and liabilities in balance sheet. They are LC, Guarantee, Commission, Bills for collection etc. These activities are very important as they are the good source of profit to the bank, though they have risk

2.1.3 Review of Books

"Investment has many factors. It may involve putting money into bond, treasury bills, notes or common stocks, painting of real estate, mortgages or oil venture, cattle and even the theater. It may involve, especially in bull markets or selling short in bear markets. It may involves options , straddles, tights, warrants, convertible, margin, gold silver, mutual funds, money market funds, index funds and result in accumulation of wealth or dissipation of resources, diversity and challenge characterize the field. For the able or lucky, the reward may be substantial. for the uninformed results can be disastrous."**(Jerome; 1997:1)**

"Investment is the employment of funds with the aim of achieving addition income or growth in value. It involves the commitment of resource that have been saved or put away form current consumption in the hope that same benefits will accrue in future investment involves long term commitment and waiting for a reward. The sacrifice takes place in the present and certain while the rewards come later and uncertain." **(William;1989: 40)**

"Investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generated positive returns."**(Gitman and Joehnk; 1992: 10)**

"In investment decision, expenditure and benefits should be measured in cash. Investment analysis, cash flow is more important than accounting profit. It may also be pointed out that investment decision affects the firm's value. The firm's value will increase if investment

should be evaluated on the basis of a criterion ,which is compatible with the objective of the shareholder's fund maximization.Investmetns will add to the shareholder's wealth if it yields benefit in excess of the minimum benefits as per the opportunity cost of capital."**(Pandey; 1999:407)**

Markowitz's Portfolio Selection Model

"Markowitz's approach begins by assuming that an investor has a given sum of money to invest at the present time. Markowitz's approach considers the single period rate of return. Single period rate of return is simply the total return an investor would receive during the investment period or holding period. Harry Markwoitz infused a high degree of sophistication into portfolio construction by developing a 'Mean Variance Model' for the selection of portfolios; portfolio managers used rules of thumb and intuitive judgment."***(Markowitz;1952: 7*)**

Thus Markowitz suggested two measures of evaluating the merits of a portfolio, i.e.

1. The expected return from associated with the portfolio.
2. Level of risk explore find the efficient set of portfolio. So as to find the efficient set of portfolio and select the most efficient one portfolio manager will need to know the expected return and the risk of these returns for the individual securities.

A portfolio is efficient when

1. "Offer maximum expected return for varying level of risk.
2. "Offer minimum risk for varying level of expected return."**(*William; 2000: 109*)**

To build an efficient portfolio on expected return level is choose, and assets are substituted until the portfolio combination with smallest variance at the return level is found. As its process is repeated for other expected returns, set of efficient portfolios is generated.

Portfolio Theory Assumptions

"The portfolio selection model developed Markowitz. This model is based on several assumptions regarding investor behaviour".**(*Bhalla; 2001: 500*)**

1. Investors consider each investment alternative as being represented by a probability distribution of expected returns over same holding period.
2. The risk of an individual asset or portfolio is based on the variability of return.
3. Investors base decisions solely on expected return and variance of return only.
   For a given risk level, investors prefer high returns compare to lower returns similarly, for a given level of expected returns, investor prefer less risk to more risk.

"Sources of investment uncertainty" (Francies;1993: 3-10)

Every investment alternative associated with risk despite wide range of investment categories. The sources of uncertainty that contributes to investment risk as follows:

1. Interest risk

It is potential variability of return caused by changes in the market interest rates. Investment's present value moves inversely with changes in the market interest rate i.e. if market interest rise then investment's present value will fall and vice-versa.

2. Purchasing power risk

Purchasing power risk is the variability of return an investor suffers because of inflation. The rate of inflation is measured by consumer price index. When inflation takes place, financial assets such as stocks, bonds, etc. may lose that ability to command the same amount of real goods and services they did in the past.

3. Market risk

It is the risk that arises from the variability in market returns resulting from alternating bull and bear market forces. When security index rises fairly consistently from low point, this upwards trend is called a bull market and when the security index declines from peak point

to the next trough is called a bear market. During bearish period the price of the stocks falls but in the bullish market that usually raise more than enough to compensate for the bear market loses. So, the alternating bull and bear market forces create a perennial source of investment risk.

4. Default risk

Default risk is that portion of an investment's total risk that resulting from changes in the financial integrity of the investment. In other words, default risk is the variability of return that investors experience as a result of change in the credit worthiness of a firm in which they invested. Investor's losses from a firm weaken. So, by the time bankruptcy occurs, the market prices of the firm's securities will already have declined to near zero.

5. Liquidity risk

It is the variability of return which results from price discounts given or sales commission paid in order to sell the asset without delay. Perfectly liquid assets are highly marketable and suffer no liquidation costs but liquid assets are not readily marketable. Hence, liquid assets required large price discount and sales commissions in order to affect to quick sell.

6. Call- ability Risk

The portion of a security's total variability of return that derives from the possibility that the issue may be called is the call-ability risk. Call-ability risk commands a risk premium that comes in the form of a slightly higher average rate of return.

7. Convertibility Risk

It is that portion of the total risk of return forms a convertible bon a convertible preferred stock that reflects the possibility that the investment may be converted into issuer's common stock.

8. Political Risk

It is the risk that caused by changes in the political environment that affect the asset's market value. Political risk arises from changes in environmental regulations, fees, licenses, taxes etc.

9. Industry Risk

Industry risk is the variability of return caused by events that affect the products and firms that make up an industry. The stage of the industry's life cycle, International tariffs, quotas, taxes, labor union problems, environmental restrictions, raw material availability and similar factors interact and affect all the firms in an industry simultaneously. As a result of these commonalities the prices of the securities issued by competing firms tend to rise and fall together.

Portfolio risk and return

Every financial asset associated with risk and return. Portfolio is the combination of financial asset so that investor must be able to quantify the portfolios expected return and risk. From an investor stand point the fact that a particular stock goes up or down is not very important. The return on his or her portfolio is more important than the market rate fluctuation.

Portfolio return

The return of a portfolio depends on expected rate of return of each security contained in the portfolio and the amount invested in each security. The portfolio return is the weighted average returns of the individual stock in the portfolio, with weight being the proportion of investment on each security in the portfolio. The portfolio expected return could be defined in equation as follows:

$R_p=W_1r_1+W_2r_2\ldots\ldots\ldots\ldots+W_nr_n$

R_p =Expected portfolio return

r_1= Expected return for stock1

W_1= Weighted for stock 1

r_2= Expected return for stock2

W_2= Weighted for stock 2

Portfolio risk

The risk of portfolio can be measured the variance or standard deviation of the return of the portfolio. The riskness of the portfolio expresses the extent to which the actual return. In order to calculate the risk of portfolio consideration must be given not only to the risk of the individual assets in the portfolio and their relative weighted but also to the extent to which the asset's returns move together. However the standard of a portfolio is not simply the weighted average of standard deviation of individual securities. So the portfolio risk is measured in the following way.

$\sigma^2 p = w_1^2 \sigma^2_1 + w^2_2 \sigma^2_{2+} w_1 w_2 cov(r, r_2)$

Where,

$\sigma^2 p$=Variance of the portfolio's rate of return

W_1= Weight for asset 1

W_2= Weight for asset 2

σ^2_2= Variance for asset 1

σ^2_1= Variance for asset 2

cov($r_1 r_2$)=Covariance of return between asset 1 and 2

Instead of variance, we can use standard deviation (∃p) to measure the risk of the portfolio. Standard deviation is equally valid as the variance but easier to interpret. The equation for the standard deviation of a two- asset portfolio is

$$\sigma_p = \sqrt{W_1^2 \pm_1^2 \Gamma W_2^2 \pm^2_2 \Gamma W_1 W_2 . \text{cov}(r_1 r_2)}$$

Correlation & Coefficient and Portfolio Risk

The risk of the portfolio can be measured by using covariance of the returns of assets in the portfolio. The covariance's simply means the degree to which the returns of the two assets vary together. In other words its measures how two variables co-vary. A positive covariance

indicates that the returns of two assets move in the same direction where as a negative covariance indicates that the returns of two assets move in opposite direction. If the covariance is zero, it means the rate of return on assets is independent. The correlation coefficient is the covariance divided by the product of the standard deviation for the two investments.

Correlation coefficient (p_{ij})= $\frac{cov(r_i\, r_j)}{\exists_i \exists_j}$

Where

°$_{ij}$= Correlation coefficient between assets i and j
$\exists_i$ = Standard deviations of returns for assets i
±$_j$= Standard deviations of returns for assets j

The correlation coefficient range between -1 and +1, if the value of correlation is 1, it means perfectly positively correlated. It indicates that the return on two assets move together exactly the same way. In addition, the value of correlation -1 means perfectly negatively correlated which indicate that the return on two assets move together perfectly opposite way. If the value of correlation 0 means that, there is no relationship between two assets return.

Partitioning portfolio risk

A. Unsystematic risk (Diversifiable risk)

The portion of the total risk that can be diversified away is called unsystematic risk or avoidable risk or non- market risk or company specific risk. It is caused by events particular to the firm. For example, labor strikes, management errors, inventions, advertising campaigns, shifts in consumer taste, and lawsuits etc. the formula is given as

Unsystematic risk = total risk (σ_i^2) – systematic risk

B. Systematic risk

The portion of the total risk of an individual security caused by market factors that simultaneously affects the price of all securities. It cannot be diversified away. It is also called systematic risk or market risk or unavoidable risk or beta risk. It seems form factors,

which systematically affect all firms such as war, inflation recession, high interest rates, depressions, and long-term changes in consumption in the economy. The formula is given as.

Systematic risk= ($_{im}\sigma_m^2$)

The percentage of total risk that is systematic can be measured by the coefficient of determination, (∂_{im}^2) The formula is given as

Undiversifiable proportion = $\frac{\text{systematic risk}}{\text{totalrisk}}$

$$\frac{{}_{im}^{2} \pm {}^{2}{}_{m}}{\pm {}^{2}{}_{i}} = \partial_{im}^{2}$$

"A sound investment policy of a bank is such that its funds are distributed on different types of assets with good profitability, on one hand and provide maximum safety and security to the depositors and banks on the other hand.Moreover, risk in banking sectors tends to be concentrated in the loan portfolio. When a bank gets into serious financial trouble, its problem usually springs from significant amounts of loan that have become uncollectible due to mismanagement, illegal manipulation of loan, misguided lending policy or unexpected economic downturn. Therefore, the bank investment policy must be such that it ensures that it is sound and prudent in order to protect public funds."**(Baidhya;1997:46-47)**

"The secret of successful banking is to distribute resources between the various forms assets in such a way as to get a sound balance between liquidity and profitability so that there is cash (on hand quickly realizable) to meet every claim and at the same time enough income for the bank to pay its way and earn profits for its shareholders."**(Radhaswami and Vasudevan;1979:346)**

2.2 Review of Journals and Articles

Due to development in information technology, it has brought revaluation in information through help of technology people come to know every aspect of world events by sitting in one room. The internet has become one of the most easily accessible mediums to gain information in any subject matter. Under the heading, effort has been made to examine and review some of the related articles and journal published in different economic journal, Bulletin of World bank, dissertation papers, magazines, newspapers and other related books.

Jack E. Gaumnitz,(1970),in his article "*Appraising Performance of Investment Portfolio*" has present evidence on the portfolio return as the sole criterion in measuring portfolio performance in lieu of theoretically correct returns variability of return measure and to examine portfolio strategy given the result to maximizing return or minimizing variability in order to maximize stockholder study. In this model, it was clear that the portfolio highest market price of risk value will be one that allows the investor to attain his highest indifference curve through borrowing or lending at the risk less rate thus, the investor want to select that mutual fund or other portfolio that maximize.

Sunil Chopra,(2046),in his Article *"Role of Foreign Banks in Nepal"* has concluded that joint venture banks are playing an increasing ,dynamic and vital role in the development of the country. This will undoubtly increase with time.

Ravi Bajracharya,(2047 B.S),in his article, "*Monetary Policy and Deposits Mobilization in Nepal"* has concluded that the mobilization of domestic savings is one of the monetary policies in Nepal .For this purpose, commercial banks stood as the vital and active financial intermediary for generating resources in the form of deposits of the private sector, so for providing credit to the investor's in different aspects of economy.

Shekahar Bahadhur Pradhan,(2053),has presented a short glimpses on investment in different sectors it's problem and prospects through his articles, *"Deposit Mobilization, it's Problem and Prospects"*. On his articles he has expressed that, "Deposit is the life-blood of any financial institution, be it commercial bank, financial company, co-operative or non-government organization. According to him, " In consideration of seventeen commercial banks, nearly three dozen finance companies, the latest figure does produce a strong feeling that a serious review must be made of probes and prospects of deposit sectors. Leaving few joint venture banks, other organizations rely heavily on the business deposit receiving and credit disbursement.

Pradhan has pointed out following problems of deposit mobilization in Nepalese context.

1. Due to the lack of education most of the Nepalese people do not go for saving in institutional manner. However, they are very much used of saving be it in the form of cash or ornaments. Their reluctance to deal with institutional system is governed by the lower level of understanding about financial organization process, withdrawal system, availability of depositing facilities and so on.

2. Due to lesser office hours of banking system people prefer holding cash in the personal possession.

3. Unavailability of the institutional services in rural areas.

4. No more mobilization and improvement of the employment of deposits in the loan sectors.

Pradhan has also suggested for the prosperity of deposit mobilization. They are as follows:-

1. By cultivating the habit of using rural banking unit.
2. By adding service hour system to bank.

3. By providing sufficient institutional services in the rural areas.
4. Nepal Rastra bank could also organize training program to develop skilled manpower.
5. By spreading co-operatives to the rural areas to develop mini banking services.

Amrit Man Shrestha,(2054), in his article, *"Nepal Ma Banijya Bank Haru ko Bhumika:Ek Paridhristi" (Role of the commercial Banks in Nepal)* has pointes out some important activities of commercial banks and it's present scenario. In his word these activities are situated and revised as soon a possible otherwise there may be disaster in sound and effective banking system. The article is written in Nepali language. Some of these are given as:

- Possibility of capital flight

In Nepalese perspective capital flight becomes a major problem. Whatever capitals were created in Rana, were already followed outside the country. Due to the mis-implementation of "BhumiSudhar" most of the constructed capitals were also flowed away outside the to the unstable political situation the possibilities of capital flight seem to be developed in high scale. In this controversial situation joint venture banks become the main or medium capital flight. Therefore, this problem and situation should be seriously could and analyzed so that corrective actions can be taken as soon as possible.

- Minimum deposit amount

At present it is seen that most of commercial banks and other financial institutions have increased the minimum deposit amount (threshold). This policy may harass the lower level depositors. It also affects the banking habit of lower level depositors negatively. That is why this must also be analyzed implemented after doing long homework.

- Debt recovery and its effectiveness

In these years, it can also be seen that effective debt recover is also a great problem of banks due to misinterpretation of use of loan more than this, a gap between banks and debtors (i.e;

effective supervision). Therefore, banks should perform a team of experts for evaluation of collateral and effective use of loan from the debtor's side. This must be an effective and crucial step towards the debt recovery from the government side that "Debt recovery act" is announced to implement during Ninth Five year plan.

In this way Professor Shrestha has given stress "to go seriously through the formulation of all possible physical and other infrastructure to establish Nepal as International Financial Transaction center as mentioned in the Ninth Five Year plan"

Shiva Raj Shrestha,(2055),in his article, *"Portfolio Management in Commercial Bank "* has stressed the following issues.Generally, any individual or institution having surplus funds wants to deploy their excess funds in best and profitable investment. But they might be facing the problem of how to make best investment decisions. In this case, portfolio management is very important. In case of investors having lower, income, and portfolio management may be limited to small saving incomes. But, on the other hand, portfolio management means to invest funds in various schemes of mutual funds like deposits, shares and debentures for the investor with surplus income. Basically, the wealthy clients having ample surplus funds seek to maximize the return of fund prepared to take certain amount of risk for this. But due to lack of technical expertise they can't make such investment decision of their own. Primarily, there are only two options for savers, i.e, to use funds either for purchase of financial assets like securities or for purchase of assets like land, building etc. By and large investors like to select a best mix of investment assets subject to the following aspects:

a) Higher return which is comparable with alternative opportunities available according to the risk of investor

b) Good liquidity with adequate safety on investment.

c) Certain capital gains.

d) Maximum tax concession.

e) Flexible investment.

f) Economic and efficient investment.

In the view of these aspects, investors are expected to develop following strategy:-

a) Not to hold any single security. Try to have a portfolio of different securities.

b) Not to put all the eggs in one basket i.e, diversity investment.

c) Choose such a portfolio of securities that ensure maximum return with minimum risk or lower of return but with added objective of wealth maximization.

Sunity Shrestha,(2055), in her article "*Lending Operation of Commercial Banks of Nepal and it Impact on Gross Domestic Product*" has presented with the objectives to make an analysis of contribution of commercial banks lending to the gross domestic product (GDP) of Nepal. She has said hypothesis that their has been positive impact of lending of commercial banks to the GDP. In research methodology, she has considered GDP as the dependent variable and various sectors of lending viz. agriculture, industrial, commercial service, general and social sectors as independent variables. A multiple regression technique has been analyzed in the contribution.

The multiple analysis has shown that all the variables except service sector lending have positive impact on GDP. Thus, in conclusion she has accepted the hypothesis i.e; there has been positive impact by the lending of commercial banks in various sector investments.

2.3 Review of Thesis

Prem Bahadhur Sahi ,(1999)**,** has conducted his master's thesis on "*Investment Policy of Commercial Banks in Nepal"(*A comparative study of Nepal Bank limited(NBL) with other joint ventures Bank(JVBS).The major objectives of his study were as follows:

- To evaluate the liquidity position of NBL and compare it with other JVBs.
- To find out the on balance sheet as well as off balance sheet operations and compare it with other JVBs.
- To evaluate profitability position of Nepal Bank limited and compare it with other JVBs.
- To find out growth ratios of listed banks.

The major findings of his study were as follows:

- The liquidity position of Nepal Bank Limited is comparatively better than that of the JVBs
- Nepal Bank limited is comparatively less successful in on balance sheet as well as off-balance sheet operations than that of other JVBs. It has not followed any definite policy with regard to the management of its asset.
- The profitability position of Nepal Bank Limited is comparatively not better than that of other JVBs.
- A growth ratio of NIBL is lower than other JVBs.

Shahi further analyzed that Commercial Banks must mobilize its funds in different sectors such as purchasing of shares and debentures of other financial and non- financial companies. He has recommended that banks should make continuous efforts to explore new competitive and high yielding investment opportunities to optimize its investment portfolio. He has pointed out loan default in commercial banks is a result of various factors i.e, political

influence, lack of the necessary skills of project appraisal, improper collateral enacting loan recovery act to enhance the recovery of loan.

Shailendra Adhikari,(2000**),** has conducted his master's thesis on *"Lending Policy of Commercial Banks in Nepal"*. His main objectives were as follows:

- To show the relationship between deposits and loan and advances.
- To analysis the role of Commercial Banks in its historical perspective.
- To identify major weakness of lending policy of the commercial banks.

The research findings of the study are summarized as follows:

- Effectiveness of lending policy is directly based upon a sound banking system ,but due to government variation ,transportation and other regional disparities ,it is very difficult to expand branches in different rural areas.So,it can be said that commercial banks in Nepal are not playing an active role to utilize their sources collected from different sectors.
- The banks are increasing deposits by paying higher interest rate,which in turn increase saving habits of the general people.Then the banks will be able to utilize these idle funds in productive channels .This type of business of commercial bank is really a necessary one in an agricultural country like Nepal,where public investment has limited capacity.

Indra Bahadhur Bohara ,(2002), has conducted a thesis research on, *"A Comparative Study on Investment Policy of Joint Venture Banks and Financial Companies of Nepal"* A researcher has aimed the following objectives:

- To find out the liquidity portion and profitability position of above mentioned joint venture banks in comparison with finance companies.
- To study the various risk in investment of joint venture banks in comparison with finance companies.
- To find the relationship between profitability and asset structure.

- To analyze the deposit utilization trend and its future projections for next five years for joint venture banks and finance companies
- To analyze the relationship between deposits and investment; deposits and loan and advances, net profit and total assets of joint venture banks in comparisons with finance companies.

The major findings of his study were as follows:

- The profitability position of all finance companies was better than that of JVBs.
- All the finance companies have maintained the higher growth rates in comparison with JVBs although finance companies have not got sufficient investment opportunities.
- The trend value of total deposit, loan and advances, net profit and total investment were in increasing trend
- JVBs have less interest risk and capital risk in comparison with finance companies.
- The trend value of total deposit ,loan and advances ,net profit and total investment were in increasing trend

Ganga Ram Manandhar ,(2003), has conducted a thesis research on *"A Comparative Study on Investment Policies of Finance Companies in the Context of Nepal*." He has set out the following objectives in his study.

- To evaluate the liquidity, assets management efficiency and profitability position in related to fund mobilization of above listed companies
- To evaluate the growth ratio of loan and advances and total investment with respective growth rate of total deposits and net profits of the companies.
- To find out relationship between deposits and total investments deposits and loan and advances and net profit and outside asset of the listed companies.
- To discuss the fund mobilization and investment policy of these companies in respect to its fee-based off-balance sheet transactions and fund-based on-balance sheet transaction.

- To evaluate the trends of deposits utilization and its projection for next five years in case of these companies.
- To suggest and recommend some measures on the banks of comparative fund mobilization and investment policy of these companies for the improvement of financial performance in future.

The major findings of his study were as follows:

- The liquidity position of national finance and Nefinsco has comparatively better than that of other companies. But as the concern of goodwill finance and union finance, they seem to be quite weaker.
- Profitability positions of most of the companies are comparatively not better.
- Most of the finance companies are able to maintain the growth ratios among them Nepal share markets seem to be more successful to increase their source of funds and mobilization as well as net profit.
- Most of the finance companies are successful in on-balance- sheet utilization as well as off-balance sheet operation. Among them, Nefinsco and Goodwill comes ahead of all.
- There is significant relationship between deposits and loan and advances of all the finance companies. Similarly, there is no significant relationship between deposits and total investment of all companies except Nefinsco and Goodwill finance Co. Ltd. There is also no significant relationship between outside asset and net profit of all companies except Union finance Co. and National finance Co. Ltd.

Jyoti Joshi ,(2005), has conducted her master's thesis on "*Investment Policy of Commercial Banks in Nepal"*. The main objectives of her study were:

- To discuss fund mobilization and investment policy of EBL,NABIL and BOK ltd.
- To evaluate the liquidity ,efficiency,productivity and risk position.

- To evaluate the growth ratio of loan and advances, total investment with other financial variables.
- To analyze the trends of deposit utilization towards investment and loan and advances.
- To conduct hypothetical test to find whether there is significant difference between the various important ratio of EBL, NABIL and BOK.

The major findings of the study were:

- The profitable ratio of EBL is average in comparison to other compared banks.
- The mean ratio of total interest earned to total working fund of EBL is higher than that of BOK and lower than that of Nabil.The variability of the ratio is lower than that of other compared banks.
- EBL has moderate risk in between NABIL and BOK regarding various aspects of the banking functions.
- There is a significant difference between mean ratio of loan and advances to toal deposit of EBL and NABIL,but there is no significant difference between mean ratio of loan and advances to total investment to total deposit of EBL,NABIL and BOK.

Shova K.C.,(2005**),** has conducted thesis on "*Investment Analysis of the Finance Companies in Context of Nepal."* She has analyzed the investment of various finance companies of Nepal. She has taken twenty finance companies. The objectives of the research were as follows:-

- To find out the investment in government securities is increasing or decreasing.
- To find out the major source of finance companies is utilized on loan and advances or not.
- To evaluate the trends of deposit utilization and its projection of finance companies

The major findings of her study were as follows:

- The investment in government securities of the finance companies is decreasing.
- Major source of finance companies is utilizes on loan and advances. Use of fund towards the hire-purchase loan is decreasing in the finance companies and investment on housing loan is more.
- Profitability position of most of the companies is comparatively weak.

Research Gap

The previous researchers have covered the liquidity position, asset management , profitability ,funds mobilization, deposit utilization, trend analysis as their main objectives. Some researches have also examined the loan loss provision and growth ratio of loan and advances and total investment. Some of them have missed the objectives like, weakness or drawback of deposit and investment policies, risk position and correlation analysis but they have focused on profitability , liquidity and deposit utilization only. They have used the tools like trend analysis to compare loans and advances, total investment ,total deposit and net profit etc and other tools like liquidity ratio, profitability ratio and mean ratio etc. But some of them have left or missed the tools like correlation analysis , regression the method of least square, standard deviation etc.

The present researcher has focused on various objectives like to establish correlation of deposit with total investment and loan and advances, utilization of deposit in investment ,investment in government securities ,shares and debentures ,risk position and investment practices of the banks and also to evaluate growth rate of total deposit and net profit. Therefore the study of present researcher will be beneficial to analyze the deposit and investment portfolio of Nepalese Commercial Banks.

CHAPTER – III

RESEARCH METHODOLOGY

3. Introduction:

In this chapter, efforts have been made to present and explain specific research design for the sake of attaining the research objective. It describes the methods and process applied in the entire subject of the study. It is the plan, structure and strategy of investigation conceived to answer the research questions. The secondary data is primarily used to measure performance and trading activities related to select companies. Hence, this chapter has been divided into five sections, which are as follows

1. Research design
2. Population and sample
3. Natures and source of data
4. Data Processing procedure
5. Tools and technique of analysis

3.1 Research Design

This research has done effort to analyze portfolio investment of commercial bank on the basis of historical data and information. So that most of the data and information of the study were related with past phenomena of the performance so it can be regarded as historical research.

"Research design is a plan, structure and strategy of investigation conceived so as to obtain answer to research question and to control variances."***(Kothari;1991:54)***

This research is more quantitative or analytical based as well as descriptive.

3.2. Population and sample

Population refers to the entire group of people events or things of interest that the research wishes to investigate. Under the study of portfolio analysis on investment of Nepalese Commercial Banks, the total no. of commercial banks including domestic and joint venture banks operating in the Nepal is the population. At present there are 23 CBs running in Nepal.. The selected sample banks for the analysis are as follows.

1. Nabil Bank Ltd.
2. Nepal Investment Bank Ltd.
4. Standard Chartered Bank Nepal Ltd.
5. Himalayan Bank Ltd.
6. Population size=23
7. Sample size=4
8. Sample percentage=17.39

3.3 Nature and Source of Data Collection

As, the study was based mainly on secondary data , the researcher has made the effort to gather information by published materials of different organizations such as NEPSE, SEBO/N, Central Bureau of Statistics. Nepal Rastra Bank. In addition to above, supplementary data and information were collected from different library such as library of Nepal Commerce Campus, Shanker Dev Campus, TU Central Library, similarly various data and information were collected from the periodical economic journal, journal of Business and from other published and unpublished reports.

3.4 Data Processing Procedure

Methods of analysis are applied as possible. Due to poor database, the data obtain from the various sources cannot be directly used in their original form. Further they need to be verified and simplified for the purpose of analysis. The obtained data are presented in various table, diagram and charts with supporting interpretations.

3.5. Tools and Techniques of Analysis

On the basis of historical data both financial and statistical tools are used to analysis of different variables. Ratio Analysis, Risk and Return, Portfolio Rate of Return, Total risk, Coefficient of Variation and Co-variance, Index Number, Arithmetic Mean, Standard Deviation & Variance and Correlation Coefficient & Trend Analysis.

A. Investment to total deposit ratio

Investment to total deposit ratio is calculated by dividing investment by total deposit. This can be shown following ways

$$\frac{\text{Total investment}}{\text{Total deposit}}$$

B. Loans to advances to total deposit ratio

Loans to advances to total deposit ratio is calculated by dividing loans & advances by total deposit

$$\frac{\text{Loans and deposit}}{\text{Total deposit}}$$

C. Risk on Portfolio

Risk can be defined as variability of the return of period. Portfolio risk is measured in term of variance or Standard deviation. Portfolio risk can be calculated in term of its standard deviation in the following

$$\sigma_P = \sqrt{W^2{}_A \pm {}^2{}_A \Gamma W_B{}^2 \pm {}^2{}_B \Gamma 2 W_A W_B \pm {}_{AB} \pm {}_A \pm {}_B}$$

For three asset case the formula will be:

$$\exists_p = \sqrt{w^2{}_x \pm {}^2{}_x \Gamma w^2{}_y \pm {}^2{}_y \Gamma w^2{}_z \pm {}^2{}_z \Gamma 2 w_x w_y \operatorname{cov}(x,y) \Gamma 2 w_x w_z \operatorname{cov}(x,z) \Gamma 2 w_y w_z \operatorname{cov}(y,z)}$$

Where,

X, Y and Z are three securities held in a portfolio

W x, W_Y and W_Z = Weight of securities X, Y and Z

σ_x σ_Y σ_z = Standard deviation of X, Y and Z

Cov (x,Y), Cov (x,z) and Cov (Y,Z)= Covariance between two securities.

D. Covariance

Co-variance also measure risk factor, which are associated along with return. It measures risk of assets by assessing return of two-stock move together. It can be measured with the following equation.

$Cov_{AB} = r_{ab} | \exists_A | \exists_B$

Where,

Cov_{AB}=covariance between two assets A and B

r_{AB}=correlation coefficient between assets A and B

E. **Coefficient of Variation**

The coefficient of variation is the way of expressing risk. It measure risk per unit of expected return. Coefficient of variation can be defined in the following equation.

$$CV_{J=} \frac{\exists^j}{R_j}$$

Where,

$\exists_j$=Standard deviation

$R_{j=}$Expected return of security

F. Index number

Index number are indicators which reflect the relative change in the level of a certain phenomenon in any given period or over a specified period of time called the current period with respect to its values in some fixed period, called the base period selected for comparison.

"Index numbers are statistical devices designed to measure the relative change in the level of phenomenon with respect to time geographic location or other characteristics such as income, profession etc."***(Gupta;1981: 650)***

$$\text{Index} = \frac{\textit{Deposit of year T}}{\textit{Base- year Deposit amount}} \times 100 \text{ (For the change in deposit)}$$

$$\text{Index} = \frac{\textit{Deposit of year T}}{\textit{Base- year Deposit amount}} \times 100 \text{ (For the change in investment)}$$

G**. Arithmetic Mean**

Arithmetic mean of a given set of observation is there sum divided by the number of observation.

Let x_1, x_2, and x_3----------. X_n be the

$$x = \frac{x_1+x_2+X_3----------+x_n}{n}$$

$$\bar{X} \; X \frac{X}{n}$$

Where

x= Arithmetic Mean

n= Number of observation

CHAPTER- IV

Data Presentation and Analysis

4. Introduction

The basic objective of the chapter is to analyze and elucidate the collected data following the conversion of unprocessed data to and understandable presentation. Thus this chapter is devoted to the presentation, analysis, interpretation and scoring the empirical findings out the study through definite course of research methodology. Various financial and statistical tools have been used in this study to achieve objective of the study.

- Analysis of change in deposits and investment using the concept to Index.
- Investment analysis of commercial Banks.
- To analysis risk and return on investment.
- Test of investment portfolio performance.

4.1 Analysis of Percentage Change in Deposit and Investment of four CBs.

Index number are indicator which reflect the relative changes in the level of a certain phenomenon in any given period over a specified period of time called the current period with respect to its values in some fixed period, called the base period selected for comparison. Index number are statistical devices designed to measure the relative changes in the level of phenomenon with respect to time geographical location or other characteristics such as income, profession etc.

Table no. 4.1
Index Analysis of Total Deposit of SCBL

Rs.In('000')

Fy	2000/01	%	2001/02	%	2002/03	%	2003/04	%	2004/05	%	2005/06	%
Saving	5471680	100	6632700	121.22	8404610	153.60	9441910	172.56	10633160	194.33	12771820	233.4
Fixed	2868910	100	2651650	92.43	3236030	112.80	2264770	78.94	1948600	67.92	1428490	49.79
Current	233270	100	2417090	103.55	3279430	140.49	3808390	163.15	5768620	247.13	5816930	249.19
Call &short	235780	100	274590	116.46	235620	99.93	101120	42.89	185200	78.55	9040990	399.04
Others	254520	100	592460	232.78	274360	107.80	219720	86.33	220060	86.46	203190	73.832
Total	11165160	100	1258490	112.57	15430050	138.20	15835910	141.83	18755640	167.98	21161420	189.53

Table no.4.2
Index Analysis of Total Deposit of HBL

Rs.In ('000')

Fy	2000/01	%	2001/02	%	2002/03	%	2003/04	%	2004/05	%	2005/06	%
Saving	5096650	100	6833160	134.07	9144470	179.42	9163950	179.80	10870540	213.28	11759600	230.73
Fixed	2190380	100	3917140	178.82	4927370	224.95	5480840	250.22	3205370	146.33	4710180	215.03
Current	1266660	100	1743980	137.68	2252130	177.80	2634370	207.97	3503140	276.56	4145450	327.27
Call &short	929000	100	1192280	128.34	740720	79.73	883600	95.11	3041490	327.39	970100	104.42
Others	297030	100	356540	120.03	467710	157.46	456610	153.72	386830	130.23	425000	143.08
Total	9779720	100	14043100	143.59	17532400	179.27	18619370	190.38	21007370	214.80	22010330	225.06

The above table (table no. 4.1) presents the index analysis on total deposit of SCBL. For this analysis 2000/01 is chosen as the base year. The Banks are collecting deposit from the different sources like saving deposit, fixed, current, call and short deposit and other deposits. It is also signifying that SC Bank is able to attract the large number of depositors in year to year by collecting huge volume of saving deposit, the major sources of deposit. The index of saving deposit is in increasing trend having 121.22% in 2001/02, 153.60% in 2002/03, 172.56%in 2003/04,194.33% in2004/05 and 233.4% in fiscal year 2005/06. These are much higher than the 100% of the base year 2000/01, fixed deposit, the other major source in the deposit portfolio, in volatile condition in the year to year.

SCBL has fixed deposit index of 92.43% in 2001/02, 112.80 in 2002/2003, 78.94% in 2003/04 and 67.92% in the year 2004/05 signify that the Bank poor performance in collecting fixed deposit .In the year 2005/06 SCBL has fixed deposit index of 49.79% which indicates that the Bank is not collecting fixed deposit significantly than the past year but we can see increase in collecting fixed deposit than the base year of 2000/01. This Bank has higher current deposit index of 3.55% in the year 2001/02, 40.49% in 2002/03, 63.15% in 2003/04, 147.13% in 2004/05 and 149.19% in the fiscal year 2005/06. It signifies that the Bank has been showing good performance by enhancing current deposit, the cost or interest free sources of deposit, year by year. The Bank index of call and short deposit is also increased in the year 2001/02 by 16.46% comparing to the base year. But in the year 2002/03, 2003/04 and 2004/05, the Bank has the index of 99.93%, 42.89% and 78.55% respectively in the call and short deposit. It is clearly indicated that the Bank's poor performance to collect the call and short deposit but dramatic increase in call and short deposit can be observed in the year 2005/06. It increases by 299.04% than the base year. The other source of the deposit's index of 232.78% in 2001/02 and 107.80% in 2002/03 signifies that the

SC Bank has shown the momentum growth in the collection of the other deposit in these two years. But in the 2003/04, 2004/05 and 2005/06 Bank's index of the other deposit of 86.33%, 186.46% and 73.83% signifies the poor performance in collecting of other source of deposit. When seeing the index of the total deposit, it is increasing significantly year by year. It indicates that the Bank is able to make trustworthy environment among the depositor and preventing self from liquidity crunch.

The above table no. 4.2 is the index analysis on total deposit of HBL. For this analysis 2000/01 is chosen as the base year. The Banks are collecting deposit from the different sources like saving deposit, fixed, current, call and short deposit and other deposits. It is also signifying that HBL is able to attract the large number of depositor in year to year by collecting huge volume of saving deposits, the major sources of deposit. The index of saving deposits is in increasing trend having 134.07% in 2001/02, 179.42% in 2002/03, 179.80% in 2003/04, 213.28% in 2004/05 and 230.73% in the fiscal year 2005/06. These are much higher than the 100% of the base year 2000/01.

This Bank has higher index of 78.82% in 2001/02, 124.95% in 2002/03, 150.22% in 2003/04, 46.33%in 2004/05 and 115.03% in the year 2005/06 in fixed deposit. It signifies that the Bank has been showing good performance by enhancing fixed deposit.

Current deposit, the other major sources in the deposit portfolio is also in increasing trend year by year. This Bank has higher index of 37.68% in 2001/02, 77.80% in 2002/03, 107.97% in 2003/04, 176.56% in 2004/05 and 227.27% in the year 2005/06. It signifies that the Bank has been showing good performance by enhancing current deposit, the cost or interest free sources of deposit, year by year.

The Bank index of call and short deposit is also increased year by year comparing to the base year which is 128.34% in 2001/02, 327.39% in 2004/05 and 104.42% in 2005/06. But in the year 2002/03 and 2003/04 the Bank has the index of 79.73% and 95.11%. It is clearly indicate that the Bank poor performance to collect the call and short deposit in these year.

The other sources of deposit's index of 120.03% in 2001/02, 157.46% in 2002/03, 153.72% in the year 2003/04,130.23% in 2004/05 and 143.08% in the fiscal year 2005/06 indicate that the Bank is able to collect other sources of deposit significantly than the base year.

Table no. 4.3

Index Analysis of Total Deposit of NABIL Bank Rs. in ('000')

Fy	2000/01	%	2001/02	%	2002/03	%	2003/04	%	2004/05	%	2005/06	%
Saving	3352620	100	4150190	123.79	4917140	146.67	4972060	148.30	5229720	155.99	5994120	178.79
Fixed	3420280	100	5278270	154.32	7667540	224.17	2446850	71.53	2252540	65.85	2310570	67.55
Current	2327080	100	2880650	123.78	2850970	122.51	2703820	116.19	3034000	130.38	2688970	115.55
Call& short deposit	-	100	-	-	-	-	4944960	100	2540700	51.38	2801400	56.55
Others	364300	100	470400	129.12	403360	110.72	438750	120.44	390690	107.24	323970	88.92
Total	9464280	100	12779510	135.02	15839010	167.35	1566440	163.84	13447650	142.08	14119030	149.18

Table no. 4.4

Index Analysis of Total Deposit of NIBL Bank Rs. In ('000')

Fy	2000/01	%	2001/02	%	2002/03	%	2003/04	%	2004/05	%	2005/06	%
Saving	751090	100	997480	132.80	1259570	167.70	1278790	170.26	2434050	324.07	4886100	650.53
Fixed	983610	100	1093650	111.19	1658660	168.63	945930	96.17	1672820	170.07	2294680	233.29
Current	531530	100	581910	109.48	769010	144.68	785400	147.76	979010	184.19	1500100	282.22
Call & short deposit	83160	100	221690	266.58	502510	604.27	1051890	1264.90	2610410	3139.02	2556810	3074.56
Others	89490	100	88550	98.95	66460	74.27	112750	125.99	226460	253.06	286990	320.69
Total	2438880	100	2983280	122.32	4256210	174.51	4174760	171.18	7922750	324.85	11524680	472.53

Above table no. 4.3 is the index analysis on total deposit of NABIL Bank. For this analysis 2000/01 is chosen as the base year. The table reveals that Bank sources of the deposits are saving deposit, fixed, current call and short deposit and other deposits. It is also indicating that Nabil Bank is able to attract the large number of depositor in year to year by collecting large volume of saving deposit, the major sources of the deposit. The index of saving deposit is in increasing trend having 123.79% in 2001/02, 146.67% in 2002/03, 148.30% in 2003/04, and 155.99% in 2004/05 and 178.79% in the fiscal year 2005/06 greater than the base year of 100%. But the fixed deposit, other source of the deposit does not show linear increasing trend.

In the year 2003/04, 2004/05 and 2005/06, this fixed deposit is decreased by 28.46%, 34.14% and 32.45% respectively as compared to its base year but in other years it has higher index value. In these years, mushrooming cooperative Banks were offering fixed deposit scheme by the name of double year amount in five year or less than five years. This may be the cause of the decreasing trend of the fixed deposit of the NABIL Bank. At the side of current deposit, NABIL Bank has 23.78% index in 2001/02, 22.51% in 2002/03, 16.91% in 2003/04, 30.38% in 2004/05 and the slight fall can be observed in the year 2005/06 but greater that the base year.

The Bank could not be able to collect the call and short deposit from the year 2000/01 to 2002/03. The above table signifies that the Bank can be able to collect call and short deposit in the year 2003/04 but index of the 51.38% and 56.65% in the year 2004/05 and 2005/06 reveals that Bank is not able to show its good performance to collect the call and short deposit. The other sources of deposit's index are also higher than the base year till 2004/05 but slight fall can be observed in the year 2005/06 than the base year which is decreased by 11.08%.

Above table no. 4.4 is the index analysis on total deposit of NIBL Bank. For this analysis 2000/01 is chosen as the base year. The Banks are collecting deposit from the different sources like saving deposit, fixed, current, call and short deposit and other deposits. It is also indicating that NIBL Bank is able to attract the large number of depositor in year to year by collecting huge volume of saving deposit, the major sources of the deposit. The index of saving deposit is in increasing trend having 132.80% in 2001/02, 167.70% in 2002/03, 170.26% in 2003/04, 324.67% in 2004/05 and 650.53% in the fiscal year 2005/06. These are much higher than the 100% of the base year 2000/01.

Fixed deposit, the other major sources in the deposit portfolio is gaining momentum growth in all the years. The Banks fixed deposit index of 111.19% in 2001/02, 168.63% in 2002/03, 170.07% in 2004/05, 233.29% in 2005/06 signify that the Banks best capability to enhance its fixed deposit in deposit portfolio by 11.19%, 68.63%, 70.07% and 133.29% higher than the base year. But in the year 2003/04 the Bank has 96.17% index in the fixed deposit. Despite the high cost in the fixed deposit, the NIBL is minimizing the risk of liquidity crunch. At the side of current deposit, NIBL Banks has been showing good performance by enhancing current deposit, the cost or interest free sources of deposit, year by year. This can be proved by the increasing index of the 109.48% in 2001/02, 144.68% in 2002/03, 147.76% in 2003/04, 184.19% in 2004/05 and 282.22% in the fiscal year 2005/06.

The Bank index of the call and short deposit is also increasing outstandingly; these are higher than 166.58% in 2001/02, 504.27% in 2002/03, and 1164.90% in 2003/04, 3039.03% in 2004/05 and 2974.56% in 2005/06. It is indicating that the Bank makes the extraordinary growth to collect call and short deposit. The other sources of the deposit's index of 98.5% in 2001/02, 74.27% in 2002/03 signifies that the NIBL poor performance in collecting the other sources of deposit. But in

the recent year, it has given the remarkable performance to collect other deposit. When seeing the index of total deposit, it is increasing significantly year by year. It indicates that the Bank is able to make trustworthy environment among the depositor and preventing self from the liquidity crunch.

Table no. 4.5

Index Analysis of Total Investment of S.C.B. Rs In (000)

Fy	2000/01	%	2001/02	%	2002/03	%	2003/04	%	2004/05	%	2005/06	%
Loan & advance	3970646	100	4658170	117.32	5660803	142.57	5364005	135.09	5695823	135.09	6410242	161.44
Government securities	2669880	100	3338672	125.00	4811010	180.96	5784723	216.66	6722828	251.803	7948217	297.70
Shares & debenture	11190	100	11190	100.00	11190	100.00	11190	100.00	11190	100.00	11190	100.00
Total	6651716	100	8008032	120.39	10483003	157.60	11159918	167.77	12429841	186.87	14369649	216.02

Table no. 4.6

Index Analysis of Total Investment of HBL Rs In ('ooo')

Fy	2000/01	%	2001/02	%	2002/03	%	2003/04	%	2004/05	%	2005/06	%
Loan &advances	5311660	100	7224730	136.01	9015350	169.72	8913730	167.72	10001850	188.29	11951870	225.01
Government securities	459450	100	211288	459.87	2224300	484.12	3047750	663.34	3998870	870.36	3431730	746.92
Shares & debenture	9500	100	9490	99.89	10690	112.52	34270	360.73	34270	360.73	34270	360.73
Total	5780610	100	9347100	161.69	11250340	194.62	11995750	207.51	14034990	242.79	15417870	266.71

Above table no. 4.5 is the index analysis on total investment of the SC Bank. For this analysis 2000/01 is chosen as the base year. The Bank has also the portfolio of investment including loan and advance, government securities and shares and debentures. The index of loan and advance is in increasing trend in all the year. It indicates that the SC Bank has made impetus growth in loan and advance in all the year. SC Bank has disbursed the loan and advance higher that the base year index of 100 by 17.32% in 2001/02, 42.57% in 2002/03, 35.09% in 2003/04. 43.45% on 2004/05 and 61.44% in 2005/06. Despite the economic slowdown, recession, burgeoning inflation, the Bank has gain good performance in disbursement of the loan and advances. The table signifies that SC Bank made extraordinary growth in the government securities investment. The index of the Bank in government securities of 125.50% in 2001/02, 180.196% in 2002/03, 216.66% in 2003/04, 251.803% in 2004/05 and 297.70% in 2005/06 signifies that the Bank as being multinational player has made good investment in the government securities, the risk free investment. In Nepal, share and debenture is taken as the highly volatile investment avenue due to lack of sufficient corporate sector, volatile return, and Maoist insurgency. By realizing this, the Bank has not made any growth in the share and debenture in all the year. At the side of total investment, as being the international player, SC Bank has gained the momentum growth in all the years this signifies the Bank good performance to attract customer trust, gain higher profitability, and sustains Bank in stiff competition and recession time.

Above table no. 4.6 is the index analysis on total investment of the HBL. For this analysis 2000/01 is chosen as the base year. The Bank has also the portfolio of investment including loan and advances, government securities and shares and debenture. The index of loan and advance is in increasing trend in all the year. It indicates that the HBL has made impetus disbursed the loan and advance higher

than the base index of 100 by 36.01% in 2001/02, 69.72% in 2002/03, 67.81% in 2003/04, 88.29% in 2004/05 and 125.01% in the fiscal year 2005/06. Despite the economic slowdown, recession, burgeoning inflation, the Bank has gain good performance in disbursement of the loan and advances. The index of the government securities signifies that HBL made extraordinary growth in the government securities investment. The index of the government securities signifies is 459.87% in 2001/02, 484.12% in 2002/03, 663.34% in 2003/04, 870.36% in 2004/05 and 746.92% in the fiscal year 2005/06 signify that the Bank as being the multinational player, has made good investment in the government securities, the risk free investment. In Nepal, shares and debenture is the highly volatile investment avenue of the Bank. That's why the Bank has not increased but decreased in the year 2001/02 but in the year 2002/03 it increased by 12.52% and then it is increased by 260.73% in the fiscal year 2003/04 and remaining constant till 2005/06. At the side of total investment it has gained significant growth in all the years. This signifies that the Bank's good performance to attract customer trust, gain highly profitability, sustain Bank in stiff competition and recession time.

Table No.4.7

Index Analysis of Total Investment of NABIL Rs. In ('000')

Fy	2000/01	%	2001/02	%	2002/03	%	2003/04	%	2004/05	%	2005/06	%
Loan & advance	5396819	100	6202187	114.92	8993282	166.64	7135536	132.22	7755951	143.71	818992	151.75
Government securities	1402848	100	1233822	87.95	2767959	197.31	4120294	293.71	3588772	255.82	3672626	261.79
Share & debenture	16512	100	16120	97.63	18820	113.98	22220	134.57	22220	134.57	22220	134.57
Total	6816179	100	7452129	109.33	11780061	172.82	11278050	165.46	11366943	166.76	11884838	174.36

Table No. 4.8

Index Analysis of Total Investment of NIBL Rs. In ('000')

Fy	2000/01	%	2001/02	%	2002/03	%	2003/04	%	2004/05	%	2005/06	%
Loan & advance	1298325	100	1984239	152.83	2318907	178.61	2518057	193.95	5772140	444.58	6917796	532.82
Government securities	90000	100	-	-	300000	333.33	224400	249.33	400000	444.44	2001100	2223.44
Share &debenture	12695	100	12695	100	12695	100.00	13895	109.45	13895	109.45	13895	109.45
Total	1401020	100	1996934	142.53	2631602	187.83	2756352	196.74	6186035	441.54	8932791	637.59

Above table no. 4.7 is the index analysis of total investment of NABIL Bank. For this analysis 2000/01 is chosen as the base year. The Bank has the portfolio of investment including loan and advance, government securities and share and debentures. The Bank has made impetus growth in loan and advance in the year 2001/02 and 2002/03. But, due to economic slowdown, recession, burgeoning inflation, in 2003/04 the Bank has disbursed the loan and advance significantly low comparatively low to 2003/04. The Bank catch the same place in the year 2004/05 and it has disbursed the loan and advance 43.71% higher that the base year but it rises to 51.75% in the fiscal year 2005/06.

The Bank slashed the investment in the other avenue of the Bank's investment, government securities by 14.05% comparatively to the base year. But in the year 2002/03, 2003/04, 2004/05 and 2005/06, the Bank has gain robust growth in the investment in government securities. It has increased by 97.31%; 193.71%, 155.82%, 161.79% respectively in comparison to the base year.

Share and debenture is the highly volatile investment avenues of the Bank. The Bank has not invested in share and debenture significantly comparison to other avenue of investment. Its index of 97.63% of the year 2001/02 signifies that, it has slashed the investment in share and debenture by 2.37%. But the booming of the share market from 2002/03 it has enlarged investment in share and debenture by 13.98% in 2002/03, 34.57% in 2003/04 and same percentage in the year 2004/05, 2005/06 greater that the base year.

At the side of total investment, it has gained the momentum growth in all the years this signifies the Bank good performance to attract customer trust, gain higher profitability, and sustains Bank in stiff competition and recession time.

Above table no. 4.8 is the index of analysis on total investment of NIBL Bank. For this analysis 2000/01 is chosen as the base year. The Bank has the portfolio of investment including loan and advance, government securities and share and debentures. The Bank has made impetus growth in loan and advance in all the year. NIBL Bank has disbursed the loan and advance higher that the base year index of 100 by 52.83% in 2001/02, 78.61% in 2002/03, 93.95% in 2003/04, 344.58% in 2004/05 and 432.82% in 2005/06. Despite of

economic slowdown, recession, burgeoning inflation, the Bank has gain good performance in disbursement of the loan and advance. The table signifies that NIBL could not be able to invest in the government securities, the risk free investment in the fiscal year 2001/02. But the index of the government securities of 333.33% in 2002/03, 249.33% in 2003/04, 444.44% in 2004/05 and 2223.44% in 2005/06 signify that NIBL Bank has momentum growth in investment in government securities. In Nepal, share and debenture is taken as the highly volatile investment avenue due to lack of sufficient corporate sector, volatile return etc. That's why Banks hesitate huge amount in the share and debenture segment of the investment.

The Bank's index in the year from 2000/01 to 2002/03 is the same i.e. 100%; it signifies that the Bank has not made any investment higher than the base year. But it has investment little bit higher than the previous year by 9.45% in the fiscal year 2003/04, 2004/05, 2005/06. At the side of total investment, it has gained the momentum growth in all the years this signifies the Banks good performance to attract customer trust, gain higher profitability, and sustains Bank in stiff competition and recession time.

Table no.4.9

Ranking of Commercial Banks as per the utilization of Deposit in Investment portfolio

Year	Nabil		NIBL		SCB		HBL	
-	Ratio	Rank	Ratio	Rank	Ratio	Rank	Ratio	Rank
2000/01	72.02	I	57.45	III	38.05	IV	59.10	II
2001/02	73.15	I	66.94	II	63.72	IV	66.56	III
2002/03	74.37	I	61.83	IV	67..94	II	64.16	III
2003/04	72.73	I	66.02	III	70.47	II	64.42	IV
2004/05	84.53	I	78.08	II	66.27	IV	66.80	III
2005/06	84.17	I	77.51	II	67.90	IV	70.04	III

Total deposit of Nabil bank in the year 2000/2001=9464280(table no.4.3)

Total investment of Nabil bank in the 2000/2001=6816179(table no.4.7)

Therefore % of investment in the year 2000/2001= 6816179 ie.72.02%

9464280

Similarly,we can calculate the ratio of NIBL,SCBL and HML as per the utilization of deposit in investment portfolio by using table no:4.1,4.2,4.3,4.4,4.5,4.6,4.7,4.8.

The above table no. 4.9 is the representation of the ranking analysis of commercial Banks as per utilization of deposit in investment portfolio. The Banks profitability, operational efficiency, leadership and future perspective all are depend on the ability of investment and utilization of collected fund. The commercial Banks collect fund from saving account, fixed account, current account and other call and short term deposit where as they invest in loan and advance, government securities, share and debentures. To maintain the cost of deposit and gain the profit it is necessary to invest collected fund. In the year 2000/01, NABIL showed the significance performance that other Bank by investing 72.02% of its collected deposit. In the same way, HBL placed its position to second, NIBL placed to third and SCB placed the fourth position by utilizing its collection funds by 59.10%, 57.45% and 38.05%.

In the fiscal year 2001/02, NABIL Bank stood in the 1st position by utilizing 73.15% of its deposit in different investment portfolio. After restructuring its capital and handling the management by Nepalese, NIBL, HBL and SCB have many opportunities to invest and show their potential and invested in different portfolio. By this they created 2nd, and 3rd position and ratios are 66.94% and 66.56%. Despite the sufficient amount invested in the investment portfolio, the above table indicates that SCB positioned itself in 4th. Due to highly trustworthy Bank among the consumers, large amount required to open account compare to other Banks, the Bank has been parking high amount of deposit.

Like previous year, NABIL has positioned itself in first and utilized its collected deposit by 74.37% in the fiscal year 2002/03. This is the indication that the Bank has innovative leadership, operational efficiency in the utilization funds. The above table signifies that, in the same year SCB, HBL and NIBL created 2nd, 3rd and 4th position by utilizing 67.94%, 64.16% and 61.83% respectively.

In the fiscal year 2003/04 again NBIL Bank is in the 1st position by utilizing 72.73% of its deposit and like previous year SCB positioned itself in 2nd position by utilizing 70.47% of its deposit. But we can see change in the position of HBL and NIBL than previous year. In this year NIBL is in 3rd and HBL is in 4th position by utilizing 66.02% and 64.42% of deposit respectively.

In the fiscal year 2004/05, NABIL Bank is able to maintain its position by utilizing 84.53% of its total deposit which is more than last year and it is also clear to see that NIBL has improved its performance and positioned itself in 2nd. On the other hand HBL and SCB is in 3rd and 4th position and they collect deposit by 66.80% and 66.27% respectively.

In the fiscal year2004/05, all the Banks positioned themselves as well as the previous year; NABIL utilized its collected funds by 84.17% and be the 1st, NIBL utilized its deposit by 77.51% and be the second, HBL invested its funds by 70.04% and be 3rd and finally SCB is in last position by utilizing its deposit of 67.90%

It is clear to see that always NABIL is in the 1st position and which signifies that the Bank has different and innovative portfolio of investment, management ability to handle the deposit and investment, enthusiasm and urge to be leader in the commercial Banking industry. Other Banks also show their good performance as much as they can. In percentage there are no huge differences between them.

4.2 Investment Analysis of Commercial Banks

In an increasingly competitive global economy capital was relative scare, inflation was raising in the other hand the world's most of the nation has adopted mantra of globalization, liberalization and resulting opening up of domestic market since then the world economy experienced synchronize hence capital allocation is only way to survive and gain handsome profit which is the ultimate objective of commercial Banks.

The term portfolio simply means collection of investment fund. Allocation of fund is the only way to minimize risk and maximize profit so that commercial Banks mobilize it's

deposit in the different sector area like government securities, loans and advances and share and debenture which are quite prominent sectors now-a-days along with that commercial Banks investment agriculture, industry, commercial and social service sectors.

4.2.1 Investment on Government Securities

To run the development program smoothly, government should spent huge amount. For this shake, government collect fund from public and issuing treasury bills, development bonds etc. Government, as being the guarantor, these funds are regards as low risky funds.

Table No.4.10

Investment on Government Securities **Rs. In ('000')**

Fy	NABIL	NIBL	SCB	HBL	CBs(Total)
2000/01	1402848	90000	2669880	459450	4622178
2001/02	1233822	-	3338672	2112880	6685374
2002/03	2767959	300000	4811010	2224300	10103269
2003/04	4120294	224400	5784723	3047750	13177167
2004/05	3588772	400000	6722828	3998870	14710470
2005/06	3672626	2001100	7948217	3431730	17053673
Total	16786321	3015500	31275330	15274980	66352131
Average	2797720.10	502583.33	5212555	2545830	110586885

Source: Annual Reports (Balance Sheet) of CBs.

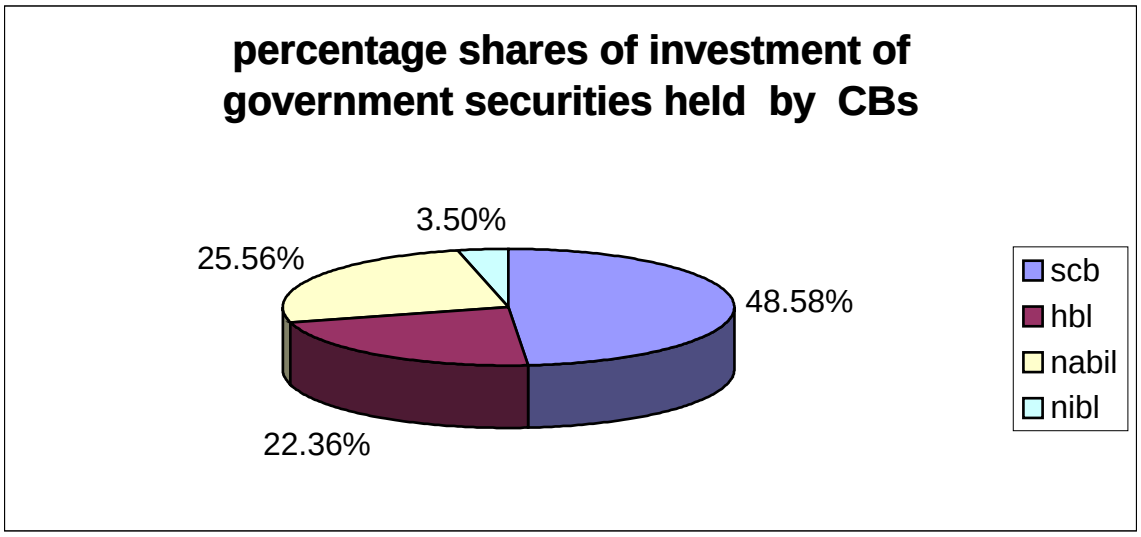
Table No 4.11

Percentage Share of Investment on Government Securities of each Bank

Fy	NABIL	NIBL	SCB	HBL
2000/01	30.35	1.94	57.76	9.94
2001/02	18.45	0	49.93	31.60
2002/03	27.39	2.96	47.61	22.01
2003/04	31.26	1.70	43.89	23.12
2004/05	24.39	2.71	45.70	27.18
2005/06	21.53	11.73	46.60	20.13
Mean	25.56	3.50	48.58	22.36
S.D.	5.60	3.85	4.92	7.32
C.V.	21.90	11.00	10.12	32.78

Source: Annual Reports of CBs.

Figure no 4.1



The above table 4.11 shows the percentage of yearly investment in government securities in total investment, percentage of average investment in government securities in total investment , standard deviation of the percentage of investment in government securities in total investment and coefficient of variation of percentage of investment in government

securities in total investment of 4 commercial Banks. SCB has the highest average investment i.e. 48.58 and the NIBL has the lowest average investment i.e. 3.50 in government securities in the total investment portfolio which means SCB has invested higher proportion in government securities and the NIBL has invested lower proportion in government securities in their total investment portfolio. The standard deviation which is the measure of variability, consistency, homogeneity shows the HBL has the higher S.D. i.e. 7.32% and the NIBL has the least S.D. among four commercial Banks which means percentage of investment in government securities in total investment portfolio of HBL has the higher variability, in consistency and less homogeneity among four commercial Banks and the NIBL has the less variability, higher consistency and higher homogeneity.

For comparative measure of both mean and standard deviation coefficient of variation is the better measure since it is a relative measure of both mean and standard deviation. CV measures per unit variability and here it measures the per unit variability in the percentage of investment in government securities in the total investment portfolio.

Here HBL has the highest C.V. i.e. 32.78% and the SCB has the lowest C.V. i.e. 10.12% among four commercial Banks which shows the S.C.B. has the less per unit variability of percentage investment in government securities in total investment portfolio and the HBL has the higher per unit variability of percentage investment in government securities in total investment portfolio. Lower the C.V. the better is the percentage of investment in government securities in total investment portfolio.

Table No 4.12

Interest Income on Government Securities (Rs in Thousand)

FY	NABIL	NIBL	SCB	HBL	CBs(Total)
2000/01	97107	1317	67294	18381	159261
2001/02	92969	387	162859	75439	331654
2002/03	107843	9792	229454	64960	412049
2003/04	175579	11027	264953	79894	531453
2004/05	174861	10227	303544	121543	610175
2005/06	192761	35868	380441	170332	779402
Total	816282	68618	1408545	530549	2823994
Average	136047	11436.33	234757.5	88424.83	470665.67

Source: Annual Reports of CBs.

4.2.2 Investment on Shares and Debentures

Share and debenture is the another part of investment portfolio. Due to poor political environment and increasing Maoist activities commercial Bank have to select the investment in shares and debenture in order to maximize the return of investment portfolio by retaining acceptable risk level. Especially the commercial Banks invest their funds in share issued by finance companies development Banks, rural micro finance Co., regional development Banks etc. Commercial Banks have investment in the shares of different institutions some of them are Nepal Oil Corporation, National Insurance Corporation, NIDC Capital Markers Ltd., Rural Micro Finance Development Center Ltd, Nirdhan Uthan Bank Ltd, Deprose Nepal Ltd, Far Western Development Bank Ltd, Mid Western Development Bank Ltd, Eastern Development Finance Co. Ltd, Himalaya and Distillery Ltd., Nepal Housing Bikas Bank Ltd, Sudur Paschimanchall Grameen Bikash Bank, Paschimanchal Gramin Bikash Bank etc. The following table shows the investment structure of commercial Banks on shares and debentures

Table no.4.13
Investment on Shares & Debentures

Fy	NABIL	NIBL	SCB	HBL	CBs(Total)
2000/01	16512	12659	11190	9500	49861
2001/02	16120	12659	11190	9490	49459
2002/03	18820	12659	11190	10690	53359
2003/04	22220	13895	11190	34270	81575
2004/05	22220	13895	11190	34270	81575
2005/06	22220	13895	11190	34270	81575
Total	118112	175723	67140	132490	397404
Average	19685.33	29287.16	11190	22081.66	66234

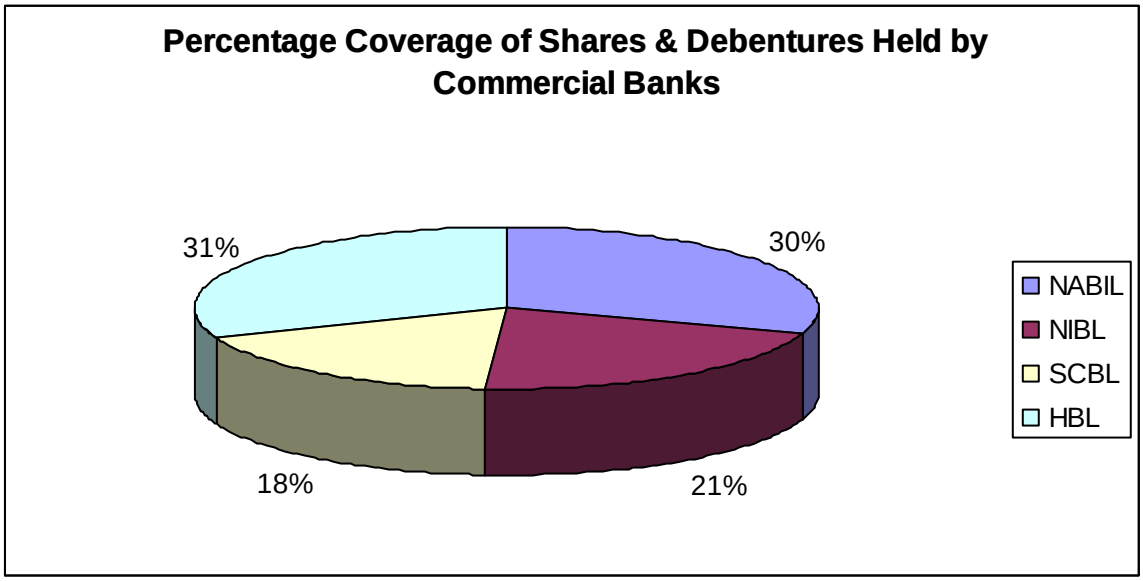
Source: Annual Reports (Balance Sheet) of CBs.

Table no. 4.14
Percentage Share of Investment on Shares & Debentures of each Bank

Fy	NABIL	NIBL	SCB	HBL
2000/01	33.11	25.38	22.44	19.05
2001/02	32.59	25.59	22.62	19.18
2002/03	35.27	23.72	20.97	20.03
2003/04	27.23	17.03	13.71	42.01
2004/05	27.23	17.03	13.71	42.01
2005/06	27.23	17.03	13.71	42.01
Mean	30.44	20.96	17.86	30.71
S.D.	3.63	4.35	4.58	12.37
C.V.	11.92	20.75	25.64	40.28

Source: Annual reports of CBs.

Figure no 4.2



The above table no. 4.14 shows the percentage of yearly investment in share and debenture in total investment, percentage of average investment in share and debenture in total investment, standard deviation of the percentage of investment in share and debenture in total investment and coefficient of variation of percentage of investment in share and debenture in total investment of four commercial Banks. HBL has the highest average investment i.e. 30.71 and the SCB has the lowest average investment i.e. 17.86 in share and debenture in the total investment portfolio which means HBL has invested higher proportion in government securities and the SCB has invested lower proportion in share and debenture in their total investment portfolio. The standard deviation which is the measure of variability, consistency, homogeneity shows the HBL has the higher standard deviation i.e. 12.37 and the NIBL has the least S.D. among four commercial Banks which means percentage of investment in share and debenture in total investment portfolio of HBL has the higher variability, inconsistency and less homogeneity among five commercial Banks and the NIBL has the less variability, higher consistency and higher homogeneity comparative measure of both mean and standard deviation, coefficient of variation is the better measure since it is a relative measure of both mean and standard deviation. Coefficient of variation measures the per unit variability and here it measures the per unit variability and here it measures the per unit variability in the percentage of investment in government securities in total investment portfolio.

Here, HBL has the highest CV i.e. 40.28% and the NABIL Bank has the lowest CV i.e.11.92% among the four commercial Banks which shows the HBL has the less per unit variability of percentage investment in share and debenture in total investment portfolio and the NABIL has the higher per unit variability of percentage investment in share and debenture in total investment portfolio. Lower the CV the better is the percentage in share and debenture in total investment portfolio.

4.2.3 Investment on loan and Advances:-

Commercial Banks pool the saving of different institutions, individuals in the form of different accounts and means. Commercial Banks can't hold the pooled money with them for the longer time since they have to pay interest on that deposit. That's why the main purpose of pooling the saving is to invest in different sectors one of them is loan and advances which is the most important and known function of commercial Banks as well as the core function. Investing in loan and advances involves the higher risk known as credit risk. Therefore before forwarding the credit to the needy organization, individuals commercial Banks assess the required information about the organization, individual whom the Bank is going to forward the credit to minimize the credit risk and to secure their investment and the return on that investment. How much credit should commercial Banks provides depends on the strategy adopted by the Bank, liquidity maintenance and the quality of credit asking customers that's why the percentage of loans and advances in total investment portfolio is different year to year.

Table No.4.15

Investment on loan & advances

FY	NABIL	NIBL	SCB	HBL	CBs
2000/01	5396819	1298325	3970646	5311660	15977450
2001/02	6902187	198239	4658170	7224730	20769326
2002/03	7993282	2318907	5660803	9015350	24988342
2003/04	7135536	2518057	5364005	8913730	23931328
2004/05	7755951	5772140	5695823	10001850	29225764
2005/06	8189992	6917796	6416242	11951870	33469980
Total	43373767	8306964	31759689	52419190	148362190
Average	7228961.16	1384494	5293281.5	8736531.66	24727031.67

Source: Annual Reports (Balance Sheet) of CBs.

The above table 4.15 shows the investment of 4 commercial Banks in loan and advances from 2000/01 to 2005/06. All the 4 Banks have different investment amounts in loans and advances in different year. The average investment in loans and advances of HBL is highest and NIBL has the lowest average investment amount in loans and advances.

Table no. 4.16

Percentage Share of Investment on loan & Advances of each Bank

FY	NABIL	NIBL	SCB	HBL
2000/01	33.77	8.12	24.85	33.24
2001/02	33.23	9.55	22.42	34.78
2002/03	31.98	9.27	22.65	36.07
2003/04	29.81	10.52	22.41	37.24
2004/05	26.53	19.75	19.48	34.22
2005/06	24.46	20.66	19.15	35.70
Mean	29.96	12.97	21.82	35.20
S.D.	3.77	5.65	2.15	1.42
C.V.	12.58	43.63	9.85	4.03

Source: Annual reports of CBs.

Total investment on loan and advances of four CBs in the year 2000/01=15977450 (Table no.4.15)

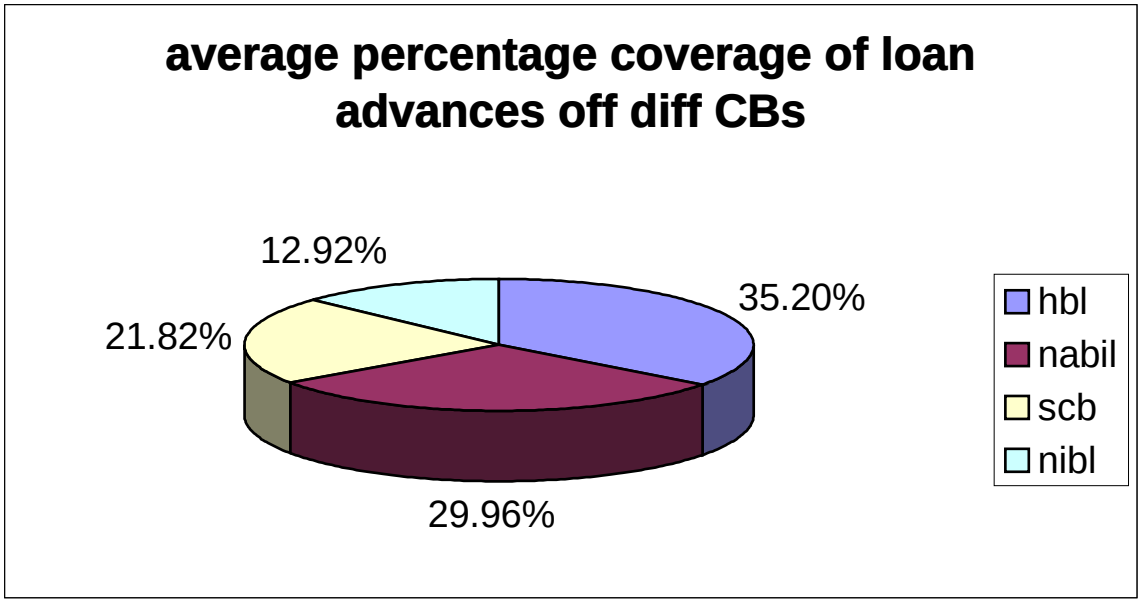
Investment on loan and advances of Nabil bank in the year 2000/1= 5396819 (Table no 4.15)

Percentage of investment on loan and advances of Nabil bank= $\frac{53977450}{15977450}$ =33.77

Similarly,we can find the percentage of investment on loan and advances of NIBL.SCBL and HBL by using table no 4.15.

The above table no. 4.16 shows the percentage of yearly investment in loans and advances in total investment, percentage of average investment in loans and advances in total investment, standard deviation of the percentage of investment in loans and advances in total investment and coefficient of variation of percentage of investment in loans and advances in total investment of 4 commercial Banks. HBL has the highest average investment i.e. 29.96% and the NIBL has the lowest average investment i.e. 12.97% in loans and advances in total investment portfolio which means NABIL has invested higher proportion in loans and advances and the NIBL has invested lower proportion in loans and advances in their total investment portfolio. The standard deviation which is the measure of variability, consistency, stability homogeneity shows the NIBL has the highest S.D. i.e. 5.65% and the HBL has the lowest S.D. i.e.1.42 among four commercial Banks which means percentage of investment in loans and advances in total investment portfolio of NIBL has the higher variability, inconsistency, instability and less homogeneity among 4 commercial Banks and the HBL has the less consistency, higher stability and higher homogeneity. In simple words the NIBL's investment in loans and advances in total investment is not same or inconsistent in different years among the four commercial Banks. For comparative measure of both mean and S. D. coefficient of variation is the better measure since it is a relative measure of both mean and standard deviation , CV measures the per unit variability and here it measures the per unit variability in the percentage on investment in loans and advances in total investment portfolio. Here NIBL ha the highest CV i.e. 43.63% and the HBL has the lowest CV i.e. 4.03 among four commercial Banks which shows the NIBL has the less per unit variability of percentage investment in loans and advances in total investment portfolio and the NIBL has the higher per unit variability of percentage investment in loans and advances in total investment portfolio. Lower the value of coefficient of variation of particular commercial Bank the better is the percentage of investment in loans and advances in total investment portfolio compared to higher coefficient of variation.

Figure no 4.3



The above figure no. 4.3 shows the average percentage in loans and advances in total investment of five different commercial Banks. It can be seen from the above figure that the HBL has the highest average percentage investment in loans and advances and the NIBL has the lowest average percentage investment in loans and advances in the total investment portfolio. Other has medium average percentage investment in loans and advances in total investment portfolio.

Table no. 4.17

Interest Income on loan and Advance (RS, in thousand)

FY	NABIL	NIBL	SCB	HBL	CBs(Total)
2000/01	660447	215543	566730	608144	2050864
2001/02	722576	197695	527795	685293	2133359
2002/03	847664	229042	558102	850359	2485167
2003/04	801046	258583	540851	853429	2453909
2004/05	776300	421847	563505	903838	2665490
2005/06	761616	663016	558006	970166	2952804
Total	4569649	1985726	3314989	4871229	14741593
Average	761608.16	330954.33	552498.16	811871.5	2456932.16

Source: Annual reports of CBs

4.3 Risk and Return Analysis of Investment Portfolio CBs

Modern portfolio theory (MPT) or portfolio theory was introduced by Harry Markowitz with his paper “portfolio selection "which appeared in the 1952 Journal of Finance. Thirty-eight years latter, he shared a noble prize with Merton miller and William Sharpe for what has become a broad theory for portfolio selection. Portfolio theory explores how risk-avers investors construct portfolio in order to optimize expected return for a given level of a universe of risky assets; an efficient frontier of optimal portfolio can be constructed. In this study, Bank investment portfolio means allocation of fund in the different sector. Every Bank has to mobilize its deposit in order to achieve maximum profit. Every investment entails degree of risk, it requires a present certain sacrifice for a future uncertain benefit. Risk is a complicated subject and needs to be properly analyzed.

Portfolio return depends on the expected rate of return of each investment assets contained in the portfolio and the amount investment portfolio return is the weighted average expected return from individual investment assets. Portfolio risk is the variability of the return of the investment portfolio.

The relationship between risk and return is described by individual's perception about risk and their demand for compensation. Nobody will like to invest in risky assets unless he is assured of adequate compensation for the assumption of risk. Generally, in market, higher risk will command higher premium

The main purpose of risk and return analysis is to appraise investment performance and to explore combination of investment that maximize returns, minimize risk or achieve both. The risk minimization, in particular is not possible by holding only one asset or only one type of assets. Risk plays a central role in the analysis in the investments. Commercial Banks or investors generally do not invest their money only on risky assets. Instead they hold a portfolio of many assets with the hope of diversifying the investment risk. In the context of portfolio, the contribution of each asset to the portfolio risk is the portion of relevant risk of the asset.

The measurement of risk has always been subject for debate in the investment industry. This disagreement stems primarily from the various ways investor perceive risk .Many Investors , such as Bank may view their major risk as the uncertainty of whether the money they lend will be returned. To those investors he risk of Bankruptcy or default is the major source of risk. The measurement of return in dollar or percentage is simple statically process while the measure of risk involves a complex process. Risk can be measured in many ways using various statically techniques such as range semi-inter-quartile range, mean absolute deviation , variance, semi-variance etc. On the satisfactorily describes the description of the outcome around the mean value is the analysis of variance (standard deviation) which is widely used in this study standard deviation is taken as the as the tools to measure risk on investment.

The portfolio of assets usually offers the advantage of reducing risk through diversification. The standard deviation of the return on the portfolio may be less than the sum of standard deviation of the return from the individual assets. The portfolio return is the straight weighted average of returns from the individual assets. But the portfolio risk is not the weighted average of the variance of return of individual assets. The portfolio risk is affected by the variance of return as well as the covariance between the returns of individual assets

included in the portfolio and their respective weights. In reality, one will find an asset held in the portfolio to be relatively less risky than when it is held in isolation. This is because when an asset is held in a portfolio, the idiosyncratic risk (unsystematic risk) is totally or at least partly eliminated. Therefore, the portfolio standard deviation is not just the sum of variances of assets held in the portfolio.

Hence, in this chapter, the mean and variance i.e. standard deviation is used as measure of risk and return for a single risky investment asset. Then the effort has been made to explore the effect s of portfolio diversification. Combination of risky assets in the form of portfolios, provide a set of investment opportunities for CBs and how these helps in risk return analysis.

Most of the investment has the objective of regular income and price appreciation. That's why the investor sacrifices the certain amount today with the expectation to earn the additional uncertain amount in the future. No investment is risk- free every investment involves the risk of actual return being different than expected. The higher the uncertainty of actual return being different from expected the higher the risk involved in the investment. There are so many factors which affects the return on investment and makes the investment risky such as change in interest rate, rise in inflation, change in major currency, political change, change in the policy of government etc. the investor will demand the higher return in the investment if there is high uncertainty in the return or high risk on the investment.

Analysis of Risk and Return on Government securities

The return on government securities is computed by dividing interest income on government securities by total investment on government securities of four commercial Banks.

- Return on government securities (R_1)= interest income in government securities / Investment on government securities
- Average (expected) return on government securities (R_1)=$\phi R_1/n$

  Where,

  n=no of historical year (period)
- Standard deviation on return on government securities

$$(\exists_i) = \sqrt{\frac{\phi(R_1 - \overline{R_1})^2}{n-1}}$$

) Coefficient of variation $(CV_1) = \exists_i / R_i$

Table No. 4.18
Return on Government Securities (%)

FY	NABIL	NIBL	SCB	HBL	CBs(total)
2000/01	6.92	1.46	2.52	4.00	14.9
2001/02	7.53	-	4.88	3.57	15.98
2002/03	3.89	4.91	4.58	2.92	16.3
2003/04	4.26	1.35	1.14	2.62	9.37
2004/05	4.87	2.55	4.51	3.09	15.02
2005/06	5.24	1.79	4.78	4.96	16.77
Total	32.71	12.06	22.41	21.16	28.34
Mean return	5.41	2.01	3.735	3.52	14.72
Standard Deviation	1.46	1.37	1.54	0.85	2.77
Coefficient of variation	26.98	68.15	41.28	24.17	18.81

Total investment on government securities of Nabil bank in the year 2000/01=1402848(table no.4.10)

Interest on government securities on Nabil bank in the year 2000/01=97107(table no.4.12)

Return on government securities= $\frac{\text{Interest}}{\text{Investment}}$

$= \frac{97107}{1402848} = 6.92$

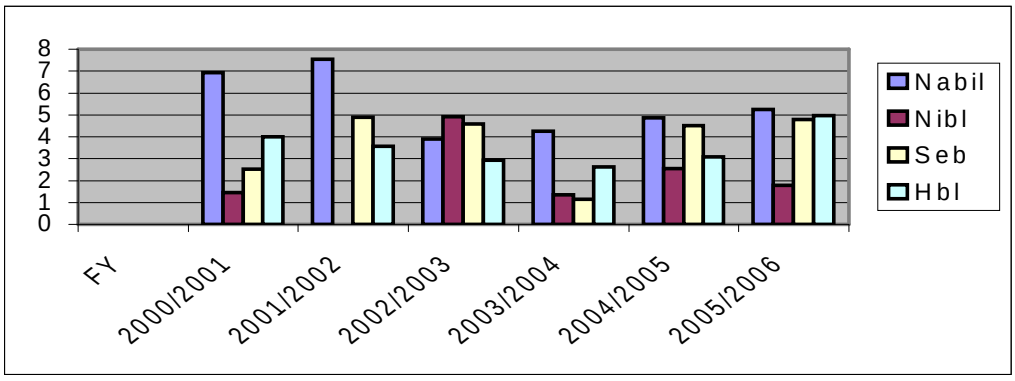
Similarly we can calculate the return on government securities of NBL,SCBL and HBL by using table no.4.10 and 4.12.

In the above table no 4.18, return on investment in government securities of four commercial Banks through 2000/01to 2005/06, standard deviation of return and the coefficient of variation is calculated and presented. Looking at the average return of the four

commercial Banks it can be concluded that the NABIL Bank has the highest mean return i.e. 5.41% and the NIBIL has the lowest mean return among the four commercial Banks. Here standard deviation measures the variability, consistency in the yearly return on investment in the government securities, which is also used in finance to measure the total risk in the return on investment of four commercial Banks in government securities. SCB has the highest standard deviation i.e. 1.54%which means SCB has the highest variability , higher inconsistency and high risk in the return on investment in government securities which also means the SCB's return on investment in government is highly uncertain in the coming year compared to other commercial Banks and HBL has the lowest standard deviation i.e. 0.85 which means HBL has the lowest variability , higher consistency and lower risk in the return on investment in government securities which also means the HBLl's return on investment on government securities is highly certain in the coming year compared to other commercial Banks . Coefficient of variation is the better for risk return analysis, which measure the risk per unit of return, and is also a relative measure of both risk and return. Here, HBL has the lowest coefficient of variation i.e. 24.17%which means there is 0.2417risk for 1%return and NIBL the lowest coefficient of variation i.e. 68.15%which means there is 0.6815% risk for the 1% return. Since the HBL has the lowest risk per unit of return, it is chosen as the best Bank from risk and return analysis on return on investment in government securities among four commercial Banks

Figure no 4.4

Return on government securities of four commercial Banks



The above table no 4.4shows the trend of yearly return on investment in government securities is fluctuated year to year. NIBL has not invested in government securities in some years that are why they have no return or zero returns. NABIL has the highest return and NIBL has the lowest return on investment in government securities compared.

Risk and Return on loans and Advances

Loan and advances are the main sources for commercial Banks. The facility of granting loan and advances is one of the main services, which costumers of the commercial Banks can enjoy. Hence, in order to realize their objectives. The commercial Banks invest in various sectors like agricultural, industry, commercial sectors, services sectors and other important sectors.

The risk and return on investment in the form of loan and advances can be calculated as follows:

Return on loan and advances (R_1) = $\frac{\text{interest income on loan and advances}}{\text{Investment on loan and advances}}$

Average (expected) return on loan and advances (R_i) = R_i/n

Where, n = no. of historical year (period)

Standard deviation on return on government securities

$(\exists_i) = \sqrt{(R_i \; Z \overline{R_i})^2 / n \; Z1}$

Coefficient of variation (CV) = ∃i/Ri

Table No 4.19

Calculation of Risk and Return on Loans & Advances of CBs

FY	NABIL	NIBL	SCB	HBL	CBs(Total)
2000/01	12.24	16.60	14.27	11.44	54.55
2001/02	10.24	9.96	11.33	9.48	41.01
2002/03	10.59	9.88	9.86	9.43	39.76
2003/04	11.23	10.27	10.31	9.57	41.38
2004/05	10.00	7.30	9.89	9.03	36.22
2005/06	9.29	9.03	8.70	8.11	35.13
Total	63.59	63.04	64.36	57.06	248.05
Mean	10.59	10.50	10.72	9.51	41.34
S.D.	1.02	3.17	1.92	1.08	6.95
C.V.	9.63	30.19	17.91	11.35	16.81

Source: Annual reports of CBs

Investment on loan and advances of Nabil bank in the year 2000/01=5396819 (Table no.4.15)

Interest on loan and advances of Nabil bank in the year 2000/01=660447 (Table no.4.17)

Therefore calculation of risk and return on loan and advances = $\frac{\text{Interest}}{\text{Investemnt}}$

$= \frac{660447}{5396819} = 12.24$

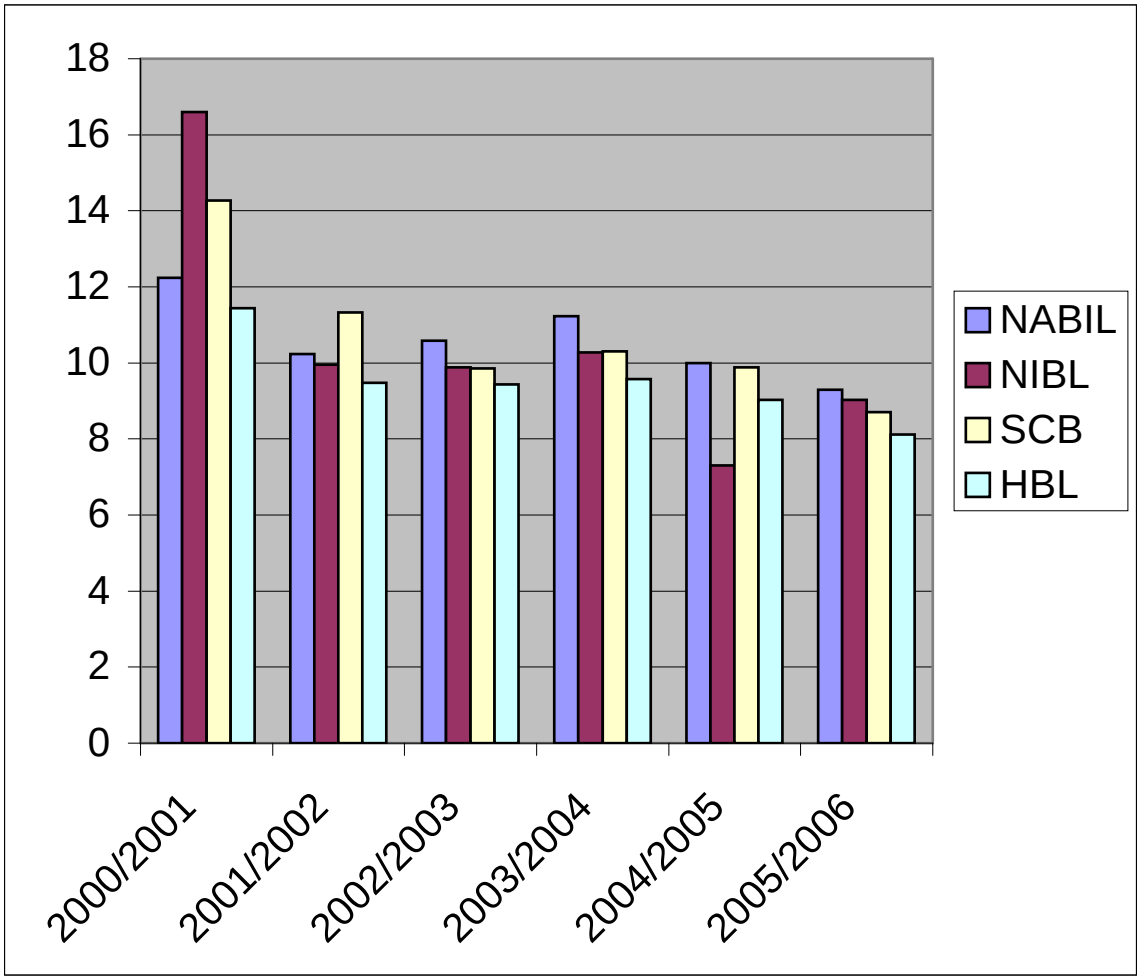
Similarly we can calculate the percentage of risk and return on loans and advances of NIBL,SBC and HBL by using table no.4.15 and 4.17)

In the above table 4.19, return on investment in loans and advance of four commercial Banks through 2000/01 to 2002.03, standard deviation of return and the coefficient of variation is calculated and presented. Looking at the average return of the four commercial Banks it can be concluded that SCB has the highest mean return i.e. 10.72 and the HBL has the lowest mean return

i.e. 9.51 on investment in loans and advances among the four commercial Banks. Here standard deviation measures the variability, consistency in the yearly return on investment in loans advance which is also used in finance to measure the total risk in the return on investment of four different Banks in loans and advances. NIBL has the highest S.D i.e. 3.17 which means NIBL has the highest variability, higher inconsistency and high risk in the return on investment in loans and advances which also means the NIBL's return on investment in loans and advances is highly uncertain in the coming year compared to other commercial Banks and NABIL has the lowest S.D. i.e. 1.02 which means NABL Bank has the lowest variability, highest consistency and lower risk in the return on investment in loans and advances which also means the NABIL's return and investment in loan advances is highly certain in the coming year compared to other commercial Banks. CV is the better for risk return analysis which measure the risk per unit of return and is also a relative measure of both risk and return. Here NABIL has the lowest C.V i.e. 9.63 which means there is o.9663% risk for the 10% return and the NIBL has the highest C, V. i.e. 30.19% which means there is 0.3019% risk for the 10% of return since NABIL has the lowest risk per unit of return, it is chosen as the best Bank from risk and return analysis on return on investment in loans advances among four commercial Banks.

Figure No.4.5

Return on Loans and Advances of four CBs



The above figure no. 4.5 shows the trend of yearly return on investment in loans and advances, most of the commercial Banks return on investment in loans and advances in not highly fluctuated year to year. All the Banks have positive return on investment in loans and advances, SCB has highest return and HBL has the lowest return on investment in loans and advances compared to four commercial Banks and the six years through 2000/01 to 2005/06.

Risk and Return on Share and Debentures

The return on share and debentures considers dividend yield and capital gain yield (change in market price).The information about dividend received and capital gain yield by the commercial bank is not available properly .Without such information calculation of return on shares and debenture is not possible. Hence, due to information disclosure by the concern Banks regarding return from shares has been established to calculate the necessary return on shares and debentures by using market return. i.e. the average market return on shares and debentures is also the average return of commercial Banks from the investment on shares and debenture. The market return on shares and debenture for this purpose is the average return of the sample given in NEPSE.

(Rs) = Capital gain yield+ Dividend yield

$$= \frac{p_t \, Z \, p_{tZ1}}{p_{tZ1}} \Gamma \frac{d_1}{p_1}$$

The risk on share and debenture i.e. S.D.

$$\exists I = \sqrt{\frac{(Rs \, Z \, Rs)^2}{n_1}}$$

Average return $fR_s \quad AX \frac{R}{n}$

Coefficient of variation (Cv_i) = $\exists_s$/Rs

Where Capital yield $\frac{p_t \, Z \, p_{tZ1}}{p_{tZ1}}$

p_t and p_{t-1} are the average closing price of year t and

t-1 (previous year)

Return on share and Debentures = Capital yield +Dividend yield

Table no 4.20

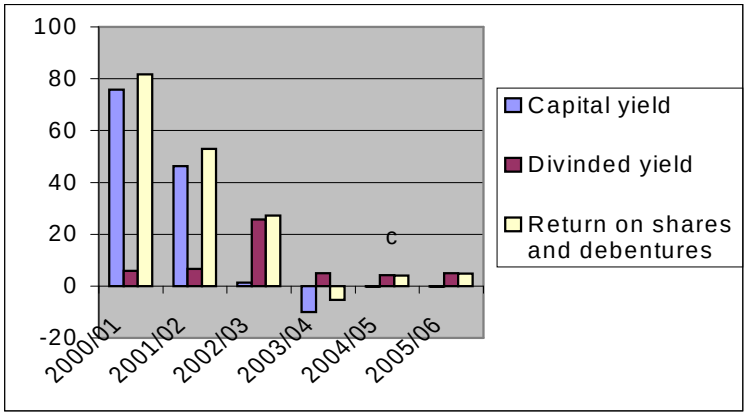
Calculation of Return on Shares and Debentures

F.Y	Av. closing price (Pt)	% change in price (Capital yield)	Av. Dividend Yield (D_t/P_t)	Return on shares Debentures Rs.	$(Rs-\overline{Rs})^2$
1999/00	297.33	0	0	0	0
2000/01	522.75	75.81	5.94	81.74	2934.38
2001/02	764.71	46.28	6.62	52.9	641.60
2002/03	775.46	1.41	25.76	27.17	0.16
2003/04	695.33	-10.33	4.98	-5.35	1083.72
2004/05	694.5	-0.12	4.25	4.13	549.43
2005/06	613.42	-0.11	4.98	4.87	515.29
Total				165.46	5724.58

Source: Nepal stock exchange (www.nepalstock.com,listed companies)
*N*ote:Calculation shown in Annex 11

Figure No. 4.6

Capital yield, Dividend yield & Return on Shares and debentures



In table no 4.20 return on shares and a debenture is the sum of capital yield and dividend yield.

It can be observed from above table no 4.20 and figure no 4.6 that the annual rates of return of investment on shares and debenture of Commercial Banks show wide fluctuations, ranging from – 5.35 in 2001/02 to 81.74% in year 1998/99.

These fluctuations in returns are caused mainly by the volatility of the shares prices in the market. The changes in dividends also Contributed to the variability of the shares return in some extent.
The average rate of return of investment on shares and debenture of CBs for years during 1998/99 to 2003/04 is 27.57% similarly the annual rates of return of investment on shares and debenture show a high degree of variability, they deviated, on an average, by 33.83% from the average rate of 27.57%. This is also reveals by the 1.22% Coefficient of variation.

Risk and Return on Investment Portfolio of four CBs

The return of a portfolio is equal to weighted average of the returns of individual's securities in the portfolio with weights being equal to the proportion of investment in each security. In this study, four commercial Banks invest their funds in shares and debenture, loan and advances and government securities over six years period is shown.

Table no 4.21

Risk Return on Individual Sector Investment portfolio of NABIL

FY	Return on loan & Advances	Return on Govt. Securities	Return on Shares Debentures	Portfolio Return
2000/01	12.24	6.92	81.74	9.89
2001/02	10.24	7.53	52.9	9.91
2002/03	10.59	3.89	27.17	8.89
2003/04	11.23	4.26	-5.35	8.64
2004/05	10.10	4.87	4.13	8.36
2005/06	9.29	5.24	4.87	8.02
Total	63.59	32.71	165.46	53.71
Mean return	10.58	5.45	27.57	8.95
SD	0.73	1.46	33.83	0.75
CV	6.89	26.78	122.70	8.37%

Note: The formulae, procedures to calculate the portfolio risk and return are presented in Annex 16.

In the above table no 4.21, portfolio risk and return on individual investment and the portfolio investment of NABIL Bank is presented. The table shows that the average return on shares and

debentures in highest i.e. 27.57% among average return on loans & advances, govt. Securities and portfolio investment of NABIL Bank and the return on government securities have the lowest average return i.e. 5.45% compared to others and the portfolio has the mean return of 8.95%.

The standard deviation which is a measure of risk variability, uncertainty, consistency of return shows that the return loans and advances and the portfolio investment has the lower variability of risk in the return on investment and government securities have also lower S.D. i.e. 0.73, 0.75 and 1.46 respectively but the shares and debentures have highest S.D. i.e. 33.83% . The value of above table shows that the securities or assets which have higher return has the higher risk and the securities which have lower return have lower risk or vice versa which also supports the theory of risk and return that is higher risk higher will be the return on investment. The relative measure of both mean and S.D. is known as C.V. which measures the per unit risk of variability on return.

The coefficient of variation of loans and advances and portfolio investment, which is a combination of loans and advances, govt Securities and shares and debentures have lower i.e. 6.89% and 8.37% respectively and the shares and debentures have the highest per unit risk or variability i.e. 122.70% in return on investment than other investment mentioned above. The above analysis supports that risk on investment portfolio is lower compared to the risk on individual assets or investment included in the investment portfolio. The per unit risk in the return on investment portfolio of NABIL Bank is lower but it can't be said that the portfolio risk of NABIL can still be lowered and portfolio investment of NABIL is well diversified since the study have not calculated the unsystematic risk which is the measure of company specific risk and can be minimized or eliminate by well diversification of assets included in the investment portfolio

Table no. 4.22

Risk & Return on Individual Sector Investment Portfolio of NIBL Bank

FY	Return on loan & Advances	Return on Govt. Securities	Return on Shares Debentures	Portfolio Return
2000/01	16.60	1.46	81.74	12.12
2001/02	9.96	0	52.9	10.23
2002/03	9.88	4.91	27.17	9.40
2003/04	10.27	1.35	-5.35	9.47
2004/05	7.30	2.55	4.13	6.99
2005/06	9.03	1.79	4.87	7.11
Total	63.04	12.06	165.46	59.32
Mean return	10.50	2.01	27.57	9.88
SD	3.17	1.37	33.83	2.97
CV	30.19	68.15	122.70	30.07

Note: The formulae, procedures to calculate the portfolio risk and return are presented in Annex 19.

In the above table no 4.22, portfolio risk and return on individual investment and the portfolio investment of NIBL is presented. The table shows that the average return on shares and debentures is highest i.e. 27.57% among average return on loans & advances, government, securities and portfolio investment of NIBL Bank and the government securities have lowest mean return on investment i.e. 2.01% compared to others and the portfolio has the average return 9.88% . The standard deviation which is a measure of risk, variability, uncertainty, consistency of return shows that the return on government securities have the lowest standard deviation i.e. 1.37,loans and advances have the standard deviation of 3.17 and the portfolio investment has also the lower variability of risk in the return on investment i.e. 2.97 but shares the values of above table show that the securities or assets which have higher return has the higher risk and the securities which have lower return have lower risk or vice versa which also supports the theory of risk and return that is higher risk will be the return on investment. The relative measure of both mean and standard deviation is known as coefficient of variation which measures the per unit risk or variability on return.

The coefficient of variation of loans and advances and portfolio investment which is a combination of loans and advances, government securities and shares and debentures have lower i.e. 30. 19% and 30.07% respectively and the government securities and shares and debentures have the higher coefficient of variation i.e. 68.15% and 122.70% respectively which shows that government securities and shares and debentures have the higher per unit risk or variability in return on investment than other investment mentioned above. The above analysis supports that risk on investment portfolio is lower compared to the risk on individual assets or investment included in the investment portfolio. The per unit risk in the return on investment portfolio of NIBL Bank is lower but it can't be said that the portfolio risk of NIBL Bank can still be lowered and portfolio investment of NIBL is well diversified since have not calculated the unsystematic risk which is the measure of company specific risk and can be minimized eliminated by well diversification of assets included in the investment portfolio.

Table no. 4.23

Risk & Return on Individual Sector Investment Portfolio of SCB

FY	Return on loan & Advances	Return on Govt. Securities	Return on Shares Debentures	Portfolio Return
2000/01	14.27	2.52	81.74	8.66
2001/02	11.33	4.88	52.9	8.70
2002/03	9.86	4.58	27.17	7.46
2003/04	10.31	1.14	-5.35	5.54
2004/05	9.89	4.51	4.13	7.02
2005/06	8.70	4.78	4.87	6.52
Total	64.36	22.41	165.46	43.90
Mean return	10.72	3.735	27.57	7.31
SD	1.92	1.54	33.83	0.96
CV	17.91	41.28	122.70	13.19

Note: The formulae, procedures to calculate the portfolio risk and return are presented in Annex 17.

In the above table no 4.23, portfolio risk and return on individual investment and the portfolio investment of SCB Bank is presented. The table shows that the average return on shares and debentures is highest i.e. 27.57 among average return on loans & advances, govt. Securities and portfolio investment of SCB Bank and the government securities have the lowest average return i.e. 3.73 compared to others but the portfolio investment has the 7.31% mean return on investment. The standard deviation which is a measure of risk, variability, uncertainty, consistency of return shows that the return on portfolio investment has the lowest standard deviation i.e. 0.96, loans and advances have the standard deviation of 1.92 and the government securities has also the lower variability or risk in the return on investment i.e. 1.54 but the shares and debentures have highest standard deviation i.e. 33.83%. The values of above table shows that the securities or assets which have higher return has the higher risk and the securities which have lower return have lower risk or vice versa which also supports the theory of risk and return that is higher risk higher will be the return on investment. The relative measure of both mean and standard deviation s know as coefficient of variation which measures the per unit risk or variability on return. The coefficient of

variation of loans and advances and portfolio investment, which is a combination of loans and advances, govt. securities and shares and debentures have lower i.e. 17.91% and 13.19% respectively, government securities have moderate risk per unit of return on investment i.e. 41.28% but the shares and debentures have the highest coefficient variation i.e. 122.70% which shows shares and debentures have the highest per unit risk or variability in return on investment than other investment mentioned above. The above analysis supports that risk on investment portfolio is lower compared to the risk on individual assets or investment included in the investment portfolio. The per unit risk in the return on investment portfolio of SCB Bank is lower but it can't be said that the portfolio risk of SCB Bank can still be lowered and portfolio investment of SCB is well diversified since have not calculated the unsystematic risk which is the measure of company specified risk and can be minimized eliminated by well diversification of assets included in the investment portfolio.

Table no. 4.24

Risk & Return on Individual Sector Investment Portfolio of HBL

FY	Return on loan & Advances	Return on Govt. Securities	Return on Shares Debentures	Portfolio Return
2000/01	11.14	4.00	81.74	10.96
2001/02	9.48	3.57	52.9	8.18
2002/03	9.43	2.92	27.17	8.15
2003/04	9.57	2.62	-5.35	7.76
2004/05	9.03	3.09	4.13	7.32
2005/06	8.11	4.96	4.87	7.40
Total	57.06	21.16	165.46	49.77
Mean return	9.51	3.52	27.57	8.29
SD	1.08	0.85	33.83	1.01
CV	11.35	24.17	122.70	12.18

Note: The formulae, procedures to calculate the portfolio risk and return are presented in Annex 18.

In the above table no 4.24, portfolio risk and return on individual investment and the portfolio investment of HBL is presented. The table shows that the average return on shares and debentures is highest i.e. 27.57% among average return on loans & advances, govt. securities and portfolio investment of HBL Bank and the government securities have the lowest average return on investment i.e. 3.52% compared to others and the portfolio has the average return of 8.29%. The standard deviation which is a measure of risk, variability, uncertainty, consistency of return shows that the return loans and advances and the portfolio investment has the lower variability or risk in the return on investment i.e. 1.08 and 1.01 respectively but the government securities has the lowest standard deviation i.e. 0.85%. And the shares and debentures have the highest standard deviation. The values of above table shows that the securities or assets which have higher return has the higher risk and the securities which have lower return have lower risk or vice versa which also supports the theory of risk and return that is higher risk higher will be the return on investment. The relative measure of both mean and standard deviation is known as coefficient of variation which measures the per unit risk or variability on return. The coefficient of variation of loans and advances and portfolio investment which is a combination of loans and advances, govt. securities and shares and debentures have lower i.e. 11.35% and 12.18% respectively and the government Securities have moderate coefficient of variation i.e. 24.17% but the shares and debentures have the highest coefficient of variation i.e. 122.70% which shows that shares and debenture have the highest per unit risk or variability in return on investment than other investment mentioned above. The above analysis supports that risk on investment portfolio is lower compared to the risk on individual assets or investment included in the investment portfolio. The per unit risk in the return on investment portfolio of HBL Bank is lower but it can't be said that the portfolio risk of HBL can still be lowered and portfolio investment of HBL is well diversified since have not calculated the unsystematic risk which is the measure of company specific risk and can be minimized eliminated by well diversification of assets included in the investment portfolio.

Table No. 4.25

Performance Measurement of Investment Portfolio of Four Commercial Banks

CBs	Mean Return of Portfolio	Portfolio Risk	Sharpe measure	Rank
NABIL	8.95	0.75	6.6	I
NIBL	9.88	2.97	1.97	IV
SCB	7.31	0.96	3.44	III
HBL	8.29	1.01	4.24	II

Note: The formulae, procedures to calculate the performance Measurement of Investment Portfolioo of four Commercial Banks are presented in Annex 20.

In the above table no 4.25 the performance of investment portfolio of four commercial Banks are presented by using Sharpe ratio to measure the performance of investment portfolio so this study has also used the Sharpe ratio to measure the performance of investment portfolio of four commercial Banks. Sharpe ratio measure the risk adjusted return on investment portfolio. Higher the value of Sharpe ratio the better is the performance of investment portfolio. Here, NABIL, HIBL, SCB and NIBL are ranked first, second, third and fourth respectively only considering the value of Sharpe ratio. Which means the performance of NABIL'S investment portfolio is best and the performance of the NIBL'S investment portfolio is worst among four commercial Banks investment portfolio by risk adjusted return using Sharpe ration or measure.

4.4 Findings of the Study:

Every investment requires the fund to invest in particular sector, assets or projects so as the Bank collects the fund required to invest in different securities and different assets through the saving, fixed, current accounts, and using other sources. Banks have to pay predetermined interest on these sources of fund. That's why Banks invest these funds in high yielding and secure assets, financial securities, loans and advances, government securities etc. To earn high income which will be excess than that of the interest paid on the source of fund. This research has studies in the above mentioned area and the major findings of the study are presented below:

- This study indicates that the commercial Banks are not able to utilize sufficient amount indifferent investment portfolio.
- Due to the lack of adequate sector to invest and utilize funds, the Banks are hesitating collect deposit.
- Lack of the corporate sector and listed company to invest in share and debenture, availability of the only one stock exchange for the whole country, the Banks has not investing much amount in share and debenture.
- Risk on investment portfolio is lower than that of the individual risk on government securities, loans and advances and the shares and debentures.
- Higher the risk involved in the investment higher is the return on that investment in most of the investment sectors.
- The performance of the investment portfolio using Sharpe ratio which measure the risk adjusted return found that NABIL'S investment portfolio has the highest risk adjusted return and the NIBL'S investment portfolio has the lower risk adjusted return among four commercial Banks.
- All the four commercial Banks have the highest mean return on investment in loans advances than the return on investment in government securities.

- All the four Commercial Banks return is stable, consistent or lower standard deviation on loans and advances over six year period compared to return on government securities and shares and debentures.
- Most of the commercial Banks return on investment in government securities is lower and not stable as it should be by its name.
- All the commercial Banks have lower percentage of investment in shares and debentures in total investment portfolio compared to loans and advances and government securities.
- All the commercial Banks have higher percentage of investment in loans and advances in total investment portfolio compared to government securities and shares and debentures.
- Most of the Banks are able to attract the higher deposits in saving, current, fixed, call and short deposits and others year-by-year means the trend of the deposits is increasing year by year.
- As the deposits of the commercial Banks increasing so as the investment in different sectors such as loans and advances, government securities, shares and debentures and other is also increasing.
- All the Banks are able to earn the positive return on their investment portfolio, which includes the loan & advances, government securities and shares & debentures.

CHAPTER– V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Commercial bank provides different services to the individual and institutional customers Deposits in the form of saving, current and fixed account, call & short deposit and other which are the main sources of fund for commercial banks. Commercial banks pay some interest as per the types and terms of deposits to its customer that is why they interest the collect fund in different investment avenues and in this study analysis of only investment in loans and advances, government securities, shares and debentures is analyzed from different angles. To analyze the change over the years in deposit and investment concept of index is used and to analyze the investment return and risk on individual investment and the overall investment portfolio is analyzed as well as the investment in individual assets and the portfolio is compared to assess the portfolio concept and to evaluate how portfolio investment minimizes the risk in the given level of return on investment portfolio compared to individual investment.

This part is the summary of the whole study. Different analysis related to the deposit and investment is studied in this research. The whole study is divided into five chapters which are introduction, review of literature, research methodology, data presentation & analysis and summary, conclusion & recommendation from first to fifth respectively.

The first chapter of this thesis entitled “Analysis of deposits and investment; the effort has been made to explain about the related aspects of the study. A brief introduction of all four commercial banks under the study and summarized important facts are figures are also presented. The chapter has tried to define the status of Nepalese commercial banks, present

economic environment, problem faced by commercial banks etc. the study has well explained about the topic, objective related matters to make the further study easy and precise. The introduction chapter concentrated in the matter, like sources and used of collected funds and their effort to maximize the benefit from it.

Literature review is the second chapter of the study which further explains about the subject matter of the study and term related to study by studying the past articles, thesis, published books, journals, magazines etc to make easy the rest of the study. Literature review helps to fulfill the study by giving the particular way which also provides facts, data, formats, problems and prospects of the study, theoretical concept etc. in this chapter the study has tried to include the reviewed literature and the related aspects of the study from books, journals, thesis, magazines which is explained in the good flow. Only conclusions, findings, summary is explained in this chapter which is required to complete as per the demand of the study.

Every study needs certain methodology, tools, techniques, measures to simplify, to meet the objective and complete the study which is explained the third chapter known as research methodology. In this chapter population and sample is also mentioned to make the study simple, easy and clear. To evaluate, analyze and to calculate the required measure to explain, compare the data to find out the result and make conclusion based on the analysis different statistical and financial tools, measures and techniques are explained.

The most important part of the study is data presentation and analysis which is the fourth chapter of this study. In this chapter data required to meet the objective as per the availability is presented in the simple and understandable tables or in formats. Then these data are analyzed using the different tools, measures and techniques which is mentioned in the research methodology chapter to find the certain aspects of the study to fulfill the study. In this chapter data are presented and analyzed as per the objective. This chapter tries to find everything which is mentioned in the objective of the study. This chapter also includes the findings of the study. The last chapter includes the summary of the study, conclusion of the study and the recommendation based on the study.

Since the commercial banks are the most important financial service provider of the country in present condition because of the unavailability and development of other financial institutions like in western and developed countries. The saving of the individual of our country is very low, limited products that suits the customers class there is a problem in collecting the large funds and in the field of investment due to the lack of investment avenues, high risk associated on investment are not well government policies & priorities most of the banks investments are not well diversified. However the study has analyzed certain aspects of the commercial banks and has made a lot of effort to find some new and useable findings which helps to the banker, investors and the concerned institutions and individuals.

5.2 CONCLUSION

The environment in which the banks are operating has drastically changed. Nepalese banks are trying to attain international banking standards and practices. The implementation of financial sector reform in this sector reform in this sector has supported these efforts. In global standards, the Nepalese commercial banks are facing the numerous challenges like increase in competition among the banks with the entry of new private sector banks, increasing level of the Non-performing Assets (NPA), need to enhance the employee productivity etc.

When economy is in recession, everyone focuses on the performance of the manufacturing sector and other related corporate sectors. Actually economic slowdown creates a cumulative effect on the banking sector. The Nepal's condition is the same. The liquidity in the financial markets is largely depends on the supply and demand side. During the last couple of years, there was a significant spurt in deposit growth because of various reasons like poor performance in the share market, sluggish economic condition, high level of remittance income, lack of best investment avenue, failure of corporate sectors. With the backdrop Nepalese investor's confidence in the commercial especially towards private and multinational banks has gone up. This has caused a gradual influx of deposits into the

banking system increasing the supply sides. All the commercial banks are suffering from the high level of liquidity. The economic slowdown in the domestic market resulted in the sluggish growth in the manufacturing as well as service sectors. Consequently, the credit off take in the banking sector was not at the desired level resulting in low demand for funds. In this recession scenario, the commercial banks are slashing interest rate of saving and time deposit significantly to prevent the excessive liquidity position.

The other avenue of banking sector, treasury, is not gaining momentum growth. With the slowdown in the overall economic activities along with lack of demand for developing funds from government, resulting in high liquidity in the banking sector. That's why the commercial banks are sinking the investment in the government securities significantly. The lack of sufficient corporate sectors, existence of only one secondary market for whole country, low level of the investment amount and return, fluctuating share market, the banks also hesitate to invest in share and debenture.

In the past couple of years, the slowdown of loan and advance in the corporate sector, high level of liquidity, banks have thought to structural change and shifted their focus from traditional base of lending to retail lending. Though initially it was a move to get rid of the excess liquidity, it turned out to be a lucrative business for banks. Although it started with the initiatives of foreign and private banks, the retail lending came a full circle when the public sector banks like ADBN. Rastriya Banijya Bank, with their large branch network joined the bandwagon. Retail banking has become a buzzword in the banking circles and they have identified it as the thrust area. Banks are seeing it as a sunrise sector as it seems that for the first time in the history of human civilization there is such a large proportion of middle class. Summing up the reasons for the banks to shifts their focus to retail lending are poor credit off take of corporate, commercial and other traditionally wholesale borrowers due to slowdown of the economy, especially industrial sector, growing riskiness of lending to industry on account of recession, relatively less riskiness of borrowers, rising disposable income and changing life style and aspiration of a sizeable section of the population, continuous softening of lending rates which has improved the borrowers' ability to repay, improved liquidity with banks following a reduction in Cash Reserve Ratio (CRR) and low

credit off take in the face of continued accretion of deposits, widespread of risk among large number of borrowers, developments in technology which have reduced transaction costs on a large number of borrower accounts. Given the above reasons it is not surprising to see the retail credit increase in the bank portfolio over a period. As of now, the share of retail lending of banks in their total lending is more than 40%.

5.3 Recommendation

Every where improvement is possible that's why on the basis of the study, the following recommendations are made for the betterment of commercial banks deposits and investment portfolio:-

- Commercial banks should change its structural portfolio towards in the service and agricultural sectors and should have clear investment policy.

- Commercial banks have to identify new areas of investment to increase loan and advances in reducing the higher Liquidity position this would help both for the banks and investment demand sector.

- In current scenario, Nepalese commercial banks are suffering from different risks including liquidity, operational risk, credit risk, cyclical risk, interest rate risk, market risk, financial risk, investment risk, NPA in its investment portfolio. To prevent from these risks bank should invent effective management model like value at risk (VAR), corporate governance, risk management strategies alliance, policy framework etc.

- Nepalese banks are now aware of the importance of the retail banking business and its strength in improving their bottom line. So, banks should enhance its retail banking segment for the enrichment of its loans and advance portfolio. Banks should take initiation to increase its retail banking product including innovative products.

- In the field of investment portfolio management the commercial banks are still using traditional methods compared to develop world that's why they should focus and should use advance technologies, high financial professionals and sophisticated computer software like portfolio management software, application of corporate risk management, application of enterprise resource planning etc.

- Commercial banks should develop the retail products as per the need of Nepalese customers rather than following the rest of the world to collect the funds through different sources.

- The commercial banks investment portfolio is combined with few investment options and securities so that the return and risk on their investment portfolio is not optimal. In order to improve, they should take initiation with NRB, NEPSE, Securities Exchange Board and other government and concerned body to develop the wide range of financial securities, investment options and to investment in international market for the benefit of well diversification as well as international diversification.

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Annex– 1

Interest Income on government securities (Rs in Thousand)

FY	NABIL	NIBL	SCB	HBL	CBs(Total)
2000/01	72269	1317	67294	18381	159261
2001/02	92969	387	162859	75439	331654
2002/03	107843	9792	229454	64960	412049
2003/04	175579	11027	264953	79894	531453
2004/05	174861	10227	303544	121543	610175
2005/06	192761	35868	380441	170332	779402
Total	816282	68618	1408545	530549	2823994
Average	136047	11436.33	234757.5	88424.83	470665.67

Annex– 2

Interest Income on loan advance (RS in thousand)

FY	NABIL	NIBL	SCB	HBL	CBs(Total)
2000/01	660447	215543	566730	608144	2050864
2001/02	722576	197695	527795	685293	2133359

2002/03	847664	229042	558102	850359	2485167
2003/04	801046	258583	540851	853429	2453909
2004/05	776300	421847	563505	903838	2665490
2005/06	761616	663016	558006	970166	2952804
Total	4569649	1985726	3314989	4871229	14741593
Average	761608.16	330954.33	552498.16	811871.5	2456932.16

Annex -3

Calculation of mean return and co variances on the return of NABIL between differences investment.

Here,

Mean returns= $\frac{x}{n}, \frac{y}{n}, \frac{z}{n}$

(1) $\bar{x}$ Mean return on loan and advances= $\frac{x}{n}$ =63.59/6=10.59

(2) $\bar{y}$ Mean return on government securities= $\frac{y}{n}$ =32.71/6=5.41

(3) $\bar{z}$ Mean return on shares and debentures= $\frac{z}{n}$ =165.46/6=27.57

Calculations of co variances

(1) $COV_{xy}=\frac{\sum x(x-\bar{x})\sum y(y-\bar{y})}{n-1}$ =1.553/5=0.31

(2) $COV_{xz}=\frac{\sum x(x-\bar{x})\sum z(z-\bar{z})}{n-1}$ =102.79/5=20.55

(3) $COV_{yz=}\frac{\sum y(y-\bar{y})\sum z(z-\bar{z})}{n-1}$ =190.43/5=38.08

Annex –4

Calculation of Covariance on the return of NABIL Bet^n different investments

FY	Return on Loan & Adv(x)	Return on gov.sec(y)	Return on share & Debn(z)	(x-x)(y y)	(x-x)z-z)	(y-y)(z-z)
2000/01	12.24	6.92	81.74	2.49	89.38	81.79
2001/02	10.24	7.53	52.9	-0.74	-8.86	53.69
2002/03	10.59	3.89	27.17	0	0	0.608
2003/04	11.23	4.26	-5.35	-0.736	-21.06	37.85
2004/05	10.00	4.87	4.13	0.318	13.82	12.65
2005/06	9.29	5.24	4.87	0.221	29.51	3.85
Total	63.59	32.71	165.46	1.553	102.79	190.43
mean return	10.59	5.41	27.57	-	-	-
Cov				0.31	20.55	38.08

Annex -5

Calculation of mean return and co-variances on the return of SCBL between differences investment.

Here,

Mean returns= $\frac{x}{n}, \frac{y}{n}, \frac{z}{n}$

(1) $\bar{x}$ Mean return on loan and advances= $\frac{x}{n}$ =64.36/6=10.72

(2) $\bar{y}$ Mean return on government securities= $\frac{y}{n}$ =22.41/6=3.73

(3) $\bar{z}$ Mean return on shares and debentures= $\frac{z}{n}$ =165.46/6=27.57

Calculations of co variances

(1) $COV_{xy}=\frac{\sum x Z \bar{x} \sum y Z \bar{y}}{n Z 1}$ =-5.96/5=-1.92

(2) $COV_{xz} = \frac{\sum (x - \bar{x})(z - \bar{z})}{n - 1} = 284.17/5 = 56.83$

(3) $COV_{yz} = \frac{\sum (y - \bar{y})(z - \bar{z})}{n - 1} = 6.39/5 = 1.27$

Annex -6

Calculation of Covariance on the return of SCBL betn different investments

FY	Return on Loan & Adv(x)	Return on govt. sec(y)	Return on share & Deb^n(z)	(x-x)(y-y)	(x-x)z-z)	(y-y)(z-z)
2000/01	14.27	2.52	81.74	-4.23	189.59	-65.54
2001/02	11.33	4.88	52.9	0.70	15.54	29.12
2002/03	9.86	4.58	27.17	-0.731	0.34	-0.34
2003/04	10.31	1.14	-5.35	1.06	13.49	85.26
2004/05	9.89	4.51	4.13	-0.64	19.45	-18.28
2005/06	8.70	4.78	4.87	-2.12	45.85	-23.83
Total	64.36	22.41	165.46	-5.96	284.17	6.39
mean return	10.72	3.73	27.57	-	-	-
Cov				-1.192	56.83	1.27

Annex – 7

Calculation of mean return and co variances on the return of NIBL between differences investment.

Here,

Mean returns= $\frac{x}{n}, \frac{y}{n}, \frac{z}{n}$

(1) $\bar{x}$ Mean return on loan and advances= $\frac{x}{n}$ =63.04/6=10.50

(2) $\bar{y}$ Mean return on government securities= $\frac{y}{n}$ =12.06/6=2.01

(3) $\bar{z}$ Mean return on shares and debentures= $\frac{z}{n}$ =165.43/6=27.57

Calculations of co variances

(1) $COV_{xy}=\frac{\sum(x-\bar{x})(y-\bar{y})}{n-1}$ =-5.46/5=-1.09

(2) $COV_{xz}=\frac{\sum(x-\bar{x})(z-\bar{z})}{n-1}$ =433.01/5=86.60

(3) $COV_{yz=}\frac{\sum(y-\bar{y})(z-\bar{z})}{n-1}$ =-67.8/-13.

Annex- 8

Calculation of Covariance on the return of NIBL bet^{n} different investments

FY	Return on Loan & Adv(x)	Return govt. sec(y)	Return on share & Deb^{n} (z)	(x-x)(y-y)	(x-x)z-z)	(y-y)(z-z)
2000/01	16.60	1.46	81.74	-3.35	330.43	-29.79
2001/02	9.96	0	52.9	1.08	-13.67	-50.91
2002/03	9.88	4.91	27.17	-1.79	0.24	-1.16
2003/04	10.27	1.35	-5.35	0.15	7.57	21.72
2004/05	7.30	2.55	4.13	-1.72	75.008	-12.65
2005/06	9.03	1.79	4.87	0.32	33.36	4.99
Total	63.04	12.06	165.46	-5.46	433.01	-67.8
mean return	10.50	2.01	27.57	-	-	-
Cov				-1.09	86.60	-13.56

Annex - 9

Calculation of mean return and co variances on the return of HBL between differences investment.

Here,

Mean returns= $\frac{x}{n}, \frac{y}{n}, \frac{z}{n}$

(1) $\left(\bar{x}\right)$ Mean return on loan and advances= $\frac{x}{n}$ =57.06/6=9.51

(2) $\left(\bar{y}\right)$ Mean return on government securities= $\frac{y}{n}$ =21.16/6=3.52

(3) $\left(\bar{z}\right)$ Mean return on shares and debentures= $\frac{z}{n}$ =165.46/6=27.57

Calculations of co variances

(1) $COV_{xy}=\frac{\sum(x-\bar{x})(y-\bar{y})}{n-1}$ =-3.13/5=0.62

(2) $COV_{xz}=\frac{\sum(x-\bar{x})(z-\bar{z})}{n-1}$ =116.882/5=23.37

(3) $COV_{yz=}\frac{\sum(y-\bar{y})(z-\bar{z})}{n-1}$ =34.51/5=6.90

Annex-10

Calculation of Covariance on the return of HBL bet^{n} different investments

FY	Return on Loan & Adv(x)	Return on govt. sec(y)	Return on share & Deb^{n} (z)	(x-x)(y-y)	(x-x)z-z)	(y-y)(z-z)
2000/01	11.44	4.00	81.74	0.926	104.54	26.00
2001/02	9.48	3.57	52.9	-0.0015	-0.75	1.26
2002/03	9.43	2.92	27.17	0.048	0.032	0.24
2003/04	9.57	2.62	-5.35	-0.054	-1.97	29.62
2004/05	9.03	3.09	4.13	0.2064	11.25	10.07
2005/06	8.11	4.96	4.87	2.01	3.78	-32.68
Total	57.06	21.16	165.46	3.13	116.882	34.51
mean return	9.51	3.52	27.57	-	-	-
Cov	-	-	-	0.62	23.37	6.90

Annex -11

SN	Selected Banks	2000/01		2001/02		2002/03		2003/04		2004/05		2005/06	
		Pt	Dt	Pt	Dt	Pt	Dt	Pt	Dt	Pt	Dt	Pt	Dt
1	Nabil	700	50	1400	55	1500	40	735	30	735	50	1000	65
2	Himalayan	1000	50	1700	50	1500	28	1000	25	836	1.3	840	0
3	Standard Chartered	1162	80	1985	100	2144	100	1550	100	1640	110	1745	110
4	Nepal Investment	822	39	1401	250	1150	0	760	0	795	0	940	15

The average rate of return from share and debenture for commercial Banks is;

$\overline{(R_s)} = \frac{R_s}{n} = \frac{165.46}{6} = 27.57\%$

Again, $\exists_i = = \sqrt{(R_s \; Z \overline{R}_s)^2} = \sqrt{5724.58/5} = 33.83$

Coefficient of Variation = $(Cv_s) = \exists_s / R_s = 33.83/27.57 = 122.70$

From above calculation we get:

- Average return on Shares and debenture $(\overline{R_S}) = 27.57\%$
- Standard deviation on return on shares and debenture $(\exists_i) = 33.83\%$
- Coefficient of variation on return $(CV_s) = 122.70$

Annex -12

Weight used to calculate the yearly Return on Investment Portfolio and Average weight for Portfolio Risk of NABIL

FY	Weight of loan and Advances	Weight of Govt. securities	Weight of shares and debentures	Total Individual's weight
2000/01	79.1766	0.0000	0.2422	100
2001/02	84.6673	15.1350	0.1977	100
2002/03	74.1488	25.6767	0.1746	100
2003/04	63.2692	36.5337	0.1970	100
2004/05	68.2325	31.5720	0.1955	100
2005/06	68.9112	30.9017	0.1869	100
Average weight	73.06	23.03	0.1988	100

Annex-13

Weight used to calculate the yearly Return on Investment Portfolio and Average weight for Portfolio Risk of NIBL

FY	Weight of loan and Advances	Weight of Govt. securities	Weight of shares and debentures	Total of Individual's weight
2000/01	92.67	0.00	0.91	100
2001/02	99.36	0.00	0.64	100

2002/03	88.12	11.40	0.48	100
2003/04	91.35	8.14	0.50	100
2004/05	93.31	6.47	0.22	100
2005/06	77.44	22.40	0.15	100
Average weight	90.375	8.06	0.48	100

Annex-14

Weight used to calculate the yearly Return on Investment Portfolio and Average weight for Portfolio Risk of S.C.B.

FY	Weight of loan and Advances	Weight of Govt. securities	Weight of shares and debentures	Total of Individual's weight
2000/01	59.6935	0.0000	0.1683	100
2001/02	58.1687	41.6915	0.1398	100
2002/03	53.9998	45.8934	0.1068	100
2003/04	48.0649	51.8348	0.1003	100
2004/05	45.8238	54.0862	0.0901	100
2005/06	44.6095	55.3125	0.0779	100
Average weight	51.72	41.4697	0.1138	100

Annex -15

Weight used to calculate the yearly Return on Investment Portfolio and Average weight for Portfolio Risk of HBL

FY	Weight of loan and Advances	Weight of Govt. securities	Weight of shares and debentures	Total of Individual's weight
2000/01	91.8875	7.9481	0.1643	100
2001/02	77.2938	22.60	0.1015	100
2002/03	80.1340	19.77	0.0950	100
2003/04	74.3074	25.4069	0.2856	100
2004/05	71.2636	28.4921	0.2441	100
2005/06	77.5196	22.2581	0.2222	100
Average weight	78.73	21.0792	0.1854	100

Annex -16

Calculation of portfolio returns of Nabil Bank ltd

$R_p=W_AR_A+W_BR_B+W_CR_C$

Year	Portfolio returns
2000/01	.7917×12.24+0.00×6.92+0.002422×81.74=9.89
2001/02	.8466×10.24+.1513×7.53+.001977×52.9=9.91
2002/03	.7414×10.59+.2567×3.89+.001746×27.17=8.89
2003/04	.6326×11.23+.3653×4.26+.00197×-5.35=8.64

2004/05	.6823×10.10+.3157×4.87+.00186×4.13=8.36
2005/06	.68912×9.29+.309017×5.24+.001869×4.87=8.02

Calculation of Standard deviation portfolio of Nabil Bank ltd

For three asset case the formula is :

$$\exists_p = \sqrt{w^2_x \pm^2_x \Gamma w^2_y \pm^2_y \Gamma w^2_z \pm_z^2 \Gamma 2w_x w_y \operatorname{cov}(x,y) \Gamma 2w_x w_z \operatorname{cov}(x,z) \Gamma 2w_y w_z \operatorname{cov}(y,z)}$$

$$\sqrt{.730^2 0.73^2 \Gamma .230^2 1.46^2 \Gamma .0019^2 33.83^2 \Gamma 2 \mid .730 \mid .230 \mid .31 \Gamma 2 \mid .730 \mid .230 \mid 20.55 \Gamma 2 \mid .230 \mid .0019 \mid 38.08} = 0.75$$

Annex- 17

Calculation of portfolio returns of SCBank ltd

$R_p = W_A R_A + W_B R_B + W_C R_C$

Year	Portfolio returns
2000/01	.5969 ⎪14.27 Γ.00 ⎪2.52 Γ.0016 ⎪81.74 X8.66

2001/02	.5816 | 11.33 Γ .4169 | 4.88 Γ .0013 | 52.9 X 8.70
2002/03	.5399 | 9.86 Γ .4589 | 4.58 Γ .001 | 27.17 X 7.46
2003/04	.4806 | 10.31 Γ .5183 | 1.14 Γ .0010 | Z 5.35 X 5.54
2004/05	.4582 | 9.89 Γ .5408 | 4.51 Γ .00090 | 4.13 X 7.02
2005/06	.4460 | 8.70 Γ .5531 | 4.78 Γ .00079 | 4.87 X 6.52

Calculation of standard deviation portfolio of SCBank ltd

For three asset case the formula is :

$$\exists_p = \sqrt{w^2{}_x \pm^2{}_x \Gamma w^2{}_y \pm^2{}_y \Gamma w^2{}_z \pm^2{}_z \Gamma 2w_x w_y \operatorname{cov}(x,y) \Gamma 2w_x w_z \operatorname{cov}(x,z) \Gamma 2w_y w_z \operatorname{cov}(y,z)}$$

$$\sqrt{.5172^2 1.92^2 \Gamma .414^2 1.54^2 \Gamma .0011^2 \mid 33.83^2 \Gamma 2 \mid .5172 \mid .414 \mid Z 1.192 \Gamma 2 \mid .5172 \mid .0011 \mid 56.83 \Gamma 2 \mid .4146 \mid .0011 \mid 1.27} = 0.96$$

Annex -18

Calculation of portfolio returns of HBL

$R_p = W_A R_A + W_B R_B + W_C R_C$

Year	Portfolio returns

2000/01	.918875 ⏐11.14 Γ.0794 ⏐4 Γ.001643 ⏐81.74 X10.96
2001/02	.7729 ⏐9.48 Γ.2260 ⏐3.57 Γ.0010 ⏐52.9 X8.18
2002/03	.8013 ⏐9.43 Γ.1977 ⏐2.92 Γ.0009 ⏐27.17 X8.15
2003/04	.7430 ⏐9.57 Γ.2540 ⏐2.62 Γ.00285 ⏐Z5.35 X7.76
2004/05	.7126 ⏐9.03 Γ.2849 ⏐3.09 Γ.0024 ⏐4.13 X7.32
2005/06	.7751 ⏐8.11 Γ.222 ⏐4.96 Γ.0022 ⏐4.87 X7.40

Calculation of standard deviation portfolio of HBL

For three asset case the formula is :

$$\exists_p = \sqrt{w^2{}_x \pm^2{}_x \Gamma w^2{}_y \pm^2{}_y \Gamma w^2{}_z \pm^2{}_z \Gamma 2 w_x w_y \operatorname{cov}(x,y) \Gamma 2 w_x w_z \operatorname{cov}(x,z) \Gamma 2 w_y w_z \operatorname{cov}(y,z)}$$

$$\sqrt{.787^2 1.08^2 \Gamma .210^2 0.85^2 \Gamma .0018^2 33.83^2 \Gamma 2 \mid .787 \mid .210 \mid .62 \Gamma 2 \mid .787 \mid .0018 \mid 23.37 \Gamma 2 \mid .21 \mid .0018 \mid 6.9} = 1.01$$

Annex - 19

Calculation of portfolio returns of NIBL

$R_p=W_AR_A+W_BR_B+W_CR_C$

Year	Portfolio returns
2000/01	.9267 ⏐16.60 Γ .0 ⏐1.46 Γ .0091 ⏐81.74 X12.12
2001/02	.9936 ⏐9.96 Γ 0 ⏐0 Γ .0064 ⏐52.9 X10.23
2002/03	.8812 ⏐9.88 Γ .1140 ⏐4.91 Γ .0048 ⏐27.17 X9.40
2003/04	.9135 ⏐10.27 Γ .0814 ⏐1.35 Γ .0050 ⏐Z5.35 X9.47
2004/05	.9331 ⏐7.30 Γ .0647 ⏐2.55 Γ .0022 ⏐4.13 X6.99
2005/06	.7744 ⏐9.03 Γ .2240 ⏐1.79 Γ .0015 ⏐4.87 X7.11

Calculation of standard deviation portfolio of NIBL

For three asset case the formula is:

$$\exists_p = \sqrt{w^2{}_x \pm^2{}_x \Gamma w^2{}_y \pm^2{}_y \Gamma w^2{}_z \pm^2{}_z \Gamma 2 w_x w_y \operatorname{cov}(x,y) \Gamma 2 w_x w_z \operatorname{cov}(x,z) \Gamma 2 w_y w_z \operatorname{cov}(y,z)}$$

$$\sqrt{.903^2 3.17^2 \Gamma .08^2 1.37^2 \Gamma .0048^2 33.83^2 \Gamma 2 \mid .903 \mid .080 \mid Z1.09 \Gamma 2 \mid .903 \mid .0048 \mid 86.60 \Gamma 2 \mid .080 \mid .0048 \mid Z13.56,} = 2.97$$

Annex - 20

Sharpe measurement $= \frac{Riskpremium}{totalrisk} = \frac{\bar{r}_i \; Z \, R}{\pm_i}$

Where,
(R)=risk free rate
$\pm_i$ X Portfolio risk
$\bar{r}_i$ =mean return of portfolio
Risk free rate =4% assume

For Nabil Bank

$S = \frac{8.95 \; Z \, 4\%}{0.75} = 6.6\%$

For NIBL Bank ltd

$S = \frac{9.88 \; Z \, 4\%}{2.97} = 1.97\%$

For SCBL

$S = \frac{7.31 \; Z \, 4}{0.96} = 3.44$

For HBL

$S = \frac{8.29 \; Z \, 4}{1.01} = 4.24$