"Implementation of Nepal Rastra Bank's (NRB) Directives In The Commercial Banks of Nepal"

(In Context to the Emerging Competitive Banking Environment)

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CHAPTER ONE

Introduction

1.1. General Background of the Study

Nepal is one of the least developing countries of the world. The industrialization stage of the country is at primitive stage till now. This has added the problem in an employment opportunity in the country. Due to geographical difficulties & lack of infrastructure development of financial sector, the growths of financial sector are badly affected. Domestic crisis create huge problem in development of financial sector in Nepal. The world converted into narrow boundary. The concept of borderless country took rapid motion in those days. Liberalization, globalization as well as privatization are most common and essential part of investment and other activities in financial sector of Nepal. The open market concept creates several opportunities & threats. Rapid development in information-technology sector is also milestone for increasing investment activities. Thus, competitive environment was formed in national market as well as international market. The liberalization policy attracts foreign investor as well as national investor to invest financial sector & commercial sector, which help to raise the life standard of people.

Despite of the above natural resources and attributes, Nepal is still a developing country characterized by high population growth rate, low per capita income and low rate of capital formation. Nepal remained in self-imposed isolation for more than a century until it saw the dawn of democracy in 1951.It is an underdeveloped country with per capita income of US$310, almost half of the population lives below the poverty line. Many reasons are there for the slow pace of development such as landlocked position, misuse of resources, absence of economic infrastructure, political instability, poor economic policy and institutional weaknesses. For this to overcome, the process of capital accumulation among other perquisites should be enhanced.

Capital accumulation plays an important role in accelerating the economic growth of a nation, which in turn is determined among other, by saving and investment propensities. However, the capacity to save in developing countries is quite low with a relative higher marginal propensity of consumption. As a result, such countries are badly entrapped into the various circle of poverty. Therefore, the basic problem for the developing countries is in raising the level of saving and thus investments.

The banking sector is largely responsible for collecting household saving in terms of different types of deposit and regulating them in the society by lending different sectors of economy. The different sector has now reached to the most remote areas of the country and has experienced a good deal in the growth of the economy. By lending their resources in the small-scale industries under intensive banking program has enabled the banks to share in the economic growth of the economy.

Banking concept existed even in the ancient period when goldsmiths and the rich people used to issue the common people against the promised of safekeeping of their valuable items on the presentation of the receipt; the depositors would get bank their gold and valuables of the paying a small amount for safekeeping and saving.

Central bank (NRB) is the Supreme Bank of a country which occupies central position in the monetary banking structure of a country. It enjoys a special group of power like issuing of currencies, foreign exchange, controls credit & representative of government. It is the most important bank in the country. It gives permission to establish other banks & to control their financial activities. It accepts the Deposit from commercial banks & other banks. NRB is the central Bank of Nepal which was established in 14^{th} Baishakh 2013 B.S. under the Nepal Rastra Bank Act 2012 has been amended time & again. It is owned, managed & controlled by the government. Its objective isn't to earn profit. "Reek Bank of Sweden" is the first central Bank in the world which was established in 1656 A.D. Bank of England, Reserve Bank of India, the national bank of Denmark are the central Bank of England, India & Denmark respectively. It is very difficult to give a brief & accurate definition of central Bank. Different authors have given different definition of central Bank according to situation & need. Some of important definitions of central Bank are given below.

"A Bank which constitutes the apex of the monetary & banking structure of its country is called central Bank". – Dr. D. Kode.

"The central Bank stand as the member- bank is exactly the same relation as the member banks themselves to the public". – Crowther.

"Central Bank may be defined as an institution which is charged with the responsibility of managing, the expansion & contraction of the volume of money in the interest of the public welfare". Prof. Kent.

From the study of above definitions, central Bank is the bank which has the power & right of controlling all the banks, managing & controlling monetary management of the country, preparing various monetary & economic policies rapid economic development of the country.

1.2 Origin and Emergence of Modern Bank Origin of Bank

Those financial institutions that offer the widest range of financial services – especially credit, savings & payments services and perform the widest range of financial functions of any business firm in the economy is known as Bank. There are different views about the origin of Bank. The word bank is derived from Italian word " Banca", Latin word "Bancus" & French word " Banque" all of which means a bench. Similarly others view that Bank is derived from the German word "Bach" which means a Joint fund. Regarding the origin of Bank in the world, the first bank named as The Bank of Venice, was established in Venice of Italy in 1157 A.D. Following this, "The Bank of Barcelona, Spain, established in 1401 A.D. was the second bank of the world. In Addition, the first central Bank, which was established in 1844 A.D., was "The Bank of England". In the banking History of Nepal, Nepal Bank Limited is the first Bank which was established in 1994 B.S. Due to wider & changing roles & functions of the banks as per time & situations, it is difficult to give the concrete definition of Bank. Some of the definitions given by popular, renowned scholars are as follows.

"Bank is the one who, in the ordinary course of his business, receives money which he pays by honouring cheque of persons from whom or whose accounts receives". – Dr. HL Hart.

“A Bank is an organization whose principle operation are concerned with accumulation of the temporarily idle money of the general public for the purpose of advancing to others for expenditures”. – Kent.

“A Bank collects money from those who have it to spare or who are saving it out of their incomes, and it lends this money to those who require it”.-

C.R. Crowther

“Bank is an organization or place that provides a financial service.”

-Oxford Dictionary.

“Ordinary banking business consists of changing cash for bank deposits & bank deposits for cash, transferring bank deposits from one person or corporation to another, giving bank deposits in exchange for bills of exchange, government bonds, the secured or unsecured promises of Businessmen to repay etc”. Sayers.

“Bank is an organization established for the purpose of exchange money deposit lending money & participation in transactions”.

– Commercial Bank Act 2031 (Nepal).

In summary, a bank can be defined as any business organization that offers acceptance of deposits, which is subject to withdrawal on demand (either through cheque or electronic transfer or both) & grants loans & credits to private individuals & business firms on commercial basis.

Crowther observed that the Modern Banking has three ancestors who are the merchant, the gold smith & the moneylender. Following is the brief description of the ancestors of Modern Banking.

<u>Merchants</u>: - The Merchants or Traders are entitled as the ancestors of Bank. Trading activities require remittance of money from one place to another. This is one of the important functions of a bank. There is a possibility of theft of metallic money during transportation. So the traders, with high & widespread reputation, begun to issue documents, which were taken as title of money. This gave rise to the institution of "Hundi". Hundi is the letter of transfer of money.

<u>Goldsmith</u>: - Goldsmiths had very sound credit standing in the society. They used to have safe to keep valuables. Fear of theft & robbery led people keep their valuables (gold, silver & metallic coins) in the custody of the goldsmiths. Goldsmiths used to charge commission for safe keeping & used to return the valuables on demand. The depositors had to visit goldsmiths for part & full withdrawal of gold, silver & coins. Gold & silver used to remain with the goldsmiths for relatively a longtime but coins had to be withdrawn from time to time.

<u>Money Lender</u>: - The next stage in the development of banking arose, when the goldsmith became a money lender. This development was based on the goldsmith's discovery that it wasn't necessary to hold hundred percent of the coins deposited with them. The goldsmiths soon realized that, on average, daily withdrawals were equal to daily deposits & only a contingency reserve was required for the period when withdrawals exceeded deposits.

All functions & activities performed by merchants, goldsmiths & moneylenders in the ancient time are being performed by the various types of banks in modern ways at the present time.

Emergence of Modern Banks

The first modern bank of the world is the bank of Venice, set up in 1157 in Venice, Italy subsequently, bank of Barcelona in 1401 & Bank of Genoa in 1407 were established. The Lombard's migrated to England & other parts of Europe from Italy are regarded for their role in the development & expansion of the Modern Banking, Bank of Amsterdam set up in 1609 was very popular then the Banks of Hindustan established in 1770 is regarded as the first bank of India. Though Bank of England was set in 1694, the growth of banks accelerated only after the introduction of banking act in 1833 in united Kingdom as it allows to open joint stock company banks. These modern banks gradually replaced goldsmiths & money lenders.

The 20th century observed the development of various banking institutions highly specialized & sophisticated particularly in advanced countries like U.S.A., U.K. & others. Today various international organizations like W.B., I.M.F., A.D.B. etc have been developed which are influencing the whole business of the modern world.

1.3 Emergence of Bank in Nepal

The history of banking sector is rather more slow evolution. Even now, the banking system is still in the evolution phase so far as banking is concerned with debt, we may go back in the Nepalese history, where a merchant namely "Sankhdhar" is recorded. He was the person who alone paid all debts of the people existing in the country at that time. Since then he introduced a new era called "Nepal Sambat". This record proves the existence of money lending function at that time. During the course of development of borrowing, there are some steps in the direction of start of banking development in Nepal.

Phase I :- The establishment of “Tejarath Adda” during the Tenure of Prime Minister Ranoddip Singh in 1933 B.S. (1876 A.D.) was the first step towards the institutional development of banking in Nepal. It was fully subscribed by the government in KTM. Tejarath provided credit loans to the general public at 5% interest rate on securities i.e. gold, silver & other ornaments. Its objective was to provide credit or loans to the general public but it failed to accept deposits from them.

Phase II :- During the time of Chandra Shamsher (1901-1929), credit facilities of ‘Tejarath’ were extended by opening its branches. Later, ‘Tejarath’ was replaced by the first commercial bank, Nepal Bank Ltd. established on 30th Kartik 1994 B.S. is the first commercial bank in Nepal with authorized capital of 10 million rupees. Then Nepal Rastra Bank was established on B.S. 2013/01/14 as the Central Bank under the Nepal Rastra Bank Act 2012 B.S. Its function was to supervise commercial banks & to guide the basic monetary policy of the nation. In 2013 B.S., Industrial development center was established & later it was converted into Nepal Industrial Development Corporation (NIDC) in 2016 B.S. As the monetary transaction got more & more complicated on 2022.10.10, Rastriya Banijya Bank was established as a fully government owned commercial Bank. Agricultural development bank was then established on 2024.10.07 to help the agriculture side of the country.

Phase III :- To operate all commercial banks uniformly under single act, "commercial bank Act 2031 " was enacted. According to the Nepal commercial bank Act of 2031 B.S. (1974 A.D.) "Commercial banks are banks that deal with money exchange, accepting deposits, advancing loans and other commercial transactions except some special functions done by specified cooperative, agriculture and industrial banks". In 2041 B.S., Nepal Government established five rural development banks under the control and supervision of Nepal Rastra Bank. The establishment of these banks helped in spreading the banking services to both urban and rural areas but banking service to the customer satisfaction was still far.

After the reestablishment of democracy, the Government has taken liberal policy in banking sector so different private banks are getting permission to establish with the joint venture of other countries. Nabil is the first joint venture bank as Nepal Arab bank. Similarly, two foreign commercial banks Nepal Indosuez Bank ltd and Nepal Grindlays Bank ltd. entered in Nepal in the form of joint venture and the trend is continuing till today as many Nepalese owned banks are also running. Today, there are altogether 25 commercial banks in Nepal

1.4 Introduction of Commercial Bank

Meaning & Definition

Commercial banks are those financial institutions which are established for promoting trade, commerce, industries in the country. Commercial bank performs the commercial activities like, accepting deposit from the public & institutions & grants loan to the parties against the security. It performs various agency functions by taking commission from its client. Thus commercial bank is a profit seeking financial institution. It provides loan to depositors & charges interest on loans. It also helps its clients by issuing drafts, L.C., T.T., credit cards, Traveller's cheque, safe custody of deposit & locker facilities. In the Banking History of Nepal, Nepal Bank Limited is the first commercial bank which was established in 30th Kartik 1994 B.S. with an authorized capital of 10 Million & a subscribed capital of 2.5 Million. A second commercial bank, Ratriya Banijya Bank, was established in 2022 B.S. under Rastriya Banijya Bank Act, 2021. Again Agriculture Development Bank, which was established in 2024, has also been allowed to serve commercial functions from 2041 B.S. Other commercial banks established in Nepal are Nepal Arab Bank Ltd, Nepal Indosuez Bank Ltd. & Grindleys Bank Ltd. Again after the restoration of democracy in the country, the government adopted liberal economic policy & as a result, many other commercial banks came into existence. Himalayan Bank, Bank of K.T.M., Nepal Srilankan Merchant Bank etc. are other commercial banks established in the country after the restoration of democracy. According to commercial Bank Act 2031 B.S.

"Commercial Banks are those banks which are established under this act to perform commercial functions except those which are established for specific purpose like development Banks, Co-operative etc."

"Banks are institution whose debts are referred to as 'Bank deposit's & they are commonly accepted in final settlement of " other people debts". – RS. Mayers

1.5 Brief introduction of selected commercial Banks

There are 25 commercial banks in Nepal, out of which only 5 commercial banks Nepal Investment Bank Ltd. (NIBL), Nabil Bank Ltd. (NABIL), Nepal SBI Bank (NSBI), Everest Bank Ltd. (EBL) and Himalayan Bank Ltd. (HBL) are selected for study. The study focuses on "Implementation of Nepal Rastra Bank's (NRB) Directives in the commercial banks of Nepal." including past 5 years data from fiscal year 2008/09 to 2012/13.

1.5.1. Nepal Investment Bank Ltd (NIBL)

Nepal Investment Bank was established in 1986 at the name of Nepal Indosuez Bank Ltd. as a 2nd joint venture Bank under the company act 1964. This is managed by Banque Indosuez, Paris is accordance with joint venture & technical services agreement signed between it's & Nepalese promoters. Banque Indosuez hold 50% of total capital & Nepalese promoters hold other half portion which include government organization holding 30% & general public holding 20% of the total capital. The main objective of the Bank is to provide loan & advances to the agriculture, commercial & industrial to provide modern banking services to the people the paid up capital of bank for the year 1989/90 was Rs. 30 millions. Later the name of this bank is changed as Nepal Investment Bank Ltd.

Share capital of NIBL :

Authorized capital	(40,000,000 share@ Rs. 100) 4000,000,000
Issued capital	(3,768,007,7 share @ Rs. 100) 3,768,007,700
Paid up capital	(3,768,007,7 share @ Rs. 100) 3,768,007,700

1.5.2. Nabil Bank Ltd. (NABIL)

Nepal Arab Bank Ltd. is the first JVB's which is established in 1984 under the company Act 1964. Dubai bank Ltd. was the initial foreign joint venture partner with 50% equity investment. The shares owned by Dubai bank Ltd. was transferred to Emirates Bank international Ltd. Dubai by virtue of it's annexation with the later. Later an Emirate Bank international. Dubai sold it's entire 50% equity holding to National bank Ltd. of Bangladesh. National Bank Ltd. Bangladesh is managed the Bank is accordance with the technical service agreement signed between it's the bank a june 1995. Later on the name of this Bank is Changed as NABIL Bank Ltd.

Share capital of Nabil Bank Ltd :

Authorized capital	(25,000,000 share@ Rs. 100)	2,500,000,000
Issued capital	(20,297,694 share @ Rs. 100)	2,029,769,400
Paid up capital	(24,368,414 share @ Rs. 100)	2,436,841,400

The bank is providing services such as deposit, lending, document credit, guarantee, credit card, tele-banking, deposit locker, fund transfer & ATM. It has 15 branches & 2 counters throughout the country.

1.5.3. Nepal SBI Bank (NSBI)

Nepal SBI Bank Ltd. is the joint venture Bank which is established in 1993 under the company act 1964. This is the joint venture of state bank of India & Nepalese promoters. The bank is managed by the state bank of India under the joint venture & technical services agreement between its Nepalese promoters via Employee provident fund & Agriculture Development Bank, Nepal. The State Bank of India is holding its 50% equity. The main objective of the bank is to carryout modern banking business under the commercial Bank Act 1974. The bank provides loans to agriculture, commercial & industrial sector.

Share Capital of Nepal SBI Bank Limited:

Authorized capital	(30,000,000 share @ Rs. 100)	Rs. 3,000,000,000
Issued capital	(23,647,149 share @ Rs. 100)	Rs. 2,364,714,900
Paid up capital	(23,557,385.04 share @ Rs.100)	Rs.23,557,385,040

1.5.4. Everest Bank Ltd. (EBL)

Everest Bank Ltd. was established in 1992 as a joint venture bank with Punjab National Bank Ltd. (India) with the objective of extending professionalized banking services to various section of society in the kingdom of Nepal & there by contribute in the economic development of the country. It has 15 branches across the country. Its earning per share is very high.

Share Capital of Everest Bank Limited:

Authorized capital (18,400,000 share @ 100)	Rs. 1,840,000,000
Issued capital (16,011,264 share @ 100)	Rs. 1,601,126,410
Paid up capital (16,011,264 share @ 100)	Rs. 1,601,126,410

1.5.5. Himalayan Bank Ltd. (HBL)

Himalayan Bank Limited (HBL) is the largest private sector commercial bank of Nepal in terms of deposit base, loan portfolio and capital base. In July 2003 and again in July 2005 the Bankers Almanac ranked HBL as country's no. 1 bank. For the year 2005, it was ranked at 2368 in the worldwide ratings, which are fifty positions ahead of its nearest competitor in the country.

Himalayan Bank Limited was incorporated in 1992 by a few distinguished business personalities of Nepal in partnership with Employees Provident Fund and Habib Bank Limited, one of the largest commercial bank of Pakistan. Banking operation commenced from January 1993. It is the first commercial bank of Nepal whose maximum shares are held by the Nepalese private sector. Besides commercial banking services, the Bank also offers industrial and merchant banking services.

Himalayan Bank has always been committed to providing a quality service to its valued customers, with a personal touch. All customers are treated with utmost courtesy as valued clients. The Bank, wherever possible, offers tailor made facilities to its clients, based on the unique needs and requirements of different clients. To further extend the reliable and efficient services to its valued customers, Himalayan Bank has adopted the latest banking technology. This has not only helped the bank to improve its service level but has also prepared the Bank for future adaptation to new technology. The Bank already offers unique services such as SMS Banking and Internet Banking to customers and will be introducing more services like these in the near future.

Himalayan Bank has access to the worldwide correspondent network of Habib Bank for fund transfer, letter of credit or any banking services.

Share Capital of Himalayan Bank Limited:

Authorized Capital	Rs 3,000,000,000
Issued Capital	Rs. 2,400,000,000
Paid-Up Capital	Rs. 2,400,000,000

1.6. Focus of the Study

The main focus of the study is collected money from people & provide loan to them in appropriate interest rate to uplift the living standard of people. Most of commercial as well as financial banking services are limited only in city. It is very necessary to establish banking and commercial service in nook & corner of the country for the economic development of the country.The study is focused on the capital adequacy norm, loan classification & loan loss provision and black listing of willful defaulters as directed by the central bank of Nepal, Nepal Rastra Bank. Similarly, it tries to study of the provisions on the liquidity standard & provision to be kept as general reserves by the CBs.

1.7 Statement of the Problem

In Nepal Rastra Bank more than half century long history various activities were under taken Nepal Rastra Bank Act 1955 and BAFIA 2063 gives the full authority to Nepal Rastra Bank to look after Banks and financial institutions. Banks and financial institutions should be established and operate under Nepal Rastra Bank's rules and regulations before the establishment of Nepal Rastra Bank as a Central Bank of the country, the most of the people were not conscious about the banking system so, the main problem is the lack of banking knowledge itself but after the country adopted the economic liberalization policy, large number of joint venture commercial Banks, Private commercial Banks and other financial institutions started to take permission for establishment from Nepal Rastra Bank.

The questions are arise whether the directives of NRB properly followed by commercial banks and financial institutions? So, for this purpose, NRB has been issuing various directives for commercial banks.

In the emerging commercial banks working environment, NRB have to update its functions of issuing various directives regarding establishment, capital adequacy, liquidity, credit classification etc. similarly the directives regarding the provisions of reserves to be fulfill by the commercial banks are followed or not?

As the government have adapted to all out to above the international banking institution to establish their branches within Nepal from 2010 as per the agreement done to be the member of WTO. The load of NRB functions in the coming days will be more challenging. NRB should do the functions of check and balance for looking after the commercial banks, capital adequacy under BASEL II which is really a challenging job. similarly the increase in the reserves provisions for commercial banks as directed by NRB should also be follow up time to time. Whether the NRB would be capable to handle the changing environment in the coming days?

Similarly other impact may be absorbed because of the changes made in directives. The directives if not properly adjust, have potential to wreck the financial system of the nations, as they are the only tools of the NRB to supervise and monitor the bank and the financial institutions. The directives themselves are not that important unless properly implemented.

1.8. Objectives of the Study

The main objectives of the study are as follows:

i. To find out the importance of central bank in the modern dynamic economy.
ii. To find out the role of NRB on monitoring & inspection of commercial bank.
iii. To find out the effectiveness of directives of NRB practically on the commercial banks of Nepal.
iv. To make necessary suggestions & recommendations.

1.9 Limitations of the Study

This report is for the partial fulfillment of MBS. The efforts have made the present and analyze the fact clearly, truly and within the boundary. But reliability of tools, lack of research experience, and lack of data are the primary limitation of this report. Other limitations are:

- This study is focused on only few directives among several directives issued by NRB for commercial banks time-to-time. Namely provision of minimum Capital Fund to be maintained by commercial bank, provision of loan classification and loan loss provisioning on credit and introduction of stringent black listing procedure for loan defaulter.

- This study is based on secondary data received from NRB and other commercial bank.

- Among twenty five commercial banks this is based on only five commercial banks.

- Past five year data from fiscal year 2003/04 to fiscal year 2007/08 are taken for study and analyze.

1.10. Organization of the Study

❖ **Chapter One :- Introduction**

First chapter will describe about the research itself by defining various aspects of NRB directives concerning to commercial banks of Nepal. This will help to develop the conceptual frame work about the research problem & subject matter.

❖ **Chapter Two :- Review of Literature**

Review of Literature will advance the knowledge about the subject matter as well as general method of doing research in directives on some requirements, which are also defined by the finance & banking expertise.

❖ **Chapter Three :- Research Methodology**

Research Methodology is policy & frame work not within, which we will find the best alternative for making the research effective to analyze on the topic.

❖ **Chapter Four :- Analysis of Data**

Data Presentation & Analysis will evaluate & examine the impact & situation of directives on different section of commercial banks in Nepal.

❖ **Chapter Five :- Summary, Conclusion & Recommendations**

Moreover, the last chapter will be the summary & conclusion of this research & remedial measures to be applied for further advancement & effectives of the directives of the central Bank, NRB to the commercial Banks of Nepal.

CHAPTER TWO

Review of Literature

2.1. Meaning and Concept of Central Bank:

Central bank is the supreme bank of a country which occupies central position in the monetary and banking structure of a country. It enjoys a special group of power like issuing of currencies, foreign exchange, controls credit and representative of government. It is the most important bank in the country. It gives permission to establish other banks and to control their financial activities. Central bank helps all other banks by providing financial support and other various services. It acts as the lender of the last resort to other banks as the bank of banks. It manages fund for the government, receipts and makes payments on behalf of the government.

Nepal Rastra Bank is the central bank of Nepal which was established in 14th Baisakh 2013 B.S. Nepal Rastra Bank Act 2012 has been amended time and again. It is owned, managed and controlled by the government. Its objective isn't to earn profit.

"Reek Bank of Sweden" is the first central bank in the world which was established in 1656 A.D. Bank of England, Reserve bank of India, the National Bank of Denmark are the central banks of England, India and Denmark respectively. One of the oldest banks that performed some of the duties of a central bank was the bank of Sweden that was opened in 1668 with help from Dutch businessmen. This was followed in 1694 by the Bank of England, created by a businessman in the City of London at the request of the British government to help pay for a

War. The U.S. Federal Reserve was created by the U.S. congress through the passing of the Glass–Owen Bill signed by President Woodrow Wilson on December 23, 1913

Nepal Rastra bank was established as the nation's central bank under the Nepal Rastra Bank Act, 1955 on April 26, 1956 as a non-profit organization fully subscribed by the government. At that time the Nepalese economy was traditional and characterized by dual currency system, low level of infrastructure development and virtual absence of the financial system.

The establishment of this bank had coincided with Nepal's "first five year plan" fined at the country's socio-economic development as the country's central bank. This the bank has the sole right to issue currency, notes and coins and is responsible to manage the country's foreign exchange reserves. The bank's other important functions include developing banking and financial system in the country, rendering advice to the government on financial and economic matters, mobilizing capital and managing public debt. The bank also acts as banker to the government besides serving as lender of the last resort. As in various other developing countries, the bank under takes a number of development functions that are intended to support the country's efforts towards accelerated development of the overall economy.

In the initial years of its operation, the bank had to focus its attention on abolishing the dual currency system regulating the circulation of Nepalese currency through out the nation and maintaining stability of exchange rates of the Nepalese currency. For this purpose, the bank opened a numbers of offices and currency exchange counters in various parts of the economically active areas in the Terai Regions such as Biratnagar, Birgunj, Siddhartha Nagar and Nepalgunj. Such offices were also expanded in the hilly regions like Illam, Bhojpur, Dhankuta, Pokhara, Palpa, Baitadi and Doti. The bank adopted the policy of gradually increasing the numbers of offices in the country to provide banking services to government of Nepal and to limited extent to the public. The recruitment of staff corresponded to the expanding number of offices and widening of the activities of the bank's central office. ***(Thapa and Neupane 2065: 38-39)***

Some important definitions of central bank are as follows –
“A bank which constitute the apex of the monetary and banking structure of its country is called central bank”--Dr. D. Kode

“A central bank stand as the member–bank is exactly the same relation as the member bank them selves to the public” --Crowther
“The central bank is to act as the lender of the last resort”--Hawtrey

“The primary definition of central banking is a banking system in which a single bank has either a complete or a residuary monopoly in the note issue.”--Vera Smith

“The maintenance of stability of the monetary standard which involves the control of the monetary circulation”--Kisch and Elkin

According to M.H. De kock, “A central bank is a bank which constitutes the apex of the monetary and banking structure of its country and which performs as best as it can in the national economic interest”, which are as follows:

1. The regulation of currency in accordance with the requirements of business and the general public for which purpose it is granted either the sole right of note issue or at least a particular monopoly there of.
2. The performance of general banking and agency services for the country.
3. The custody of cash reserves of the commercial banks.
4. The custody and management of the nation’s reserves of international currency.
5. The granting accommodation in the form of discounts or collateral advances to commercial banks, bill brokers and dealers or other financial institution and the general acceptance of the responsibility of lender of the last resort.
6. The settlement of clearance balances between the banks; and
7. The control of the credit in accordance with the needs of business with a view to carrying out the broad monetary policy adopted by the country.

De Kock further elaborated the definition of central bank “A further requisite of real central bank is that it should not to any great extent, perform such banking transactions accepting deposits from the general public and accommodating regular commercial customers with discounts and advances. It is almost generally accepted that a central should conduct direct dealings with the public only in such forms and to such extent as in the circumstances of the particulars country, it considers absolutely necessary for the purposes of carrying out its monetary and banking policy” ***(Vaidya, 2013)***

There are many functions related to central bank. “The most of important and the earliest of the functions to be discharged by central bank is that of acting as a bank of issue. In addition, it is a bankers bank and a lenders of the last resort, an agent advisor and banker to the government, a custodian of the nations metallic reserves and controller of currency. In this connection, the observation made by the governor of the bank of England before the Royal commission on Indian currency (1926) is highly illuminating. According to him a central bank should have the sole right of note issue, it should be the channel and the sole channel for the output and intake of legal tender currency. It should be the holder of all the government balances, the holder of all the reserves of the others banks and branches of banks in the country. It should be the agent so to speak, through which the financial operation, it home and abroad, of the government would be performed. It should further be to duty of a central bank to effect So far as it could, suitable contraction and suitable expansion, in addition to aiming generally at stability and to maintain that stability within as well as without when necessary it would be the ultimate service from which emergency credit might be obtained in the form of discount of approved bills or advances on approved bills or advances on approved short securities or government paper.” ***(Shekhar and Shekhar, 1999: 522)***

“A central bank is the most important financial institutions of the country because it manages the expansion and contraction of money supply and economic development in the country, central bank is the important factor for the financial mobilization of the country central bank is the government’s bank world over like it is the head of monetary and banking sector. It formulates monetary policy. The central bank plays a significant role in developing country to develop the banking system for the mobilization of resources and using them in the priority areas to match development plan."***(Pant,1971: 38)***

"In appearance the main distinction between a central bank and a commercial bank is that now a days, the central bank does not involve much in banking, but the more fundamental different is one of aim. The commercial bank thinks primarily of making a profit, where as the central bank thinks the effect of its operations on the working of the economic system. A commercial bank has its share holders and is expected to do the best it can for them. But the government by contrast, usually owns the central bank. The most commercial bank may be few or many and they are to the found doing business with the general public all over the country. There is only one central bank market operation are mainly impersonal and confined to what is necessary for influencing the country's financial business in the directed by economic policy." ***(Sayers, 1967: 17-18)***

2.1.1 Functions of a Central Bank[1]

A central bank is established for public service and economic development of a country rather than profit making and it acts as an economic advisor to the government. Therefore, the functions of the central bank is different from other. Some development functions are given below:

1. **Issue of Note**

The central bank has the sole monopoly of the note issue. The currency notes printed and issued by the central bank becomes

[1] Singh Hirday Bir, (2007- Third Edition) ***Banking and Insurance with Guidelines for Project Work & Report Writing***, Asia Publications (P) Ltd., Bagbazar, Kathmandu.pp.67-73

unlimited legal tender throughout the country. As the banker of the government, this bank issues paper money and coins according to the government policy. This is widely accepted as the means of payment throughout the country. Generally, government prohibits to use foreign currencies as the means of payment in local transactions. This policy is essential to have control over the economy in the country. This policy promotes the use of national currencies issued by the central bank.

The main advantages of the monopoly right of note issue to the central bank are given below:

a. It brings uniformity in the monetary system of note issue and note circulation.
b. As the supreme monetary institution the central bank can exercise better control over the money supply in the market.
c. It increases the public confidence in the monetary system of the country.
d. Being the supreme bank of the country, the central bank has the full information about the monetary requirement of the economy. Therefore, it can change the quantity of currency flow accordingly. Hence, monetary management becomes easier in the country.
e. It enables the central bank to exercise control over the creation of credit by the commercial banks.
f. The central bank also earns profit from the issue of paper currency, which is taken as governmental revenue.
g. Granting the monopoly right of note issue to the central bank avoids the political interferences in the matter of note issue.

In context of Nepal the sole right of issuing Nepalese currency is in the monopoly of ***Nepal Rastra Bank***, the central bank of Nepal. This right is authorized to the bank by the Nepal Rastra Bank Act 2058. The bank has to maintain the security deposit of gold, silver, foreign currencies, foreign securities etc, to issue paper money. Such security should be at least 50% of the value of note issue. In special case the bank can reduce the security deposit for paper money down to 25% of the value of paper money under government approval.

2. <u>Banker, Agent and Advisor to the Government</u>

The central bank functions as a banker agent and financial adviser to the government. As a banker of government, the central bank performs the same functions for the government as a commercial bank performs for its customers. It maintains the accounts for the central as well as divisional offices. It receives deposits from all government offices after opening separate accounts for each office. It also collects cheque and drafts deposited in the government account. In return, it pays all types of cheques drawn by governmental office to the concerned parties. In addition, it makes short-term advances to the government. It provides foreign exchange resources to the government for repaying external debt and purchasing foreign goods or marking other payments.

As an agent of the government, the central bank collects taxes and other payment on behalf of the government. It raises loans from the public and thus manages public debt. It also represents the government in the international financial institutions and conferences such as World Bank, Asian Bank, International Monetary Fund, etc.

As a financial advisor to the government, the central bank gives advice to the government on economics, monetary and fiscal matters. Specially, financial matters such as budget, deficit and surplus finance, devaluation of money, trade policy and foreign exchange policy are the core areas the government gets advice from central bank.

3. <u>Bankers' Bank</u>

The central bank acts as the banker bank in three capacities (a) As the custodian of the cash reserves of the commercial banks, (b) As the lender of the last resort and (c) As clearing agent. In this way, the central bank acts as a friend, philosopher and guide to the commercial banks.

As a custodian of the cash reserves of commercial banks, the central bank maintains the cash reserves of the commercial banks. Every commercial bank has to keep a certain percentage of the deposit collected as CRR in the central bank. These cash reserves can be utilized by the commercial banks in the time of emergency. The centralization of case reserves in the central bank has the following advantages:

a) Centralized cash reserve provides the basis of a large and more elastic credit structure than the amounts scattered among the individual banks.
b) Centralized reserve can be used in the most effective manner during the periods of seasonal strains and financial emergency.
c) In fact, the central bank functions as the lender of last resort, central reserves enable the central bank to provide financial accommodation to the commercial banks in difficulties.

d) Centralized cash reserves inspire confidence of the public in the banking system of the country.
e) The system of centralized cash reserve enables the central bank to control the credit creation by commercial banks. Central bank can influence credit creation by increasing and decreasing the cash reserve ratio (CRR).
f) The cash reserves in the central bank can used to promote national welfare.

4. <u>Lender of Last Resort</u>

As the supreme bank of the country and the bankers' bank, the central bank acts as the lender of last resort. In case, the commercial banks are unable to meet their financial requirements from other sources, they can approach the central bank for financial accommodation. Generally, central bank provides financial accommodation to commercial banks by rediscounting their securities and bill of exchange.

The main advantages of the central bank's functioning as the lender of the last resort are:

a. It increases the elasticity of overall economy.
b. It increases the elasticity of the whole credit structure of the economy.
c. It provides financial help to the commercial banks in times of emergency.
d. It enables the commercial banks to carry on their activities even with their limited cash resources.
e. It enables the central bank to exercise its control over banking system of the country.

In Nepal, Nepal Rastra Bank, as the central bank of the country, acts as the lender of the last resort for the commercial bank: Commercial banks, in general, maintain normal cash balance in vault. Such cash balance can meet only the regular cash demand predicted by the bank authority. Future is uncertain if there is unexpected increase in cash demand by any reason bank may be unable to meet cheque payments. In this condition the help of ***Nepal Rastra Bank*** is essential as the lender of the loan resort.

5. Clearing Agent

As the custodian of the cash reserves of the commercial banks, the central bank acts as the clearing-house for these banks. Since all banks have their accounts with the central bank, it can easily settle the claims of various banks against each other was least use of cash. The clearing-house function of the central bank has the following advantages:

a. It economizes the use of cash by banks while setting the claims and counter claims.
b. It reduces the withdrawals of cash and these enable the commercial banks to create credit on a large scale.
c. It keeps the central bank fully informed about liquidity position of the commercial banks.

Nepal Rastra Bank is the clearing agent of commercial banks of Nepal. It makes transfer of money economy safety convenience and prompts.

6. Custodian of Foreign Exchange reserves

The central banks also functions as the custodian of country's foreign exchange reserves. This function helps the central bank to overcome the difficulties regarding balance of payment. The exchange rate can be stabilized with the help of this function. In order to maintain stability in the foreign exchange rate, the central bank buys foreign currencies in the market as the value of foreign currencies falls. This action decreases the supply of the foreign currencies in the market and thus the falling value of foreign currencies is controlled.

In case, the value of foreign currencies is increased suddenly such condition is not favorable for smooth economic development of a country. In this condition central bank sells foreign currencies in the market when the supply of foreign currencies is increased the value of such currencies will automatically be stabilized in the money market.

In Nepal, ***Nepal Rastra Bank*** functions as the custodian of foreign exchange reserve. All types of public transactions of foreign currencies are prohibited by act in Nepal. So, foreign currencies cannot be used as the means of payment in local transactions. People having foreign currencies should exchange with Nepalese currencies to pay for local transaction.

Such foreign currencies are provided to those only, who have to make payment to foreign countries for import business, who are going abroad for tour, study, medical care or any other purposes. Such provision makes the Nepal Rastra Bank more successful in controlling the rate of foreign exchange.

7. Controller of Credit

Controlling Credit is the most important function of the central bank. In the words of **De. Kock,** "It is the function, which embraces the most important question of central banking policy and the one through which peculiarly all the functions are united and made to serve a common purpose”

Uncontrolled credit causes economic fluctuations in the economy. It may even invite economic disaster in the country. By controlling the credit effectively, the central bank establishes stability not only in the international price level but also in the foreign exchange rates. Such stability is necessary for economic growth and smooth functioning of the economic.

In Nepal, ***Nepal Rastra Bank*** acts as the controller of credit in the economy. To have a proper grip in the credit system of the economy, it uses the following measures of credit control.

a. Change the CRR rate for commercial banks
b. Change the interest rate of various bank accounts
c. Change the interest rate on loan provided by banks.
d. Change the facilities provided by central bank to other banks
e. Change the ratios and priority sectors
f. Advertisement for public awareness and publications
g. Directions follow up and direct action to commercial banks.

8. <u>Developmental Role</u>

In the underdeveloped countries, central bank also performs developmental and promotional function for economic development. Besides performing the traditional functions, central bank, on one hand, helps to develop money market and capital market. On other hand, it undertakes suitable measures to maintain price stability in exchange rate. This will ultimately promote the economic development of the country.

In developing country like Nepal, ***Nepal Rastra Bank*** plays an important role for overall development of the country. It has determined the priority sector to the cottage industries, the industries based on local raw materials, agricultural based industries etc. It helps to establish commercial bank and other financial institutions in those areas, where such banks are not established. It also helps the government to formulate appropriate financial policy for speedy economic development.

9. Control and Supervise Financial institutions

As the guardian of all commercial banks of the country central bank controls those banks by various measures such as directions, inspection, policy making etc. Commercial banks collect public deposit through different accounts. Such public deposit should not be misused. Bank should return public deposit whenever demanded under bank rules by the account holders. The supervision in commercial banks is essential to safeguard the public wealth deposited into banks. In this context, central bank must control and supervise the financial institutions including commercial bank, development bank, rural development bank, financial company to make smooth operation without any fraud. Central bank, as a philosopher, guides financial institutions to the right track and safeguard them from insolvency.

10. <u>Other Functions</u>

The central bank also performs certain other miscellaneous functions:

a. It maintains relation with international financial institutions such as the ***International Monetary fund, World Bank, Asian Bank, World Trade Organization*** etc.
b. It collects various types of statistics providing information about current state of the economy.
c. It conducts survey, seminars etc. and publish reports on other matters.
d. It helps in developing the banking system and banking habits in the country.
e. It formulates appropriate monetary policy to deal with economic crisis in the country.
f. It extends training facilities to the staff working in various banking institutions.
g. It publishes and provides up-to-date financial data and information to the institutions, students, researchers and other individuals.

In short, the central bank functions as the supreme monetary institution in the country by acting as a banker to the government and to the commercial banks, as a controller of the monetary system of the country, and as a promoter of economic growth with stability. It performs these functions without any profit and in the interest of the public.

2.1.2 Principals of Central Bank[2]

A central bank's principal function is to conduct money and credit policy to promote sustainable growth in the economy, avoid severe inflation, and achieve the nation’s other economic goals. To pursue these important objectives, most central banks use a variety of tools to affect the legal reserves of the banking system, the interest rates charged on loans made in the financial system and relative currency values in the global foreign exchange markets. The main monetary tools are as follows:

1. Open Market Operation

The buying or selling of securities in the open market increases or decreases the credit. If commercial bank has more liquidity, central bank sells the securities to the commercial bank. This action reduces the liquidity in the commercial bank. On the other hand, if commercial bank has less liquidity then central bank buys the government securities from commercial bank. As a result, it increases the cash reserves of commercial banks which are used to support additional loans.

2. Discount Rate

Discount rate is the rate at which the central bank provides loan to the commercial banks against the security of government and other approved first class securities. By making appropriate changes in the discount rate, the central bank controls the volume of the total credit indirectly by inferring the lending rates of the commercial banks. A

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[2] Thapa, Kiran & Neupane, Dipendra (2065- First Edition) ***Banking and Insurance***, Asmita Publication, Putalisadak, Kathmandu.

determinant of total loans and investment in the country. By raising the discount rate, the central bank makes the funds costlier for the commercial banks. On the other hand, the central bank may adopt liberal policy at the time of depression when the commercial banks are to be encouraged for credit expansion. If the central bank lowers the discount rate, the market rate also decreases, cost of borrowing becomes cheaper and there is a great demand for bank credit. The variations in the discount rate appears to produce the effects on the conditions in the money market.

3. Variation of Cash Reserves

The central bank has authority to decrease or increase the minimum cash reserves by the commercial banks. This instrument is very effective to reinforcing the bank rate and the open market operations.

At present banks are compelled either by law or by custom to keep certain percentage of their total deposits with the central bank in the forms of minimum legal cash reserves. An increase or decrease in the minimum legal cash reserves ratio by decreasing or increasing the excess cash reserves of the banks decreases or increase their optimum credit creation capacity. The main purpose of imposing the reserve requirement on the commercial bank was to promote liquidity. The objectives are the cash reserve requirements are as follows.

a. To ensure the liquidity and solvency of individual commercial banks and of the banking system as a whole.

b. To provide the central bank with the supply of money required for its local operations, and:

c. To control the expansion of credit by commercial banks.

4. Other Central Bank Tools

Two other policy tools the central bank uses to influence economy and bank behavior are moral suasion and margin requirements.

a. Moral suasion: Sometimes the central bank provides advice to the commercial banks and requests them not to grant the loans for speculative purposes. This method also helps in building up the good informal relations with other banks.

b. Margin requirement: It is the difference between the loan value and the market value of the securities offered by the borrowers against secured loans.

2.1.3 Importance of a Central Bank[3]

A central bank performs a number of important functions which assist directly in national development. Further, most of the countries in the world have established central bank in their respective countries. It is obvious from this that its importance cannot be ignored due to its importance in monetary and fiscal management in a country. Therefore, we can summaries its importance by the following explanations.

1. Objectives

The objective of central bank and other commercial banks are different with one another. The objective of a central bank is to assist the government in the implementation of economic policies without any profit motive whereas the objectives of remaining banks is to earn profit mobilizing funds from the general public.

[3] Vaidya Shakespeare, (2001 April-Third Edition) ***Banking & Insurance Management*** Taleju Prakashan, Kathmandu.

2. <u>Banker's Bank</u>

Central bank is the banker's bank. In the other words, it monitor and controls whole of the functions of banks operating in a country. It assist in healthy competition among banks in a country. Hence, its presence is important.

3. <u>Origin of Banking Policies</u>

A central bank is the origin of all banking policies under which all the banks are suppose to operate. Therefore, a central bank guides and assist in operating banking system as a whole.

4. <u>Monetary Control</u>

It is the only bank who reserves right to issue notes and currency. It issues currency after full analysis of unemployment, inflation, economic growth etc. of a country.

5. <u>Lender of the Last Resort</u>

The central bank also acts as a social worker. In case of any problems and emergency to any of the banks operating under it, central bank comes forward to rescue them temporarily from such problems. No other banks will be interested and assists as well voluntarily to other banks. Hence, central bank is important for such difficulties also.

6. <u>Representative of International Institutions</u>

A central bank is also important in the context to co-ordinate with different International Institutions such as international monetary fund etc. It works under the supervision and guidance of such institution to develop the monetary system of a country.

7. Banking regulatory Authority

A central bank has all authority to interfere in the banking market i.e. to all banks in terms of implementing its policies. It can penalize the banks in case they go out of the central bank's policy or the termination of the license and also can restrict their working dimensions to a large extent.

2.1.4 Introduction to Nepal Rastra Bank (NRB) [4]

Nepal Rastra Bank is known as the central bank of Nepal. It was established in 2013 B.S. Baisakh 14 (April 26, 1956) under the Nepal Rastra Bank act 2012 B.S. prior to this bank there was no such formal organization who controls and regulates the monetary system in the country. It is an autonomous body and fully owned by the government of Nepal, who works for the development of banking system in the country. It is an autonomous body and fully owned by the government of Nepal who works for the development of banking system in the country. It has also the responsibility to observe, evaluate and regulate the economy of the country. It has also the responsibility and authority to make the monetary policy of the country. More power and authorities to control and responsibility for supervision over the financial institutions of the country came over after the enactment of the Nepal Rastra Bank act 2058 and Nepal Rastra Bank act 2058 to the central bank.

2.1.4.1. Functions, Duties and Powers of NRB:

In order to achieve the objectives, the central bank (Nepal Rastra Bank) has following functions. These functions (tasks) are specified in the Nepal Rastra Bank Act: 2003

[4] Thapa, Kiran & Neupane, Dipendra (2065- First Edition) ***Banking and Insurance***, Asmita Publication, Putalisadak, Kathmandu.

a. To issue bank notes and coins.
b. To formulate necessary monetary polices in order to maintain price stability and to improvement or cause to implement them.
c. To formulate foreign exchange polices and to implement or cause to implement them.
d. To determine the system of foreign exchange rate.
e. To manage and operate foreign exchange reserve.
f. To issue license to commercial banks and financial institutions to carry on banking and financial business and to regulate, inspect, supervise and monitor such transactions.
g. To act as a banker of advisor and financial agent of Government of Nepal.
h. To act as the banker of commercial banks and financial institution and to functions as the lender of the last resort.
i. To establish and promote the system of payment clearing and settlement and to regulate these activities.
j. To implement or cause to implement any other necessary functions which the bank has to carry out in order to achieve the objectives of the bank under the act.

2.1.5 Organizational Structure of NRB: [5]

Nepal Rastra Bank has to accomplish a number of objectives consistent with other national economic objectives. Therefore, while designing the organization structure, special attention has paid to ensure that the banks dimensions and dynamic role are clearly reflected in it. The organizational structure of the bank has been modified from time to

[5]Thapa, Kiran & Neupane, Dipendra (2065- First Edition) ***Banking and Insurance***, Asmita Publication, Putalisadak, Kathmandu.

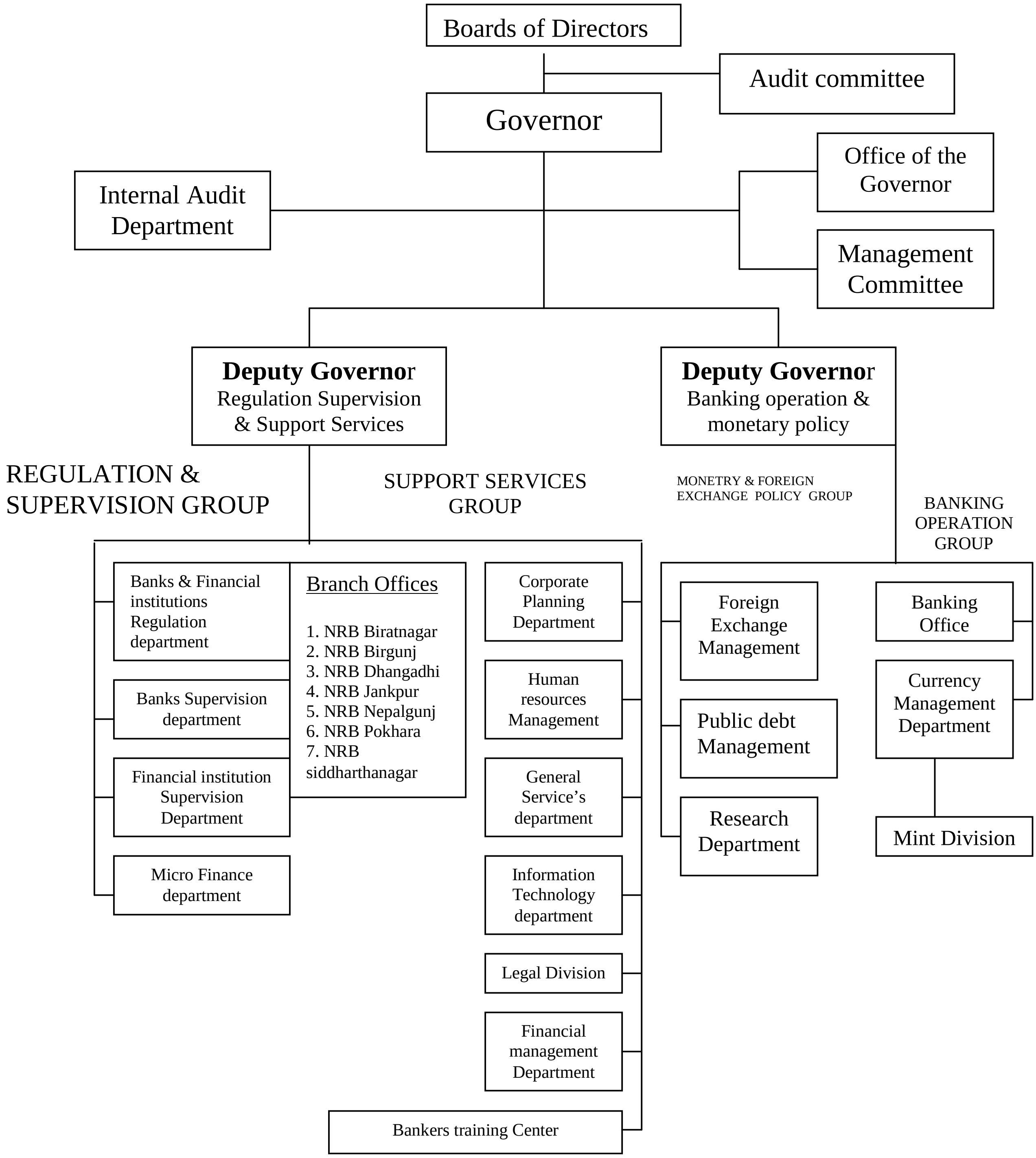
time as per exigencies and the banks futuristic activities. Similarly, at times the bank has acquired consultancy services from reputed foreign agencies to design its organization structure.

After undergoing various changes over time, the present internal organization of the bank consists of its central office in Kathmandu with 16 departments in addition to the offices of the governor and two deputy governors. Now, Nepal Rastra Bank has 17 departments and they are as follows:

a. Kathmandu banking office.
b. Currency management department.
c. Mint division
d. Foreign exchange management.
e. Public debt management
f. Research department
g. Corporate planning department
h. Human resource management
i. General services department
j. Information technology department
k. Legal division
l. Financial management department
m. Bankers' training center
n. Banks and financial institutions regulation department
o. Banks supervision department
p. Financial institution supervision department
q. Micro finance department

Figure No.1.1.

Organizational Structure of NRB



Currently, there are six branch offices of the bank located in Biratnagar, Jankpur, Birgunj, Pokhara, Siddhartha Nagar, Nepalgunj and two sub-branch offices in Dhangadhi and Illam. The bank also has its office in Bhadrapur. The branch and sub branch of the bank comprise a unit each of the issue and banking department.

2.1.6 <u>Banking Supervisory and Regulation System</u>

Bank and financial institutions are the back bone of the economic development of a country. Central bank has power and full authority to supervise and regulate the banking sector. The main objectives of the supervising the banks are financially sound well managed and not posing a threat to the interest of their depositors. A central bank makes a rule, issue instructions from time to time with regards to many aspects viz., credit control liquidity sectoral limit etc. The following are the purpose of supervision which are given below:

a. To see whether banking sector is complying with existing acts and the instructions of NRB.
b. To see whether operation has been carried out in conformity with their laid down policies.
c. To see whether people have trust towards them.
d. To see whether management and internal control system is effective.
e. To see whether the organization has sound financial standing.

Every central bank has got a separate supervision department. Staff of the supervision department adopts following procedures to have information on afore said matters. There are basically there types of supervisory system. They are basically, three types of supervisory system. They are:

1. Off- site supervision

Off- site supervision is performed by studying the documents provided by commercial banks. This function includes the analysis of balance sheet, profit and loss account, other statements and documents received from the commercial bank. Generally, documents and reports are received on a weekly/monthly/quarterly/bi-annually or annually basis. This helps the central bank to judge whether they have accomplished the legal requirements and the instructions regarding the following issues:

a. Capital adequacy
b. Cash reserve ratio
c. Priority sector loan
d. Deprived sector loan
e. Classification of loan and provision
f. Profitability

2. On- site supervision

On-site supervision is carried out by the inspector or a team of inspectors. They have to do field visit to conduct such supervision. They check various fields and examine whether they are recorded and maintain as per rules and regulations. Especially, the documents about loan accounts, expenses, letter of credit, bank guarantee, remittance should be checked properly while on- site supervision. For conformity, the inspector can randomly verify the physical balance of cash and other assets with records.

3. Special Supervision

Special supervision is conducted only for special purpose. It is not conducted regularly. Depending upon the natural of crisis and objective, the process and method of special supervision may vary from one case to another. Mostly, special supervision is conducted only in the following circumstances:

a. When a bank suffer a great loss or economic crisis,
b. When government or central bank feels that a bank is indulged in major fraud,
c. When majority of shareholders request the central bank for the special supervision,
d. When a bank is decided to go into liquidation.

In the course of supervision, when inspectors find minor mistakes, they provide suggestion and guidelines for correction. The inspectors should prepare a report containing all the findings after conducting each supervision. If a bank is found violated or neglected the rules and regulations the central bank, on the recommendation of supervision department, may take necessary action. The action may be a simple warning to tuff penalty like snatching license, penalty charge etc.

2.1.7 Conditions for Blacklisting

Commercial banks and the finance companies have been issued directives on blacklisting and credit information for transparency and relevancy in their loan options and to regulate the process of blacklisting of loan defaulters. The directives will also enable accessing information from one single source. All those debts / borrowers taking loan and advances of amount 2.5 million or more than that are eligible for blacklisting in one or any of the following cases:

- If principle amount or loan installment or interest payment past due by nine months. But concerned commercial bank or board of directors can increase the payment time of three months for payment if they feel it reasonable.
- If it is proved that the credit facility is misused.
- If security provided is misused.
- If the value of securities of loan and advances decreases or not sufficient or not secured enough to recover the loan and advances and its interest or is lost then either the loan and advances is not past due or past due in such situation the borrower/ debtor is to be blacklisted.
- If borrower is lost.
- Insolvency of debtor.
- If borrower /debtor is held guilty by the court for fraud or attempted fraud using fake documents and instruments like fake cheque draft foreign currency etc.
- If borrower / debtor is proved involved in banking and financial crime.

❖ **Persons, firms, companies and corporate bodies who should be blacklisted:**

- Person, form, company or corporate body enjoying the credit facility.
- Proprietor of the proprietorship firm.
- Directors of the company or corporate body which is blacklisted.
- All the partners of a partnership firm which is blacklisted.
- All the shareholder of a company which is blacklisted.
- Person, form, company or corporate body that has given guarantee for the repayment of credit facility availed by the blacklisted person or firm.

- Shareholder holding 15% or more shares of a public limited company which is blacklisted.
- Any other non-governmental firm, company, corporate body which has, as its director, any person or representative of any firm, company, corporate body which is blacklisted.
- The person, firm, company or corporate body under the same group of business firms to which the blacklisted person or firm belongs to
- Any person, firm, company or corporate body that has given cross guarantee to the loan to the blacklisted debtor (barring some exceptions specified in the directive.)

2.1.8 Legal Framework of Establishing Commercial Bank

Only on the recommendation of Nepal Rastra Bank, a commercial bank is established as a company with limited liability under the company Act. For obtaining, such recommendation of the NRB and only in case NRB so recommends such bank should be registered according to the company act to functioning under the Act.

The Nepal Rastra Bank may specify necessary condition, while recommending the establishment of a bank pursuant to sub recommending the establishment of a bank pursuant to subsection (1) and it shall be the duty of the concerned bank to fulfill the condition so specified.

Therefore, various legal provisions with regard to bank establishment are already being spelled out in Act, and those are being guided by the act itself. Provisions regarding the basic legal requirements in this regard are as following:

⇒ Share capital

⇒ Bank establishment policy

⇒ Functioning definition of bank formation of board of director

⇒ Formation of board of directors

⇒ Disqualification for the directors

⇒ Operational criteria of establishment

⇒ Function, which the bank may perform

⇒ Capital and provision of general reserve

⇒ Branch Expansion Policy

2.1.9. Bank Capital Structure Requirements:

One of the most critical of all banking problems in recent years centers on raising and maintaining sufficient capital. A CB has access to there source of funds: capital, deposits & borrowing. Therefore, the term capital has special meaning in the balance sheet of a bank. Capital refers to those funds contributed by the bank's owners, consisting mainly of stock, reserves & earnings that are retained in the bank rather than paid out to the stockholders. Capital performs several important functions of a bank such as supplying resources to get operate a new bank, further to expand & defend against risk. It also assists in maintaining public confidence in the bank's management & shareholders.

Bank capital cannot be treated as a single & homogenous item. Choice of the form of capital, of the amounts needed in each form, and of the way of raising it have important implications for bank profitability, it is therefore, the study of capital management has become significant in the banking management.

In general sense, “Money is needed to establish & operate a bank is called bank capital.” It is not possible to establish & operate a bank without capital. In this way, “the amount received by the bank from different sources to establish the bank, to operate the banking system is called bank capital.”

Hence, The NRB has ultimate power or right to decide how much capital is needed for a bank & non-bank financial institutions. According to the new provision implemented by NRB under BAFIA 2063, the financial institution should be as:

Table No.2.1.

Capital Structure Requirements

Description	**Prior to 27 March, 2012**	**At present**
Paid-up Capital		
CBs	Rs.1000 million	Rs.2000 million
Regional CB Concept		Eliminated
Development Bank(National Level)	Rs.320 million	Rs.640 million
Development Bank(1-3 districts)	Rs.50 million	Rs.100 million
Development Bank(4-10 districts)	Rs.100 million	Rs.200 million
Development Bank (Leasing transactions)	Rs.150 million	Rs.300 million
Finance Companies(National Level)	Rs.100 million (Rs.150 million for leasing companies)	Rs.200 million
Finance Company(1 district)	Rs.50 million	Eliminated
Finance Company(1-3 districts)		Rs.100 million
Micro-finance Development Bank		Changed
National Level	Rs.100 million	
Regional	Rs.60 million	
		Contd….

Description	**Prior to 27 March, 2012**	**At present**
1-3 districts	Rs.10 million	
4-10 districts	Rs.20 million	
Provision for Capital		
Proposal for Capital		To comply by June/July 2010
Operating financial institution		To comply by June/July 2013
Bank with more than 50% investment	20% share to general public	15% to general public
Treated as capital		80% paid-up & 20% primary capital as other capital

Source: NRB

2.1.10. Capital Requirement Criteria for Establishing New Bank:

As discussed above the need & importance of the bank capital, the central bank of the country, NRB has made the capital requirement criteria for establishing new bank also.

With a view to encourage people to open commercial banks outside the valley and also limiting the monopoly of a single person, a group and/or company in banking business, NRB announced the following measures under new BAFIA 2068:

A minimum paid-up capital of Rs 500 million required to establish a commercial bank with the headquarter to be stationed in Kathmandu valley and operation expanding throughout the country.

A minimum paid up capital of Rs. 50 million required for establishing a bank with its headquarter to be stationed in the district level and limiting its area of operation only up to 5 districts other than Kathmandu valley.

A minimum paid up capital of Rs.120 million required for establishing a bank with its headquarter in any municipality expanding business in all parts of the country except the Kathmandu valley.

In addition to above requirement NRB also made some provision in connection with the ownership pattern. Accordingly, the bank, which is to be opened, is required to sell at least 30%of its share to the general public. However, no single person, firm, company and/or a person could purchase more than 10%of issued capital of bank. Similarly, such person, firm, company and group of person (except GON, Nepal Rastra Bank, commercial banks and government financial institution) could not purchase more than 15%of issued capital of all other banks.

However, the above capital structure is still prevailing in the country but as the GON & NRB has decided to let the foreign banks to operate within Nepal since 2010 as promised while being the member of WTO. So, viewing this scenario, the central bank may decide in the capital structure required for the CBs to be established in the coming days.

Table No.2.2.

Actions on Non-compliance of Minimum Capital Requirement

S. No.	Timeframe for compliance	Type of action
1.	F/Y 2065/66	Restriction on dividend
2.	F/Y 2066/67	Restriction on dividend/deposit collection
3.	F/Y 2067/68	Restriction on dividend/deposit collection/loan disbursement
4.	F/Y 2068/69	Restriction on all transaction, except loan recovery & paying back matured deposits
5.	F/Y 2069/70 onwards	Initiation of the process of revoking license

Source: Mirmire Vol.36 No.264

In context of capital adequacy requirements in a banking institution, the core principle # 6 of the Basel Committee on Banking Supervision (revised in October 2011) states: "Supervisors must set prudent and appropriate minimum capital adequacy requirements for banks that reflect the risks that the banks undertakes, and must define the components of capital, bearing in mind its ability to absorb losses. At least for internationally active banks, these requirements must not be less than those established in Basel capital requirements." (*Bhola Ram Shrestha :Mirnire , 2012*)

The disclosure of Adequacy of Capital Fund under BASEL II is as follow:

I. CAPITAL STRUCTURE & CAPITAL ADEQUACY

i. Core Capital (Tier I)

A. Paid up Equity Share Capital

B. Proposed Bonus Equity Shares

C. Statutory General Reserves

D. Retained Earnings

E. Capital Adjustment Reserve

F. Other Free Reserve

G. Less: Fictitious Assets

H. Less: Investments arising out of underwriting commitments

Total Core Capital (Tier I)

ii. Supplementary Capital (Tier II)

A. Subordinated Term Debt

B. General Loan Loss Provision

C. Exchange Equalization Reserve

Total Supplementary Capital (Tier II)

iii. Capital Fund(Tier I+Tier II)

Total Core Capital (Tier I)

Total Supplementary Capital (Tier II)

Total Capital Fund (Tier I+Tier II)

2.1.11. <u>CRR for CB</u>:

The CRR too can be taken as criteria of measuring bank liquidity. The CBs should maintain the CRR as fixed by the central bank by opening an account in central bank and should maintain the statutory liquidity ratio, in its own treasury. It changes from time to time. CRR was used even before 1990s. NRB, first time introduced CRR in December 1966. At that time, CBs were required to maintain CRR of 8% of total deposit liabilities. Since then, NRB changed CRR a dozen times until to date, and sometimes, variable rates for different deposits, and sometimes, single rate. In 1990, NRB directed the CBs even to maintain cash in vault of 4% of deposit liabilities. Such a provision was taken away in August 2003.At present; the level of CRR is 5% of total domestic deposit liabilities of the CBs in Nepal. Demand, savings, and fixed deposits denominated in rupee are subject to the provision of CRR. The following table shows the CRR used by the NRB in past.

Table No.2.3.

CRR at Different Time Period

Date	**Rate(% of domestic deposit liabilities)**
1966 December	8%
1974	5% including statutory liquidity ratio(SLR) 32%
1978	7%
1981	9% (Cash in Vault 4% & Bal. with NRB 5%)
1989 September	9%
1989 October	12%
1990 April	12% (Cash in Vault 4% & Bal. with NRB 5%)
1998 April	Cash in Vault 3% & 8% for current & saving deposits, 6% for fixed deposits
2001 December	Cash in Vault 3% & 7% for current & saving deposits, 4.5% for fixed deposits
2002 August	Cash in Vault 2% & 7% for current & saving deposits, 4.5% for fixed deposits
2003 August	6%
2004 August	5%

Source: NRB

2.1.12. Credit Classification & Loan Loss Provision for CBs:

The commercial banks of Nepal have to classify its credit/loan as prescribed by the central bank of the country, NRB. The loans are classified as per their recovery performance. Generally, the principle of loan classification & provision for loan loss should be arranged in accordance with the directives of central bank. In Nepal, at present loans/credits are classified into two types, which further have been sub-divided. They are:

1) Good Loans

i. Pass (Good) Loan
ii. Restructured Loan

2) Non-Good Loans

i. Sub-standard Loan
ii. Doubtful Loan
iii. Bad Loan (Loss)

The loan loss provision must be arranged according to the classification of loan. So, the provision should also be maintained according to each type of loans. Every commercial banks of Nepal should mention the report of credit under ***Schedule 13 Classification of Loans, Advances and Bills Purchased & Provisioning*** in every F/Y Report as per the directive of the central bank, NRB.

According to the directive, the loan loss provision should be maintained as follow by CBs:

Table No.2.4.

Credit Classification & Loan Loss Provision for CB

Classification of Credit	**Loan Loss Provision**
Pass (Good) Loan	1%
Restructured Loan	25%
Sub-standard Loan	25%
Doubtful Loan	50%
Bad Loan (Loss)	100%

Source: NRB

The provision for the Good loans has been maintained as "General Loan Loss Provision" & for the non-Good loans as "Specific Loan Loss Provision".

2.1.13. Functions of Commercial Bank

Commercial banks perform various functions which are as follows :

1. **Accepting Deposits**: Receiving deposit is the first function of commercial bank. It accepts idle and scattered saving of the public and institutions as deposit under the following three accounts :

(a) Current account

(b) Saving account

(c) Fixed deposit account.

(a) **Current Account**: - It is an account under which the account holders can deposit and withdraw their money at any time according to their requirement. This account is mainly open for those traders and business organizations who need money frequently. This account is open for safety of money and no interest is provided to depositors by the bank. There is no restriction of the number of withdrawals and deposits for depositors. But minimum balance should be maintained as per the rule of the bank for withdrawals.

(b) **Saving Account**: - It is an account in which depositors can deposit their amount frequently but with limited withdrawal facility. Saving account is managed by bank to collect small and scattered amounts of savings of the people. To encourage saving the bank provides a certain percent of interest per annum.

(c) **Fixed Deposit Account**: - Under this account, the depositor deposits the amount for a fixed period of time. The depositor cannot withdraw the amount before the expiry of the specified time period. The bank provides higher rate of interest to the depositors than saving account.

2. **Granting Loans: -** Commercial banks provide loan to the traders' investors, industrialists, and farmers against the security deposit of valuable properties. They provide short-term, mid-term and long-term loan by charging certain rate of interest. Thus, the commercial bank utilises the collected deposit amount from the depositors into profitable and productive sectors as loan.

3. **Transfer of Money**: - Commercial bank provides the service of transferring the fund from one place to another place as per the request of its customers. Commercial bank issues cheque, demand draft, mail transfer, T.T., L.C., credit cards, traveller's cheque, etc., for remittance of money from one place to another. Bank charges a certain amount of service charge, i.e. commission for its services.

4. **Exchanging Foreign Currencies :-** To fulfill the requirements of foreign traders regarding foreign currency, the commercial banks exchange foreign currencies on the direction of the central bank of the nation. This promotes foreign trade.

5. **Opening L.C. and Issuing Credit Instruments :-** Commercial bank helps the importer to import goods from foreign countries by opening L.C. account. L.C., i.e. letter of credit is the guarantee given to the exporter on behalf of the local trader or importer to pay the value of goods imported. Beside this, the commercial bank issues traveller's cheque, credit cards, bank draft and demand drafts for the purpose of making easy and safe payment.

6. **Buying and Selling Shares and Debentures :-** On the request of customers, commercial bank helps in issuing of shares, purchase and sell of the securities like, shares, debentures through stock exchange and capital markets. Thus, it helps to issue capital which helps to promote trade and industries.

7. **Creating Credit :-** Commercial bank has its own lending policy. So, it creates credit, i.e. advance more amount of loan than the deposits it has at a given point of time. It is one of the important functions of the commercial bank.

8. **Agency Functions :-** Commercial bank is the agent of its customers. It performs a number of agency functions on behalf of its customers taking commission. The main objective of Good such agency functions is to attract the customers. Some agency functions are as follows :

- Remittance of money on behalf of customers.
- Purchase and sale of securities on the request of clients.
- Collection and acceptance of credit instruments.
- Receiving and making payment of incomes and expenses on behalf of customers.
- ATM facilities.
- Debit card and credit card facilities.

9. **Other Miscellaneous Functions :-** Besides the above mentioned functions, commercial bank provides the following services :

- Safety of valuable goods/properties,
- Locker facilities for its clients,
- Issue of guarantee and work as referee of its clients to third parties,
- Issue of gift cheques and vouchers,

Collecting and providing financial information

2.2 Review of Related Studies

2.2.1 Directives Review

Nepal Rastra Bank has recently issued twelve directives on the code of conduct for board director and employees of banks and non-banks financial institutions (unified directives). These directives are issued as authorized by section 22 of the NRB act. The section 22 of NRB act read as "The bank may issue directives from time to time to commercial banks and financial institutions regarding banking operations, currency and credits. It shall be the duty of commercial bank and financial institutions to comply with such directives." These kinds of directives as such are new from the regulator side. Ethical standard in any financial institutions is normally set at the time of establishment of the entity. Such regulation may be governed by the personal rule in the case of employee and law or by oath to the directors.

The tools described in the directives main objectives are to control and monitor the financial institutions of the country and this research consists mainly focus on the directives of NRB. NRB has been issuing directives into four different parts i.e. directives relating to banking regulations and prudential norms, credit information bureau (CIB), foreign exchange and list of forms, formats and tables. In present situation, NRB issues directives regularly and comes out with new directives. Directives relating to the banking regulation and prudential norms comprise 12 directives which are as follows.

Directive No. 1: The provision of minimum capital fund to be maintained by the commercial banks.

Directive No. 2: The provision of loan classification and loan loss provisioning on the credit.

Directive No. 3: The provision relating to single borrower limit.

Directive No. 4: The provision of accounting policy and the structure of financial statements to be followed by the commercial banks.

Directive No. 5: The provision of reducing the risk on activities of the commercial banks.

Directive No. 6:	The provision of institutions good governance to be followed by commercial banks.
Directive No. 7:	The provision of implementation schedule of regulatory directives issued in connection with inspection and supervision of the commercial banks.
Directive No. 8:	The provision of investment on shares and securities.
Directive No. 9:	The provision of submission of statistical data to the Nepal Rastra Bank Banking management division and inspection and supervision division.
Directive No. 10:	The provision of sale and re-registration of foundation shares of commercial banks.
Directive No. 11:	The provision of the provision relating to consortium financing by bank and non bank financial institutions.
Directive No. 12:	Provision relating to loan and willful defaulter or blacklisted information should be given to Nepal Rastra Bank by and non-bank financial institutions.

2.2.2 Articles Review

Business Age, vol. 4, focuses about the further establishment of commercial banks where NRB has withdrawn the seven-year restriction. Under new directives, commercial banks most maintain paid up capital equivalent to RS.1 billion & Rs.25 million at the national & regional levels respectively. This provision stipulates one compulsorily requires the joint investment of foreign banks of financial institutions & a Nepali firm, company etc. for the operation of such commercials banks. These new NRB banking policy has affected the royal Army's long standing plan to establish a separate commercial bank under its management ownership. Also, there may be negative effect on foreign investment because of no registration of new banks starting from the year 1995 due to excess of competition aroused by massive investment following the adoption of liberal policy. It has also pointed out the possibility of Chinese investment in the banking sector after both the Chinese & Nepalese government, which aims to make Nepal a tourist destination.

Mirmire, vol.36, No.268, the article on Capital Adequacy: A Major Constraint for Microfinance Institutions defines the term capital in the banking industry. It stated it is used specifically to refer to the financial strength of the organization, which is the sum of paid-up capital or core equity & retained earnings(Tier 1 capital) & the secondary source of equity-like financing(Tier 2 capital). But in microfinance industry, it is often used to refer to all sources of finance available to the institutions, including liabilities (savings & borrowings), equity or quasi-equity. Because the micro lending institutions, though they are operating successfully, they cannot grow out of retained earnings like other profit-making organizations. Moreover, these institutions & their other profit-making organizations.

2.2.3 <u>Review of the Past Research</u>

Kayestha (1987), in his thesis has laid down the problem arisen out of the branch expansion. He has concluded that the CBs have lagged behind the target in opening the new branches & existing branches were not distributed evenly all over the nation. He suggested that NRB should encourage the CBs to open its new branches in remote area with more liberal attitude & policy. This shows the strict directives on the CBs from the NRB at that time.

Shrestha (1975) has observed that the CBs are still following their traditional lending policies. They extended the loans on the basis of securities. However, the people in our country are unable to provide sufficient securities. Therefore, NRB should change the traditional lending policies. At the present, CBs are offering varieties of credit facilities. This proves NRB has already made an effort to avail credit the people without precious securities. But at present the CBs have been given strict direction by the NRB in context to the flow of the credit & the provision for losses.

Mistry (1980), in his dissertation has pointed that the deposit utilization in priority sectors are much less than statutory requirement. To increase the lending amount in priority sectors, NRB has changed the existing regulation & fixed the lending target at 12% of outstanding loans & advance since 1990. Even yet, CBs have been lagging behind in meeting the lending target so they are penalized for the shortfall. But as per the monetary policy of F/Y 2064/65 announced by NRB to phase out the compulsion of priority sector loan investment due to the low return & poor performance level., at present there is no compulsion to CBs to invest in priority sector.

Sapkota (1981) has suggested that in order to provide adequate banking to the people in un-banked remote areas, ADB/N should also act as a CB in the direction of NRB for the place where no branches of ADB/N & where as a CB's branches exist the later should act as an agent of farmer to collect the deposit & mobilize it in needy. At present ADB/N is also working as an "A" class CB of the country & works under the supervision of NRB. Similarly, in the past few years NRB has also directed CBs to invest certain percent as a priority sector loans to the deprived sector.

Pandey(2002)recommended in his dissertation that even the concerned authority of NRB urged the CBs were implementing the directives. He observed that NRB undertakes both on-site & off-site supervisions to ensure that the directives are properly & fully followed. The monitoring aspect has been strengthened by various types of penalties laid down by NRB for the non-compliance of the directives.

Manandhar (2006) recommended in his dissertation that directives or revising or norms should not be made, just to meet the international banking norms or standards. They should be issued only after properly analyzing its importance, suitability & impact on CBs. He further advised to strength NRB's CIC also.

Shrestha (2006) recommended, NRB while adjusting the level of general provisions should use the factors like past experience, current economic conditions, the current rate of improvement in the loan book, changes in policies, loan growth & concentrations of credit. Also the provision should be adequate to absorb estimated credit losses associated with the loan portfolio.

Yadav (2006) recommended, that the loan defaulters should be taken into strict legal action in the joint effort of the NRB, Loan Recovery Tribunal, GON & the concerned CBs. Loan loss provision & the classification of the loans by the CBs should be continued in the coming days to protect from the crisis.

CHAPTER THREE

Research Methodology

Research Methodology is a composed by two words "Research" & "Methodology". Research is a systematic & organized effort to investigate a specific problem that needs a solution while methodology is the research method used to test the hypothesis. Therefore, research methodology is a way to systematically solve the research problem. ***(Kothari, 1990:10)***

According to Wolff and Pant, "The study of problems again and again to find out something more about phenomenon".

3.1. Research Methodology

Research methodology consists of research design, procedure of data collection and tools and techniques of data analysis etc. It covers quantitative methodology using statistical & financial tools. But the study is mainly based on secondary data collection from NRB & respective annual reports from different commercial banks the nature of data and method of analysis used in the study used are described below.

3.1.1. Research Design

A research design is the arrangement of condition for collection and analysis of the data in manner that aims to combine relevance to the research purpose with economy in procedure. Research design is used to convert to gathered information into spatial form. The present study is mainly based in two types of research design.

Descriptive

Descriptive research design describes the nature and pattern of Nepalese Commercial Sector & Implementation of NRB's Directives on Commercial Bank of Nepal in the changing competitive banking environment.

Analytical

Analytical research design is a tool to convert raw data or raster data to spatial data. It means that the collected crude data remain information less therefore the analytical research design is used to change the uninformative data into spatial form. For the analysis, we tabulate the raw data in columnar and other form. Then, the data will be meaningful. Several statistical & financial tools & techniques are used to analyze the data.

3.1.2. Population & Sampling

Population refers to the entire group of people or things of interest that the researcher wishes to investigate. The population represents the leading five commercial banks of the country.

The sample of five commercial banks is taken for the study which covers 20% of the total population.i.e.5 commercial banks out of 31 commercial banks in operation within the country.

3.1.3. <u>Sources of Data</u>

The study is based on secondary sources but however we can use two types of sources.

Book's related to investment and finance, encyclopedia website of NRB, Encarta and annual report of sampled commercial banks.

Nature of Data

The data collected has mainly concentrated on the **Secondary Data.** It is collected from various books. Such as journals, articles, reports etc.

3.1.4. Data Collection Techniques

The following are the data collection techniques which are used to collect primary and secondary data for the study are:

- Studies various books, booklets, magazines, published reports, computer data, bank internet & periodicals.

3.1.5. Data Processing Techniques

In data processing procedure, we have tabulate classify and analyze the data to give information. The obtained data are presented in various forms like tables, diagrams and charts with supporting statistical interpretations. The detail calculations, which cannot show in the body part of the report, are presented in annexes at the end.

3.1.6. Tools Used

3.1.6.1. Credit-Deposit Ratio (C.D Ratio)

If 75% of amount deposited by the customers are invested in various sectors, it is considered satisfactory. It is good sign. This ratio shows the efficiency of the CB to use the liquidity during a particular time. The ratio helps to find out the liquidity position as well as the prediction for the need of additional capital for the CBs. If the given ratio is not maintained by the CBs, there is a scarcity of cash & there is a lack of capital.

3.1.6.2. Cash Reserve Ratio (CRR)

It is the proportion of the deposit liabilities that commercial banks are required to keep as a cash deposit with the NRB. The level of CRR influences the commercial banks' credit creation capacity. If there is a higher rate of CRR, then the CBs need to keep the higher portion of deposits for CRR purpose with the central bank. As such, they have less deposit for lending purpose. Hence, the higher CRR squeezes the money expansion in the economy. Conversely, the low CRR rate means CBs need to keep less of the deposits so that they can lend more, resulting in the expansion of money supply in the economy. Moreover, CRR also serves as a measure for smoothing payment system as a prudential measure by avoiding sudden liquidity crunch in the banking system.

3.1.6.3. Provision of General Reserve Fund

The "A" class financial institution should maintain a general reserve fund. This reserve should be maintained until the amount reached the double of the paid-up capital. Every year, the financial institution should allocate at least 20% of the particular year's net profit.

3.1.6.4. Adequacy of Capital Fund on RWA

The importance of the Adequacy of Capital Fund on RWA has increased after the implementation of the BASEL-II by NRB in the recent year. It had mentioned the rate of at least 11% of Tier 1 Capital & Tier 2 capital based on total RWA of the banks.

The concept of capital adequacy aroused after the enactment of the Federal Deposit Insurance Corporation Improving Act of 1991.This act aims to ensure that regulations take action appropriate to overcome the degree of capital short-fall. Capital adequacy of the CBs was defined at least 10% of Tier 1 Capital & Tier 2 capital based on total RWA of the banks.

But, under BASEL Report, Capital Adequacy Ratio[6] consists of (i) Tier 1 Capital Ratio that shows relationship between Tier 1 Capital & total RWA. (ii) Tier 2 Capital Ratio shows relationship between Tier 2 Capital & total RWA.

3.1.6.5. Arithmetic Mean (A.M)

The most publics and widely used measure of representing the entire data by one value is what most laymen set of observation is their sum divided by the number of observation in general X1,X2 ……………Xn are the given "n" observation then there arithmetic mean adding

6 Ibid,pp.35

together the entries item and dividing this total by numbers of item obtained its value. The arithmetic mean is also known as averages. The mean is an appropriate term than saying average. The mean of data is biased toward extreme values. The mean is the figure we get when the total of all the values in a distribution is divided by the number of values in the distribution. The arithmetic mean is also known as the average. It should, however, be remembered that the mean can only be calculated for numerical data. The mean is an appropriate term than saying average. The mean of data is biased toward extreme values. The mean is suitable when the scores are distributed symmetrically about the center of the distribution. This is calculated by using following formulae:

Mean $(A.M.) = \overline{X} = \frac{\sum X}{n}$

3.1.6.6. <u>Standard Deviation (S.D.)</u>

The measurement of the scatter ness of the mass of figure in a series about an average is known as the dispersion. The standard deviation measures the absolute dispersion. The greater amount of dispersion, greater the standard deviation. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series: a large standard deviation means just the opposite. This is calculated as follows:

Standard deviation $(S.D.) = \sqrt{\frac{\sum(X - \overline{X})}{n}}$

3.1.6.7. Coefficient of Variation (CV)

The relative measure of dispersion based on standard deviation is called coefficient of std. deviation. The coefficient of variance is the relative measure of dispersion, comparable across distribution, which is defined as the ratio of the standard deviation to the mean expressed in percent. It is calculates as follows:

Coefficient of Variation $(CV) = \frac{S.D.}{Mean} \times 100$

3.1.6.8. Line Graphs/Graphical Presentation

Graphic presentation is a power full and effective way for highlighting variable. A very common way of presenting data for two variables which have a relationship is in a figure or chart similarly graphical presentation support has been also taken to elaborate the collected data for this purpose, line graph has been used in the report to present the calculated values not all data can be presented in figures. It works best when the data is continuous. This is a characteristic of parametric data.

CHAPTER FOUR

Analysis of Data

4.1. Credit-Deposit Ratio(CD Ratio):

Table No.4.1

CD Ratios of CBs

F/Y	Nabil	NSBI	EBL	NIBL	HBL
2008/09	58.01%	71.46%	72.97%	61.87%	54.30%
2009/10	72.57%	71.80%	75.45%	71.04%	50.07%
2010/11	66.79%	69.00%	71.01%	67.50%	55.27%
2011/12	66.60%	82.66%	75.13%	79.59%	56.57%
2012/13	66.94%	88.00%	76.49%	78.36%	61.23%
A.M.	**66.18%**	**76.584%**	**74.21%**	**71.672%**	**55.488%**
S.D.	**4.66**	**7.40**	**1.97**	**6.04**	**3.60**
C.V.	**7.05%**	**9.66%**	**2.65%**	**8.43%**	**6.49%**

Source: Official Website of Respective CBs

(For detail calculations see Annex-II) $CD\ Ratio = \frac{Total\ Credit}{Total\ \ Deposit} \times 100$

CD ratio is one of the most important indicators of the CBs financial performance as prescribed the central bank of Nepal,NRB. It shows the actual liquidity position of the CBs. If 75% of amount deposited by the customers are invested in various sectors, it is considered satisfactory. It is good sign. In the above sample CBs, in average, except the CD ratio of Nabil & HBL, others CD ratios are in the strong position. According to the C.V. analysis, the CD ratio of EBL is seen most consistent among the sample banks as its C.V. is seen the least among the sample CBs.

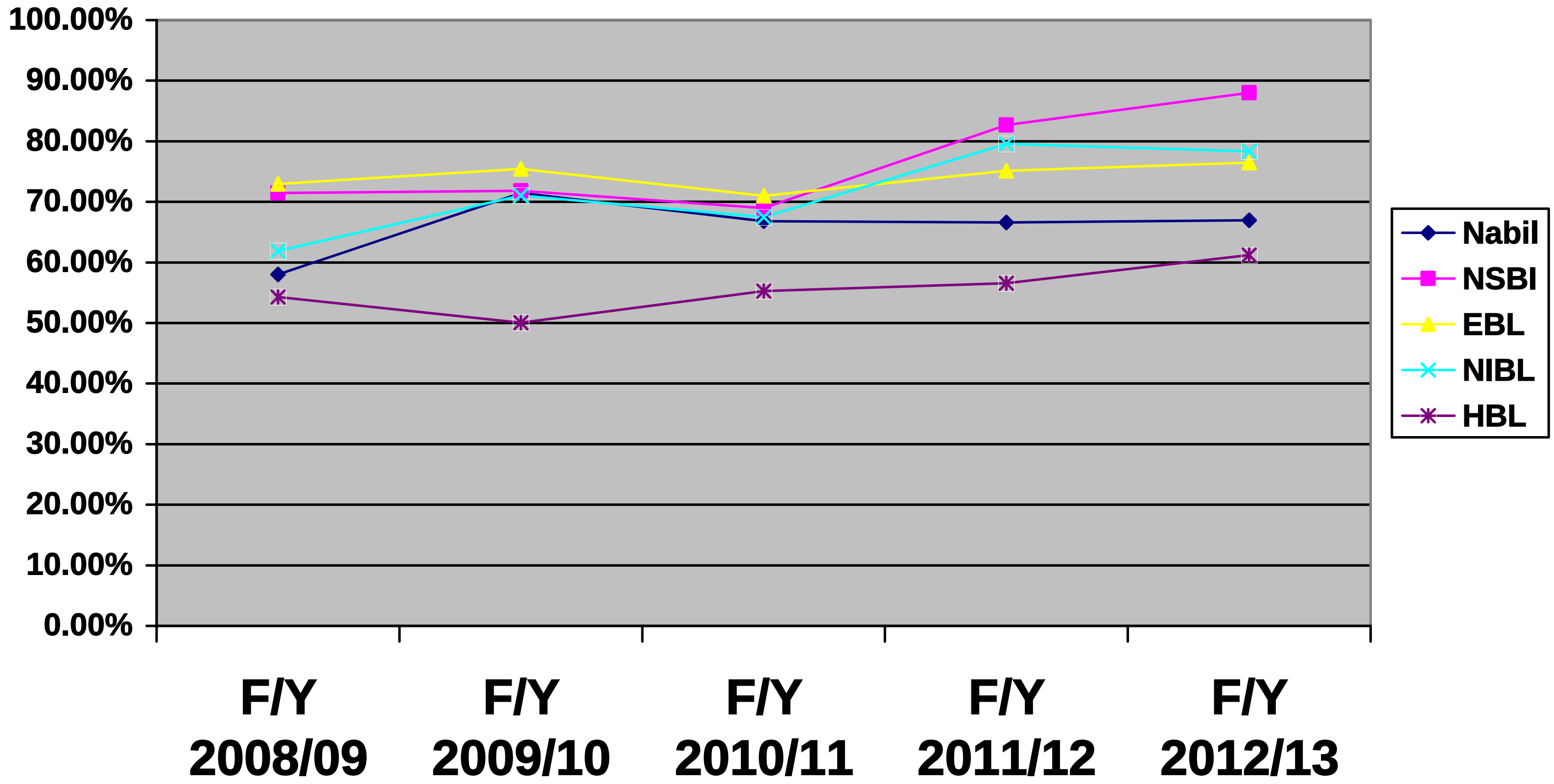

100.00%
90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
F/Y 2008/09
F/Y 2009/10
F/Y 2010/11
F/Y 2011/12
F/Y 2012/13
Nabil
NSBI
EBL
NIBL
HBL

Figure No.4.1

4.2. Cash Reserve Ratio(CRR):

Table No.4.2

CRR of CBs

F/Y	Nabil	NSBI	EBL	NIBL	HBL
2008/09	6.87%	12.01%	7.83%	10.65%	9.09%
2009/10	3.68%	6.17%	9.63%	9.40%	8.12%
2010/11	2.87%	7.91%	10.13%	11.04%	5.29%
2011/12	5.93%	7.38%	7.42%	8.76%	4.82%
2012/13	7.33%	5.19%	7.94%	9.53%	3.81%
A.M.	**5.336%**	**7.732%**	**8.99%**	**9.876%**	**6.226%**
S.D.	**1.76**	**2.34**	**1.07**	**0.84**	**2.02**
C.V.	**32.98%**	**30.26%**	**24.66%**	**15.72%**	**32.44%**

Source: Official Website of Respective CBs

(For detail calculations see Annex-III)

$$CRR = \frac{Total\ Cash\ and\ Bank\ Balance}{Total\ Deposit} \times 100$$

The level of CRR influences the commercial banks' credit creation capacity. If there is a higher rate of CRR, then the CBs need to keep the higher portion of deposits for CRR purpose with the central bank. As such, they have less deposit for lending purpose. Hence, the higher CRR squeezes the money expansion in the economy. Conversely, the low CRR rate means CBs need to keep less of the deposits so that they can lend more, resulting in the expansion of money supply in the economy.

In average, NIBL have maintained the higher level of CRR with 9.876% among the sample CBs & Nabil have maintained the least level of CRR with 5.336%. According to the C.V. analysis also, the level of the CRR of NIBL is seen the most consistent during the past five F/Y.

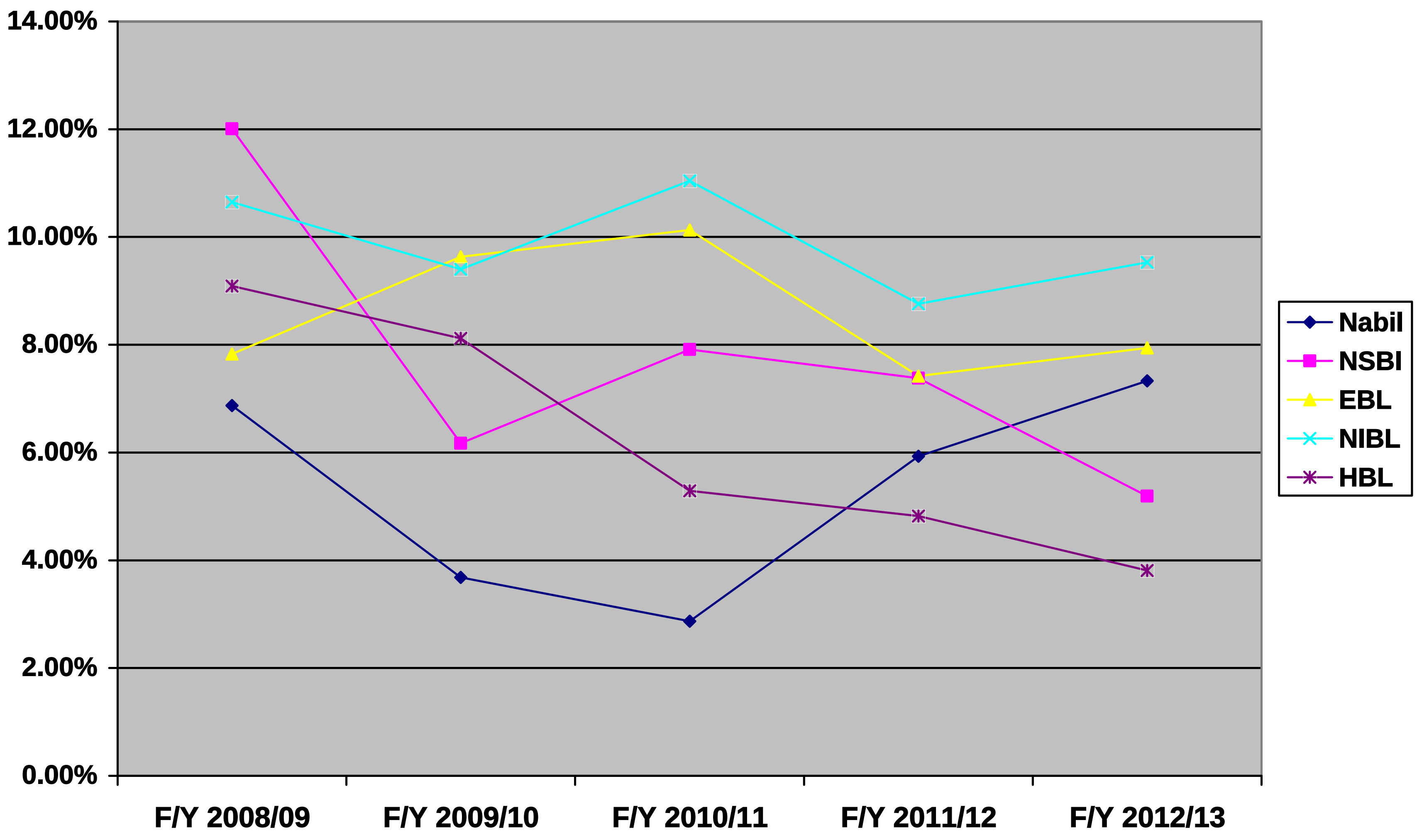

14.00%
12.00%
10.00%
8.00%
6.00%
4.00%
2.00%
0.00%
F/Y 2008/09
F/Y 2009/10
F/Y 2010/11
F/Y 2011/12
F/Y 2012/13
Nabil
NSBI
EBL
NIBL
HBL

Figure No.4.2

4.3. <u>Provisions of General Reserve Funds:</u>

Table No.4.3

Provisions of GRF of CBs

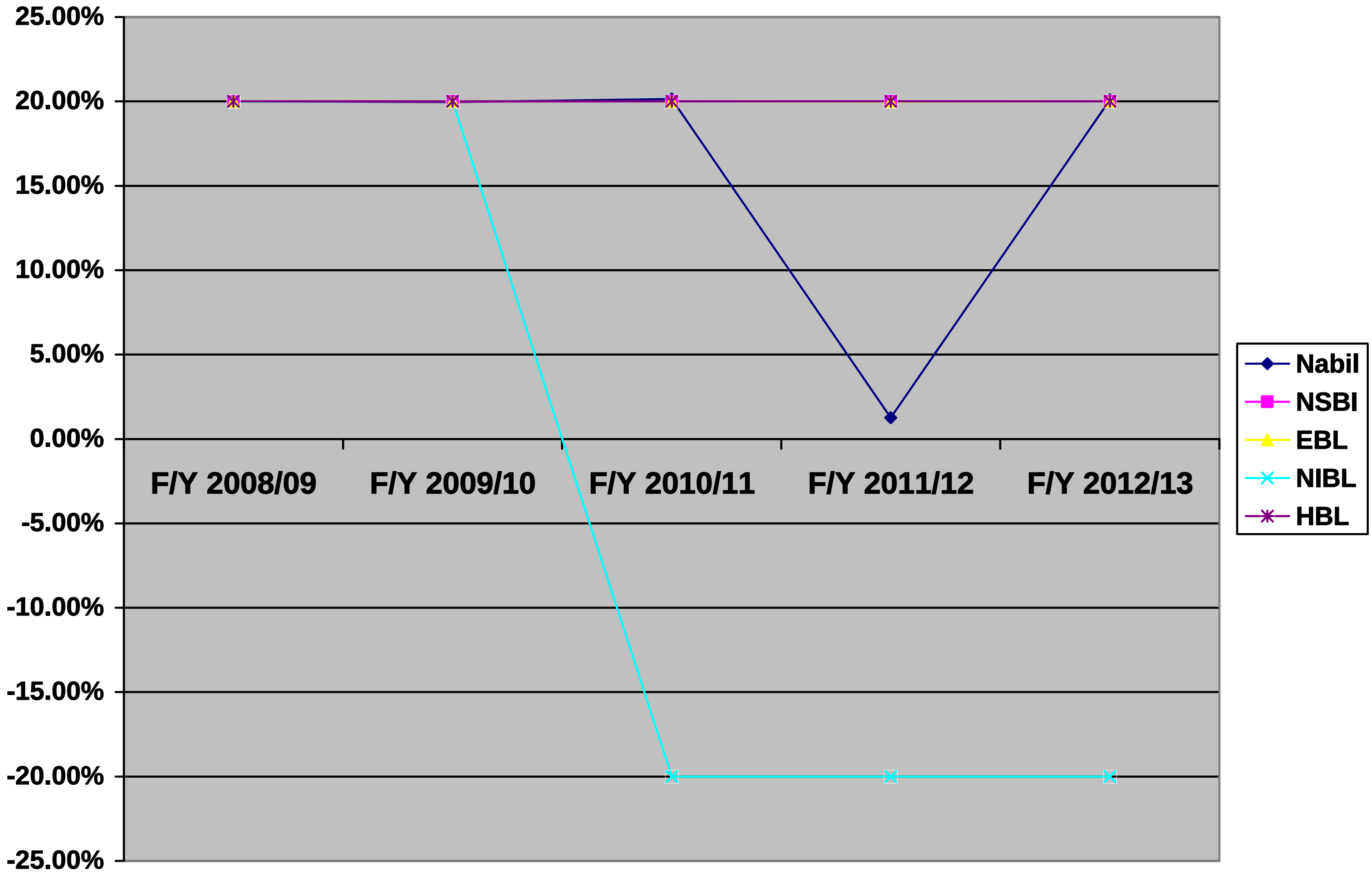
F/Y	Nabil	NSBI	EBL	NIBL	HBL
2008/09	20.01%	20.00%	20.00%	19.99%	20.00%
2009/10	19.96%	19.99%	20.00%	20.00%	20.00%
2010/11	20.15%	20.00%	20.00%	-20.00%	20.00%
2011/12	1.26%	20.00%	19.89%	-20.00%	20.00%
2012/13	20.09%	20.00%	20.00%	-20.00%	20.00%
A.M.	**16.294%**	**19.98%**	**19.98%**	**-20.08%**	**20.00%**
S.D.	**7.52**	**0.0**	**0.04**	**19.58**	**0.0**
C.V.	**46.15%**	**0.00%**	**0.2%**	**-487.06%**	**0.00%**

Source: Official Website of Respective CBs

(For detail calculations see Annex-IV)

Every year, the financial institution should allocate at least 20% of the particular year's net profit as a general reserve fund according to the NRB rules & directives regarding the provision for general reserve.

From the above table, we see that the sample CBs have been able to maintain the provision of general reserve fund every F/Y. But only, the NIBL has not been capable to maintain the GRF as per the NRB directives since the F/Y 2005/06. Similarly, the GRF of Nabil was seen only 1.26% in the F/Y 2006/07. According to the C.V. analysis also, the level of the GRF of HBL & NSBI are seen the most consistent during the past five F/Y.



25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
-5.00%
-10.00%
-15.00%
-20.00%
-25.00%
F/Y 2008/09
F/Y 2009/10
F/Y 2010/11
F/Y 2011/12
F/Y 2012/13
Nabil
NSBI
EBL
NIBL
HBL

FigureNo.4.2

4.4. Adequacy of Capital Fund on RWA:

Table No.4.4.1

Adequacy of Capital Fund on RWA of Nabil

For Nabil			
F/Y	**% of Tier 1**	**% of Tier 2**	**TCF on RWA**
2008/09	11.45%	1.60%	13.05%
2009/10	12.12%	1.44%	13.56%
2010/11	11.35%	1.09%	12.44%
2011/12	10.78%	1.52%	12.31%
2012/13	10.40%	1.64%	12.04%
A.M.	**11.22%**	**1.458%**	**12.68%**

Source: ***www.nabilbank.com.np***

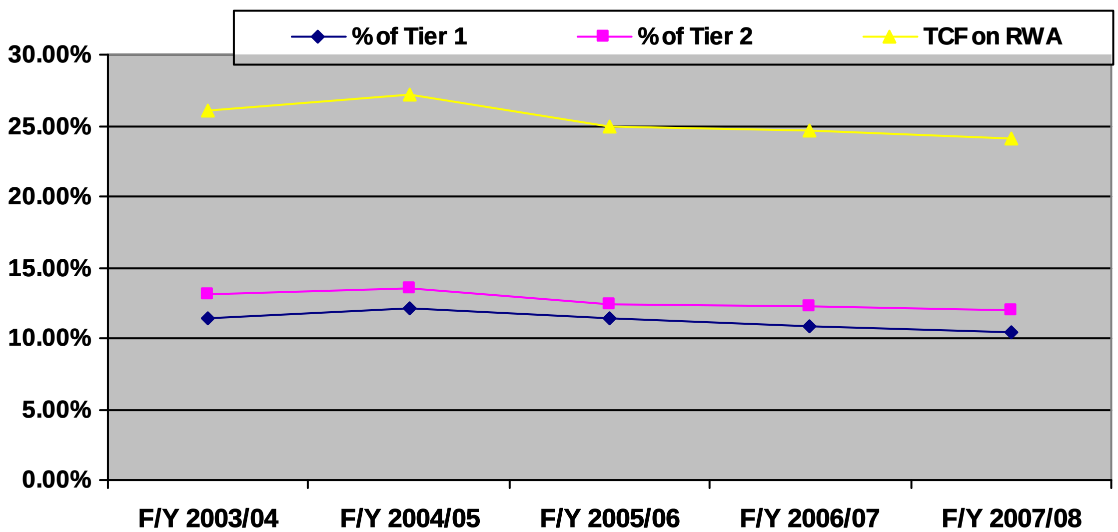


Figure No.4 3

Nabil has been capable of maintaining the adequacy of Capital Fund on RWA as directed by NRB. According to the recent NRB directives regarding the capital adequacy, every CBs have to maintain ***at least 11%*** of Tier 1 Capital & Tier 2 capital based on total RWA of the banks.

From above table we see, that Nabil has been capable to maintain the required capital as directed by NRB.

Table No.4.4.2

Adequacy of Capital Fund on RWA of NSBI

For NSBI			
F/Y	**% of Tier 1**	**% of Tier 2**	**TCF on RWA**
2008/09	9.47%	1.47%	10.95%
2009/10	8.68%	0.79%	9.47%
2010/11	10.53%	3.04%	13.57%
2011/12	10.53%	2.76%	13.29%
2012/13	9.97%	2.35%	12.32%
A.M.	**9.836%**	**2.082%**	**11.92%**

Source: ***www.nsbi.com.np***

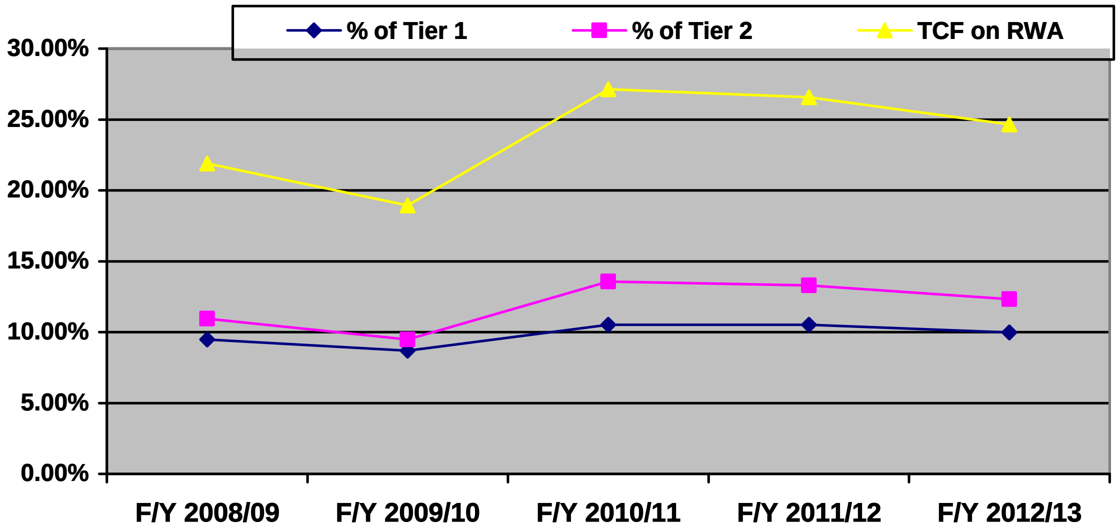


Figure No.4 4

From above table we see, that NSBI has been capable to maintain the required capital as directed by NRB. But it has not been capable to maintain the capital requirement in consistent. During the F/Y 2003/04 & F/Y 2004/05, the rate is seen below 11% with 10.95% & 9.47% respectively.

Table No.4.4.3

Adequacy of Capital Fund on RWA of EBL

For EBL			
F/Y	**% of Tier 1**	**% of Tier 2**	**TCF on RWA**
2008/09	9.60%	1.50%	11.10%
2009/10	8.90%	4.70%	13.60%
2010/11	8.20%	4.10%	12.30%
2011/12	7.80%	3.40%	11.20%
2012/13	9.04%	2.40%	11.44%
A.M.	**8.708%**	**3.22%**	**11.928%**

Source: www.everestbankltd.com.np

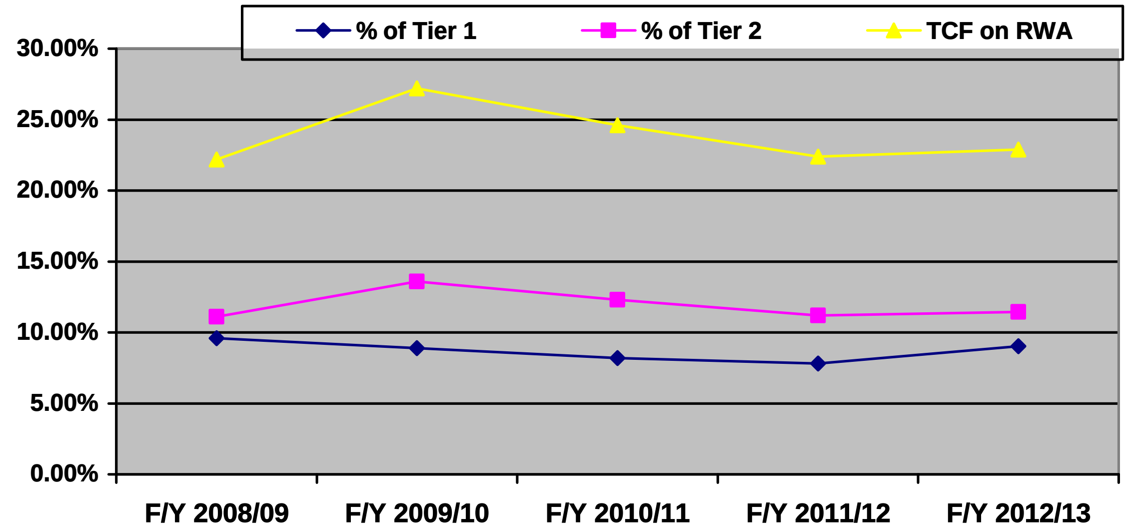


Figure No.4.5

From above table we see, that EBL has been capable to maintain the required capital as directed by NRB. It has been capable to maintain the sufficient amount of Tier I & Tier II capitals as directed by NRB. This shows the banks least exposure to the risk in the coming days.

Table No.4.4.4

Adequacy of Capital Fund on RWA of NIBL

For NIBL			
F/Y	**% of Tier 1**	**% of Tier 2**	**TCF on RWA**
2008/09	7.22%	4.02%	11.18%
2009/10	8.52%	3.06%	11.58%
2010/11	7.97%	4.01%	11.97%
2011/12	7.90%	4.26%	12.17%
2012/13	7.71%	3.57%	11.28%
A.M.	**7.864%**	**3.784%**	**11.636%**

***Source:* www.nibl.com.np**

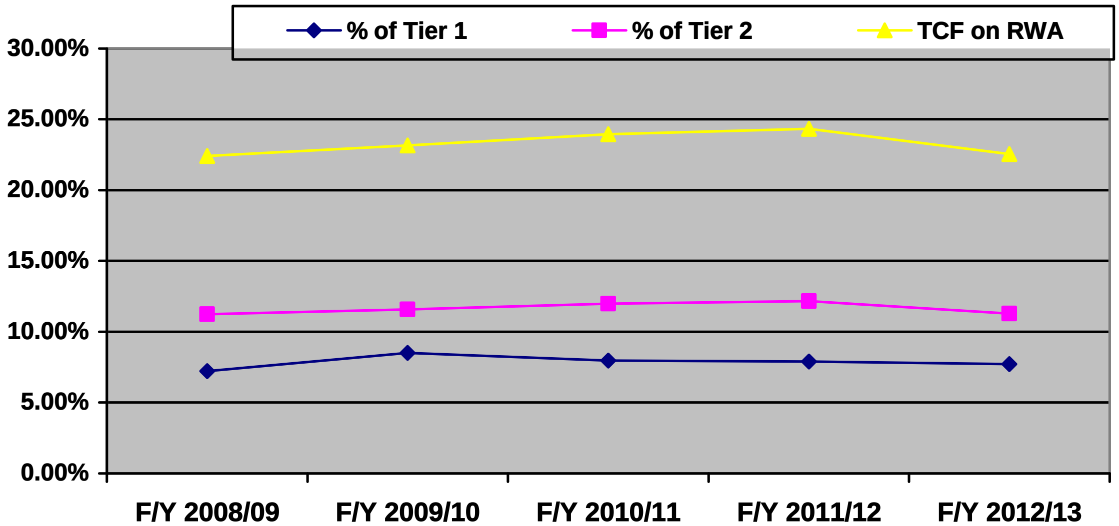


Figure No.4.6

From above table we see, that NIBL has been capable to maintain the required capital as directed by NRB. It has been capable to maintain the sufficient amount of Tier I & Tier II capitals as directed by NRB. This shows the banks least exposure to the risk in the coming days.

Table No.4.4.5

Adequacy of Capital Fund on RWA of HBL

For HBL			
F/Y	**% of Tier 1**	**% of Tier 2**	**TCF on RWA**
2008/09	7.69%	2.96%	10.65%
2009/10	8.33%	2.68%	11.01%
2010/11	8.65%	2.62%	11.26%
2011/12	9.61%	1.51%	11.13%
2012/13	9.64%	3.06%	12.70%
A.M.	**8.784%**	**2.566%**	**11.35%**

Source:* *www.himalayanbank.com.np

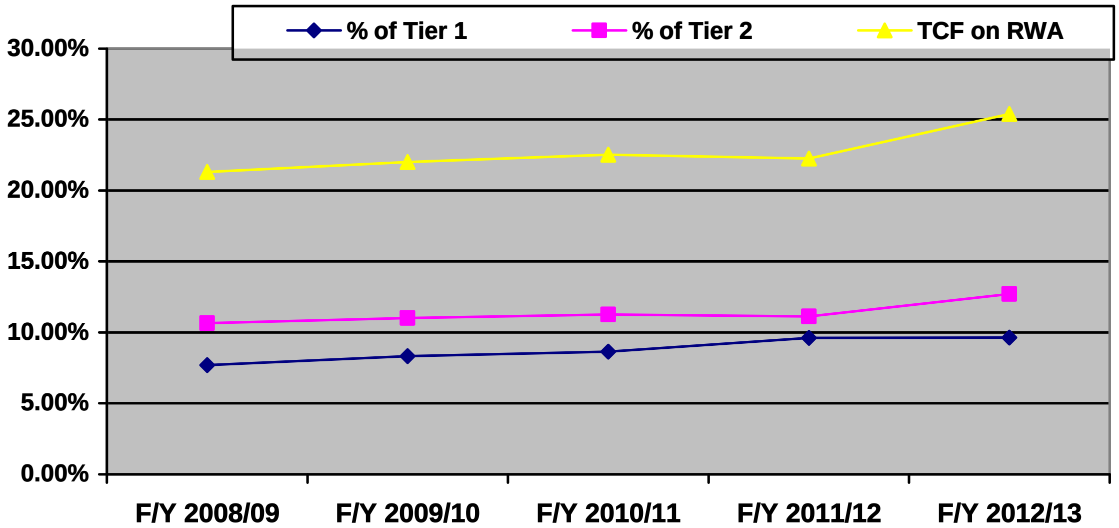


Figure No.4. 7

From above table we see, that HBL has been capable to maintain the required capital as directed by NRB. It has been capable to maintain the sufficient amount of Tier I & Tier II capitals as directed by NRB. This shows the banks least exposure to the risk in the coming days.

4.5. Loan Loss Provisions:

Table No.4.5.1

Loan Loss Provisions of Nabil

For Nabil for F/Y2008/09			
Types	**TLAC**	**LLP**	**Ratio**
Pass	286678920	127733990	44.57%
Restructured	-	-	-
Sub-standard	22139923	5140970	23.22%
Doubtful	6552224	32384357	49.40%

Bad	198986773	193404870	97.19%
For Nabil for F/Y2009/10			
Pass	19802229684	235345571	2.18%
Restructured	-	-	-
Sub-standard	22072562	6865463	31.10%
Doubtful	1834092	1415926	73.21%
Bad	120500230	116939615	103.04%
For Nabil for F/Y2010/11			
Pass	13010854147	13034343145	1%
Restructured	85293632	83958156	98.43%
Sub-standard	62665914	42573904	67.94%
Doubtful	29565952	13896064	47%
Bad	90392614	85467837	94.55%
For Nabil for F/Y2011/12			
Pass	15638484983	175502575	1.12%
Restructured	862477999	79841094	9.26%
Sub-standard	119704599	56636400	47.31%
Doubtful	14471646	7119443	49.20%
Bad	44117738	38145522	86.46%

Source: www.nabilbank.com.np

For Nabil for F/Y2012/13			
Types	**TLAC**	**LLP**	**Ratio**
Pass	21587743031	29174142	0.14%
Restructured	10631308	3026253	28.47%
Sub-standard	66111308	32305327	48.78%
Doubtful	42575948	21265253	49.95%
Bad	52288738	46096041	88.16%

Source: www.nabilbank.com.np

$$LLP\ Ratio = \frac{LLP}{TLACt} \times 100$$

Table No.4.5.2

Loan Loss Provisions of NSBI

For NSBI for F/Y2008/09			
Types	**TLAC**	**LLP**	**Ratio**
Pass	4762590360	44776860	0.94%
Restructured	423421920	45790830	10.81%
Sub-standard	1116600	149480	13.39%
Doubtful	69303360	33535080	4.84%
Bad	275401498	263919410	95.83%
For NSBI for F/Y2009/10			
Pass	5886791147	55863325	0.95%
Restructured	411539060	51961431	12.63%
Sub-standard	11912170	2494642	20.94%
Doubtful	6515490	1020691	16%
Bad	422589350	414128352	97.99%

Source:* *www.nsbi.com.np

For NSBI for F/Y 2010/11			
Types	**TLAC**	**LLP**	**Ratio**
Pass	7393297710	70841219	0.95%
Restructured	342821915	46277979	13.50%
Sub-standard	1797016	318214	17.70%
Doubtful	3842595	1921298	50%
Bad	499697308	495361697	99.13%
For NSBI for F/Y 2011/12			
Pass	9262671752	91486927	0.09%
Restructured	343624701	66461165	19.34%

Sub-standard	3284812	54869	16.59%
Doubtful	11167991	3892644	34.86%
Bad	4443021938	442215888	99.5%
For NSBI for F/Y 2012/13			
Pass	11981058849	117922667	0.98%
Restructured	276747296	47763975	17.26%
Sub-standard	3874987	566279	14.61%
Doubtful	21626680	9869035	45.63%
Bad	462908600	456395830	98.59%

Table No.4.5.3

Loan Loss Provisions of EBL

For EBL for F/Y 2008/09			
Types	**TLAC**	**LLP**	**Ratio**
Pass	5991085718	135522405	2.3%
Restructured	-	-	-
Sub-standard	11082572	2770643	25%
Doubtful	40494733	20247366	50%
Bad	53178064	53178064	100%
For EBL for F/Y 2009/10			
Types	**TLAC**	**LLP**	**Ratio**
Good	7453205999	74532050	0.99%
Restructured	318076527	37732600	11.86%
Sub-standard	4408738	1102184	25%
Doubtful	1977471	588735	29.77%
Bad	122421536	122421536	100%

For EBL for F/Y 2010/11			
Pass	9757195136	97571951	0.99%
Restructured	249823322	31227941	12.5%
Sub-standard	10669326	2667331	25%
Doubtful	683784	341692	50%
Bad	117662660	117882660	100%
For EBL for F/Y 2011/12			
Pass	13750623016	137506230	0.99%
Restructured	218884136	27360517	12.5%
Sub-standard	4218482	1057620	25%
Doubtful	2353289	1176645	50%
Bad	106607165	106667165	100%
For EBL for F/Y 2012/13			
Pass	18555269076	185552691	1%
Restructured	153852318	19231540	12.5%
Sub-standard	6306745	1576686	25%
Doubtful	745926	372963	50%
Bad	120257697	120257697	100%

Source:* *www.everestbankltd.com.np

Table No.4.4.4

Loan Loss Provisions of NIBL

For NIBL for F/Y 2008/09			
Types	**TLAC**	**LLP**	**Ratio**
Pass	7157131478	70830632	0.98%
Restructured	-	-	-
Sub-standard	10839263	2727587	25.2%
Doubtful	63878948	29896016	46.8%

Bad	106716798	104986750	98.38%
For NIBL for F/Y 2009/10			
Pass	10172289866	101059649	0.09%
Restructured	-	-	-
Sub-standard	821624	211972	25.8%
Doubtful	74941884	37557734	50.1%
Bad	205110623	188279019	91.8%
For NIBL for F/Y 2010/11			
Pass	12869277285	128759941	1%
Restructured	36381498	36381498	100%
Sub-standard	44238859	11059715	25%
Doubtful	497100	248550	50%
Bad	227775082	225499083	98.99%
For NIBL for F/Y 2011/12			
Pass	17309513613	173495470	1%
Restructured	37614741	4701842	12.5%
Sub-standard	96893690	24572650	25%
Doubtful	86049276	43084601	50%
Bad	239028584	236817951	99%

***Source:* www.nibl.com.np**

For NIBL for F/Y 2012/13			
Types	**TLAC**	**LLP**	**Ratio**
Pass	27176973284	274449428	1%
Restructured	42860469	5357559	12.5%
Sub-standard	61737243	15434311	25%
Doubtful	20724497	10401937	50.2%
Bad	22709243	227009243	100%

Source:* *www.nibl.com.np

Table No.4.5.5

Loan Loss Provisions of HBL

For HBL for F/Y 2008/09			
Types	**TLAC**	**LLP**	**Ratio**
Pass	9566445761	96016810	1%
Restructured	185313770	23164221	12.5%
Sub-standard	224318058	62628890	27.92%
Doubtful	375017864	184229769	49.13%
Bad	4935035565	476711113	96.60%
For HBL for F/Y 2009/10			
Pass	11275992182	112782502	1%
Restructured	496176174	62022022	12.5%
Sub-standard	423163354	110338076	26.07%
Doubtful	54474884	27624508	51%
Bad	669824400	654994536	97.79%

Source:* *www.himalayanbank.com.np

For HBL for F/Y 2010/11			
Types	**TLAC**	**LLP**	**Ratio**
Pass	14055103815	141354553	1%
Restructured	666114444	534565562	8.03%
Sub-standard	107227888	61953985	57.78%
Doubtful	228498188	155755034	68.16%
Bad	705031747	706896393	100%

For HBL for F/Y 2011/12			
Pass	16697714159	167225322	1%
Restructured	454394398	140064491	30.82%
Sub-standard	72076059	18349848	25.46%
Doubtful	194976256	97488128	50%
Bad	374562991	372599028	99.48%
For HBL for F/Y 2012/13			
Pass	19357600250	19649075	10.15%
Restructured	344783696	156137866	45.29%
Sub-standard	53919981	13479995	25%
Doubtful	214476314	107238157	50%
Bad	208832928	208746594	99.95%

Source: www.himalayanbank.com.np

4.6. <u>Test of Hypothesis:</u>

Under this topic, an effort has been made to test the significance regarding the parameter of the population based on drawn from the population. Generally, the following steps are followed for the test of hypothesis.

a. Formulation of Hypothesis
   i. Null Hypothesis
   ii. Alternative Hypothesis
b. Computation of test statistic
c. Fixing the level of significance
d. Finding the criteria region
e. Deciding the two tailed or one tailed test
f. Making decision

4.6.1. <u>Test of Hypothesis on Homogeneity of CD Ratio of Sample CBs:</u>

Null Hypothesis (H_o): «1=«2=«3=«4=«5 i.e. there is no significant difference among mean CD Ratio of Nabil, NSBI, EBL, NIBL & HBL &i.e. CD ratio of CBs are homogenous.

Alternative Hypothesis (H_1): «1≠«2≠«3≠«4≠«5 i.e. there is a significant difference among mean CD Ratio of Nabil, NSBI, EBL, NIBL & HBL.

(For detail calculations see Annex-V)

Table No.4.6.
One-way ANOVA Table for CD Ratio

Source of Variation	Sum of Square	d.f.	Mean Square	F ratio= $\frac{MSC}{MSF}$
Between samples	SSC=1410.84	k-1= 5-1=4	MSC= $\frac{1410.84}{4}$ =352.71	F= $\frac{MSC}{MSF}$ = $\frac{352.71}{34.41}$
Within samples(Error)	SSE=688.2	n-k= 25-5=20	MSE= $\frac{688.2}{20}$ =34.41	
Total	TSS=2099.04	n-1=24		F=10.25

Critical Value: The tabulated value of F at 5% level of significance for 4& 20 d.f. is 2.87.

Decision: Since calculated F is greater than the tabulated value, the alternative hypothesis, H_1 is accepted & hence the null hypothesis, H_0 is rejected.

Therefore, we conclude that there is a significant difference among mean CD Ratio of Nabil, NSBI, EBL, NIBL & HBL.

4.6.2. Test of Hypothesis on Homogeneity of CRR of Sample CBs:

Null Hypothesis (H_o): «1=«2=«3=«4=«5 i.e. there is no significant difference among mean CRR of Nabil, NSBI, EBL, NIBL & HBL &i.e. CRR of CBs are homogenous.

Alternative Hypothesis (H_1): «1≠«2≠«3≠«4≠«5 i.e. there is a significant difference among mean CRR of Nabil, NSBI, EBL, NIBL & HBL.

(For detail calculations see Annex-VI)

Table No.4.7.
One-way ANOVA Table for CRR

Source of Variation	Sum of Square	d.f.	Mean Square	F ratio= $\frac{MSC}{MSE}$
Between samples	SSC=70.69076	k-1=5-1=4	MSC $\frac{70.69076}{4}$ =17.67269	F= $\frac{MSC}{MSE}$ = $\frac{17.67269}{1.8095}$
Within samples (Error)	SSE=36.19	n-k=25-5=20	MSE= $\frac{36.19}{20}$ =1.8095	
Total	TSS=106.8844	n-1=24		F=9.77

Critical Value: The tabulated value of F at 5% level of significance for 4& 20 d.f. is 2.87.

Decision: Since calculated F is greater than the tabulated value, the null hypothesis, H_o is rejected & hence the alternative hypothesis, H_1 is accepted. Therefore, we conclude that there is a significant difference among mean CRR of Nabil, NSBI, EBL, NIBL & HBL.

CHAPTER FIVE

Summary, Conclusion & Recommendations

5.1. Summary

The main reason of the business fluctuation of modern times is the expansion and contraction of money and credit. In modern economics, there is the circulation of credit money many times more than the volume of bank note and coins. The central bank, the highest monetary authority of the country should, therefore, control the volume of money and credit for business stability. Since the bank notes are issued by the central bank, it can directly control the volume of money. However, the central bank controls credit through indirect measures. Hence, in an ordinary sense, the policy of the central bank related to the control of money and credit is known as monetary policy. Based on this policy, the central bank of every country makes & gives directives to the different types of financial institutions for their effective & smooth operation for the economic benefits of the country.

NRB has also updated the financial institution establishment policy with changes where necessary to ensure financial sector stability. Directives have been served to these institutions to increase their paid-up capital base with a view to ensure bank's capacity to bear possible risks of their banking transactions & to encourage merges when necessary. Accordingly, the new licensing policy in place requires having paid-up capital of Rs.2 billion for new commercial banks ("A" class financial institutions) to open. The concept of regional banks has been eliminated. Paid-up capital base for development banks & finance companies has also been raised. Such capital requirement for microfinance companies to open, however, has not been changed with a view to encourage micro-finance companies to expand. According to the new licensing policy, providing proof of mandatory paid-up capital base by June/July 2010 is a pre-condition for those which have submitted proposals to open new finance institutions. This provision has been made considering the entry of Nepal in WTO. In case of operating financial institutions, they are required to comply with this provision by June/July 2013. Provisions such as individuals intending to invest in these institutions require to proof of tax clearance, & they are not blacklisted by the CIC been made effective.

As a regulator of country's financial & banking institutions, NRB always directly & indirectly advised banks & financial institutions to increase their financial base. The plan for capital enhancement is one of the best solutions to increase capital strength of banks & complying Basle Accord. The global mantra of facing competition lies in growing big. This is not survival of the fittest alone, survival of "biggest & fittest" is the new theory formed under globalization of world finance.

Banks should pump billions, & still better if they can pump it in hard foreign currencies. This idea of curious policy makers is an example of how the whole banking system is dragged up for competition. The volume of competition & the way it could take place in future are just a matter of guess now. The government & the NRB as a banker's bank want all public banks, private banks & joint venture banks to be financially strong & healthy because there are lot of challenges & opportunities in coming days.

To maintain financial stability, inspection & supervision system has been made more effective in addition to the updated regulatory works. The time-to-time different directives to the financial institutions by the NRB have been also an effective tool. Following this, a separate monitoring committee has been established to cater for the banks in problem & in-depth supervision & monitoring of such banks has been started. As per the policy of preparing annual reports timely inspection & supervision is done by NRB. To improve the weaknesses & shortcomings observed in the course of supervision, timely directives based on the inspection reports are being issued to the concerned banks & financial institutions. Providing preliminary clearance to the banks prior to approval of their financial statement publication has also been started. Provision of compensation payment for failure to maintain the mandatory cash reserve level & failure to provide deprived class loans has been enforced.

Banks & financial institutions are the backbone of the economic development of a country. They have promoted industrialization & economic development by channeling the public deposit into these sectors. The establishment of the new bank & financial institutions leads more competition in the banking market. To win the competition, banks provide more facilities to the customers with modern technology. At the same time, the probability of loss becomes significant to banks, which are running behind in the competition. In case of insolvency, the public depositors as well as the shareholders of the bank may suffer significantly. It will adversely affect the overall banking sector. Therefore, the supervisory & monitoring of banks & financial institutions is essential to find out the solvency position & take corrective action in time when needed. For this purpose, the central bank of the country, NRB monitors & gives directives to CBs & financial institutions after supervision & inspection.

5.2. Conclusions

Banks & financial institutions in Nepal will have to benchmark themselves against some of the best in the world, for a strong & resilient banking & financial system. Therefore, banks need to go beyond peripheral issues & tackle significant issues like improvements in profitability, efficiency & technology, while achieving economies of scale through available cost effective solutions. These are some of the major issues that need to be addressed by banks in recent scenario, for their success & not just survival, in the changing milieu.

Adequate capital reserve is necessary for financial institutions to minimize risks. Financial crisis faced by the Southeast Asian countries in 1997-98 due to inadequate capital reserve is a living memory. BASEL II guides the capital-structuring requirement, which has been implemented. Accordingly, the banks & finance institutions are required to maintain capital adequacy at 11.0% starting from F/Y 2010/2011.

Another directive of NRB to licensed banks & financial institutions deals with the financial statement. Starting from F/Y 2005/2006, they are required to open capital adjustment fund to meet mandatory minimum paid-up capital by allocating a minimum of 10% of paid-up capital from their profit. For financial institutions not earning profit, they are required to comply with this provision by managing resources from whatsoever sources at their disposal.

In the interest of financial stability, inactive loan amount should be below 5% of total loan. In Nepal, inactive loan amount is high in the banking sector particularly because of some clients being delinquent. Victims of high inactive loan amount are the government-owned banks. Among the measures taken so far to reduce the level of inactive loan, blacklisting has proved more effective.

CD Ratio is one of the most important indicators of the CBs financial performance as prescribed the central bank of Nepal,NRB. It shows the actual liquidity position of the CBs. If 75% of amount deposited by the customers are invested in various sectors, it is considered satisfactory. It is good sign. In the above sample CBs, in average, except the CD ratio of Nabil & HBL, others CD ratios are in the strong position. According to the C.V. analysis, the CD ratio of EBL is seen most consistent among the sample banks as its C.V. is seen the least among the sample CBS.

The level of CRR influences the commercial banks' credit creation capacity. If there is a higher rate of CRR, then the CBs need to keep the higher portion of deposits for CRR purpose with the central bank. As such, they have less deposit for lending purpose. Hence, the higher CRR squeezes the money expansion in the economy. Conversely, the low CRR rate means CBs need to keep less of the deposits so that they can lend more, resulting in the expansion of money supply in the economy.

In average, NIBL have maintained the higher level of CRR with 9.876% among the sample CBs & Nabil have maintained the least level of CRR with 5.336%. According to the C.V. analysis also, the level of the CRR of NIBL is seen the most consistent during the past five F/Y.

Every year, the financial institution should allocate at least 20% of the particular year's net profit as a general reserve fund according to the NRB rules & directives regarding the provision for general reserve. This provision of general reserve fund helps the CBS to keep in the secured side in crisis of fund.

We see that the sample CBs have been able to maintain the provision of general reserve fund every F/Y. But only, the NIBL has not been capable to maintain the GRF as per the NRB directives since the F/Y 2010/11. Similarly, the GRF of Nabil was seen only 1.26% in the F/Y 2011/12. According to the C.V. analysis also, the level of the GRF of HBL & NSBI are seen the most consistent during the past five F/Y.

According to the recent NRB directives regarding the capital adequacy, every CBs have to maintain ***at least 11%*** of Tier 1 Capital & Tier 2 capital based on total RWA of the banks. Nabil has been capable of maintaining the adequacy of Capital Fund on RWA as directed by NRB. The TCF on RWA of Nabil in average is seen 12.68%. NSBI has been capable to maintain the required capital as directed by NRB. But it has not been capable to maintain the capital requirement in consistent. During the F/Y 2008/09 & F/Y 2009/10, the rate is seen below 11% with 10.95% & 9.47% respectively. EBL, NIBL & HBL has been capable to maintain the required capital as directed by NRB. It has been capable to maintain the sufficient amount of Tier I & Tier II capitals as directed by NRB. This shows the banks least exposure to the risk in the coming days.

According to the NRB directive regarding to the loan loss provision every CBs have to classify the total credit amount into five categories namely:

Pass (Good), restructured, sub-standard, doubtful & bad loans. They are classified according to their recovery level & payment of loan & advance by the customers to the banks. In the study, we found that every sample CBs we have taken have strictly followed the NRB directives on loan loss provision & kept according to standard level as prescribed by the NRB. This helps to keep the CBs in the safe side & escape from the credit risk.

Under, the test hypothesis, since calculated F is greater than the tabulated value, the alternative hypothesis, H_1 is accepted & hence the null hypothesis, H_0 is rejected. Therefore, we conclude that there is a significant difference among mean CD Ratio of Nabil, NSBI, EBL, NIBL & HBL.

Under, the test hypothesis, since calculated F is greater than the tabulated value, the null hypothesis, H_o is rejected & hence the alternative hypothesis, H_1 is accepted. Therefore, we conclude that there is a significant difference among mean CRR of Nabil, NSBI, EBL, NIBL & HBL.

5.3. Recommendations

1. Proper co-ordination among the NRB, SEBON, & NEPSE should be continued in the coming days for the proper follow of the directives of the all autonomous bodies.

2. NRB has to encourage the simultaneous growth of a sound & competitive financial system in the country. Such objective supports the promotion of momentum policy with stabilization driving economic development of the country.

3. The central bank of the country, NRB has to review its directives time-to-time according to the requirement of the economic situation of the country.

4. Strict action should be taken by the NRB to the CBs who have not followed the directives as prescribed by it.

5. The loan defaulters should be taken into strict legal action in the joint effort of the NRB, Loan Recovery Tribunal, GON & the concerned CBs.

6. As, Nepal has entered into WTO, & government has decided to let the foreign banks to enter into the Nepalese market, the capital requirement for the establishment of new CBs should be strictly follow-up by the local CBs also.

7. Information-technology aid should also be taken by the central bank to make the effective & efficient flow of information to the financial institutions.

8. Proper provision of collection of capital fund required should be made by the central bank. The mode of collection should also be properly mentioned in the act by the central bank.

9. Loan loss provision & the classification of the loans by the CBs should be continued in the coming days to protect from the crisis.

10. Consistency in the indicators should be made among the CBs as far as possible by the central bank, NRB using its authorities & flowing effective directives.

11. Proper implementation of bills & acts namely: Bankruptcy Act, 2063, Credit Rating Institution Bill, Assets Management Corporation Bill, Trustee Bill, Anti-Money Laundering Bill should be passed as soon as possible by GON & also be implemented with the co-ordination of NRB.

12. NRB should not only issue directives for the sake of issuing them but a proper homework needs to be done to combat the problems associated with the directives. It should not happen as the directives related to L/C, where prior study was not done & within a few days of the issuance of the directives, they had to be amended.

13. NRB should be more practicable while issuing the directives to the CBs. Directives should be straight forward, reasonable & with no loopholes with context to the country & not just to fulfill the duty of the central bank only but also as the care-taker of the economy of the country.

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Annex-I

List of Commercial Banks established under different acts & laws:

S.No.	Name of Bank
1	Nepal Bank Limited
2	Rastriya Banijya Bank Limited
3	Agriculture Development Bank Limited
4	NABIL Bank Limited
5	Nepal Investment Bank Limited
6	Standard Chartered Bank Nepal Limited
7	Himalayan Bank Limited
8	Nepal S.B.I. Bank Limited
9	Nepal Bangladesh Bank Limited
10	Nepal SBI Bank Limited
11	Bank of Kathmandu Limited
12	Nepal Credit and Commerce Bank Limited
13	Lumbini Bank Limited
14	Nepal Industrial and Commercial Asia Bank –NIC Asia
15	Machhapuchhre Bank Limited
16	Kumari Bank Limited
17	Laxmi Bank Limited
18	Siddhartha Bank Limited
19	Global IME Bank Limited
20	Citizens Bank International Limited
21	Prime Commercial Bank Limited
22	Sunrise Bank Limited
23	Grand Bank Nepal Limited
24	N. M. B. Bank Limited
25	Kist Bank Ltd
26	Janta Bank Nepal Limited
27	Mega Bank Limited
28	Commerz and Trust Bank Limited
29	Civil Bank Limited
30	Century Commercial Bank Limited
31	Sanima Bank Limited

Source: *Nepal Rasrtra Bank, Bank Management Dept., Thapthali, Kathmandu*

Annex-II

Calculation of CD Ratios of Sample CBs

For Nabil				
F/Y	**TD**	**TC**	**CD Ratio(X)**	**(X- $\overline{X}$)^2**
2008/09	14119.03	8189.99	58.01%	66.7489
2009/10	14586.61	10586.17	72.57%	40.8321
2010/11	19347.40	12922.54	66.79%	0.3721
2011/12	23342.29	15545.78	66.60%	0.1764
2012/13	31915.05	21365.05	66.94%	0.5776
N=5			∑X=330.91%	**∑(X-** $\overline{X}$ **)^2**=108.7071

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 66.18\%$$

$$(S.D.) = \sqrt{\frac{\sum(X-\overline{X})}{n}} = 4.66$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 7.05\%$$

For NSBI				
F/Y	**TD**	**TC**	**CD Ratio(X)**	**(X- $\overline{X}$)^2**
2008/09	7198.33	7130.13	61.87%	96.079204
2009/10	5684.77	10126.06	71.04%	0.399424
2010/11	11002.04	12776.21	67.50%	17.405584
2011/12	11445.29	17286.43	79.59%	23.892544
2012/13	13715.39	26996.65	78.36%	44.729344
N=5			∑X=358.36%	**∑(X-** $\overline{X}$ **)^2**=182.5061

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 71.672\%$$

$$(S.D.) = \sqrt{\frac{\sum (X - \overline{X})}{n}} = 6.04$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 8.43\%$$

For EBL				
F/Y	**TD**	**TC**	**CD Ratio(X)**	**$(X-\overline{X})^2$**
2008/09	8063.90	5884.12	72.97%	1.5376
2009/10	10097.69	7618.67	75.45%	1.5376
2010/11	13802.44	9801.31	71.01%	10.24
2011/12	18186.25	13664.08	75.13%	0.8464
2012/13	23976.30	18339.09	76.49%	5.1984
N=5			$\sum$X=371.05%	$\sum(X-\overline{X})^2$=19.36

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 74.21\%$$

$$(S.D.) = \sqrt{\frac{\sum (X - \overline{X})}{n}} = 1.97$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 2.65\%$$

For NIBL				
F/Y	**TD**	**TC**	**CD Ratio(X)**	**$(X-\overline{X})^2$**
2008/09	11524.68	7130.13	61.87%	96.079204
2009/10	14254.57	10126.06	71.04%	0.399424
2010/11	18927.31	12776.21	67.50%	17.405584
2011/12	24488.86	17286.43	79.59%	23.892544
2012/13	34451.73	26996.65	78.36%	44.729344
N=5			$\sum$X=358.36%	$\sum(X-\overline{X})^2$=182.5061

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 71.672\%$$

$$(S.D.) = \sqrt{\frac{\sum(X-\overline{X})}{n}} = 6.04$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 8.43\%$$

For HBL				
F/Y	**TD**	**TC**	**CD Ratio(X)**	**(X- $\overline{X}$)^2**
2008/09	22010.33	11951.87	54.30	1.41
2009/10	24814.01	12424.52	50.07	29.35
2010/11	26490.85	14642.56	55.27	0.05
2011/12	30048.42	16997.98	56.57	1.17
2012/13	31842.78	19497.52	61.23	32.97
N=5			∑X=277.44%	**∑(X- $\overline{X}$)^2**=64.95

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 55.488\%$$

$$(S.D.) = \sqrt{\frac{\sum(X-\overline{X})}{n}} = 3.60$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 6.49\%$$

Annex-III

Calculation of CRR of Sample CBs

For Nabil				
F/Y	**TD**	**TC & B Bal.**	**CRR(X)**	**$(X-\overline{X})^2$**
2008/09	14119.03	970.49	6.87%	2.35
2009/10	14586.61	536.06	3.68%	2.74
2010/11	19347.40	556.18	2.87%	6.08
2011/12	23342.29	1383.82	5.93%	0.35
2012/13	31915.05	2340.89	7.33%	3.98
N=5			$\sum X$=26.68%	$\sum(X-\overline{X})^2$=15.5

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 5.336\%$$

$$(S.D.) = \sqrt{\frac{\sum(X-\overline{X})}{n}} = 1.76$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 32.98\%$$

For NSBI				
F/Y	**TD**	**TC & B Bal.**	**CRR(X)**	**$(X-\overline{X})^2$**
2008/09	7198.33	864.43	12.01%	18.30
2009/10	5684.77	533.78	6.17%	2.44
2010/11	11002.04	870.31	7.91%	0.03
2011/12	11445.29	844.21	7.38%	0.12
2012/13	13715.39	711.91	5.19%	6.46
N=5			$\sum X$=38.66%	$\sum(X-\overline{X})^2$=27.35

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 7.732\%$$

$$(S.D.) = \sqrt{\frac{\sum (X - \overline{X})}{n}} = 2.34$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 30.26\%$$

For EBL				
F/Y	**TD**	**TC & B Bal.**	**CRR(X)**	**$(X-\overline{X})^2$**
2008/09	8063.90	631.80	7.83%	1.35
2009/10	10097.69	972.26	9.63%	1.80
2010/11	13802.44	1398.66	10.13%	1.30
2011/12	18186.25	1713.19	9.42%	0.18
2012/13	23976.30	1903.90	7.94%	1.10
N=5			$\sum X$=44.95%	$\sum(X-\overline{X})^2$=5.73

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 8.99\%$$

$$(S.D.) = \sqrt{\frac{\sum (X - \overline{X})}{n}} = 1.07$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 24.66\%$$

For NIBL				
F/Y	**TD**	**TC & B Bal.**	**CRR(X)**	**$(X-\overline{X})^2$**
2008/09	11524.68	1226.92	10.65%	0.60
2009/10	14254.57	1340.48	9.40%	0.23
2010/11	18927.31	2088.63	11.04%	1.35
2011/12	24488.86	2145.34	8.76%	1.25
2012/13	34451.73	3284.49	9.53%	0.12
N=5			$\sum X$=49.38%	$\sum(X-\overline{X})^2$=3.55

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 9.876\%$$

$$(S.D.) = \sqrt{\frac{\sum (X-\overline{X})}{n}} = 0.84$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 15.72\%$$

For HBL				
F/Y	**TD**	**TC & B Bal.**	**CRR(X)**	**$(X-\overline{X})^2$**
2008/09	22010.33	2001.21	9.09%	8.20
2009/10	24814.01	2014.47	8.12%	3.59
2010/11	26490.85	1401.68	5.29%	0.88
2011/12	30048.42	1449.79	4.82%	1.98
2012/13	31842.78	1214.03	3.81%	5.84
N=5			$\sum X=31.13\%$	$\sum(X-\overline{X})^2=20.49$

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 6.226\%$$

$$(S.D.) = \sqrt{\frac{\sum (X-\overline{X})}{n}} = 2.02$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 32.44\%$$

Annex-IV

Calculation of GRF of Sample CBs

For Nabil				
F/Y	**GRF**	**NP**	**GRF Ratio(X)**	**$(X-\bar{X})^2$**
2008/09	91120723	455311222	20.01%	13.81
2009/10	103800000	520114085	19.96%	13.44
2010/11	128000000	635262349	20.15%	14.87
2011/12	8500000	673959698	1.26%	226.02
2012/13	150000000	746468394	20.09%	14.41
N=5			$\sum X$=81.47%	$\sum(X-\bar{X})^2$=282.55

$$(A.M.) = \bar{X} = \frac{\sum X}{n} = 16.294\%$$

$$(S.D.) = \sqrt{\frac{\sum(X-\bar{X})}{n}} = 7.52$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 46.15\%$$

For NSBI				
F/Y	**GRF**	**NP**	**GRF Ratio(X)**	**$(X-\bar{X})^2$**
2008/09	12170335	60851673	20.00%	0.00
2009/10	11477326	57386634	19.99%	0.00
2010/11	23400395	117001973	20.00%	0.00
2011/12	50981769	254908844	20.00%	0.00
2012/13	49554152	247770758	20.00%	0.00
N=5			$\sum X$=99.99%	$\sum(X-\bar{X})^2$=0.00

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 19.998\%$$

$$(S.D.) = \sqrt{\frac{\sum(X-\overline{X})}{n}} = 0$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 0.00\%$$

For EBL				
F/Y	**GRF**	**NP**	**GRF Ratio(X)**	**$(X-\overline{X})^2$**
2008/09	28713340	143566683	20.00%	0.00
2009/10	34161600	170807797	20.00%	0.00
2010/11	47458200	237290936	20.00%	0.00
2011/12	59281900	297999729	19.89%	0.01
2012/13	90244000	451218613	20.00%	0.00
N=5			$\sum X = 99.89\%$	$\sum(X-\overline{X})^2 = 0.01$

$$(A.M.) = \overline{X} = \frac{\sum X}{n} = 19.98\%$$

$$(S.D.) = \sqrt{\frac{\sum(X-\overline{X})}{n}} = 0.04$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 0.2\%$$

For NIBL				
F/Y	**GRF**	**NP**	**GRF Ratio(X)**	**$(X-\bar{X})^2$**
2008/09	30534195	152670976	19.99%	572.17
2009/10	46429420	232147098	20.00%	576.96
2010/11	70107262	350536413	-20.00%	255.36
2011/12	100280500	501398853	-20.00%	255.36
2012/13	139800000	696731516	-20.07%	257.80
N=5			$\sum X$=-20.08%	$\sum(X-\bar{X})^2$=1917.45

$$(A.M.) = \bar{X} = \frac{\sum X}{n} = -4.02\%$$

$$(S.D.) = \sqrt{\frac{\sum(X-\bar{X})}{n}} = 19.58$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = -487.06\%$$

For HBL				
F/Y	**GRF**	**NP**	**GRF Ratio(X)**	**$(X-\bar{X})^2$**
2008/09	52610699	263053495	20.00%	0.00
2009/10	61655034	308275171	20.00%	0.00
2010/11	91491540	457457696	20.00%	0.00
2011/12	98364581	491822905	20.00%	0.00
2012/13	127173704	635868519	20.00%	0.00
N=5			$\sum X$=100.00%	$\sum(X-\bar{X})^2$=0.00

$$(A.M.) = \bar{X} = \frac{\sum X}{n} = 20.00\%$$

$$(S.D.) = \sqrt{\frac{\sum(X-\bar{X})}{n}} = 0.00$$

$$(CV) = \frac{S.D.}{Mean} \times 100 = 0.00\%$$

Annex-V

Test of Hypothesis on CD Ratios of Nabil, NSBI, EBL, NIBL & HBL:

X_1	X_2	X_3	X_4	X_5	$X_{1_1}^2$	X_2^2	X_3^2	X_4^2	X_5^2
58.01	71.46	72.97	61.87	54.30	3365.16	5106.53	5324.62	3827.90	2948.49
72.57	71.80	75.45	71.04	50.07	5266.40	5155.24	5692.70	5046.68	2507.00
66.79	69.00	71.01	67.50	55.27	4460.90	4761.00	5042.42	4556.25	3054.77
66.60	82.66	75.13	79.59	56.57	4435.56	6832.68	5644.52	6334.57	3200.16
66.94	88.00	76.49	78.36	61.23	4480.96	7744.00	5850.72	6140.29	3749.11
$\sum X_1$ = 330.91	$\sum X_2$ = 382.92	$\sum X_3$ = 371.05	$\sum X_4$ = 358.36	$\sum X_5$ = 277.44	$\sum X_{1_1}^2$ = 22008.98	$\sum X_2^2$ = 29599.45	$\sum X_3^2$ = 27554.98	$\sum X_4^2$ = 25905.69	$\sum X_5^2$ = 15459.53

Grand Total (T) $= \sum X_1 + \sum X_2 + \sum X_3 + \sum X_4 + \sum X_5$ =330.91+382.92+371.05+358.36+277.44 =1720.68

Correction Factor (C.F.) $= \frac{T^2}{N} = \frac{(1720.68)^2}{25}$ =118429.59

Total Sum of Squares (T.S.S.) $= \sum X_{1_1}^2 + \sum X_2^2 + \sum X_3^2 + \sum X_4^2 + \sum X_5^2 - C.F.$

=22008.98+29599.45+27554.98+25905.69+15459.53-118429.59 =2099.04

Sum of square between samples (S.S.C.) $= \frac{(\sum X_1)^2}{n_1} + \frac{(\sum X_2)^2}{n_2} + \frac{(\sum X_3)^2}{n_3} + \frac{(\sum X_4)^2}{n_4} + \frac{(\sum X_5)^2}{n_5} - C.F.$

$= \frac{(330.91)^2}{5} + \frac{(382.92)^2}{5} + \frac{(371.05)^2}{5} + \frac{(358.36)^2}{5} + \frac{(277.44)^2}{5} - 118429.59$ =1410.84

Sum of square within samples (S.S.W.) =T.S.S.-S.S.C. = 2099.04-1410.84=688.2

Annex-VI

Test of Hypothesis on CRR of Nabil, NSBI, EBL, NIBL & HBL:

X_1	X_2	X_3	X_4	X_5	$X_{1_1}^2$	X_2^2	X_3^2	X_4^2	X_5^2
6.87	12.01	7.83	10.65	9.09	47.20	144.24	61.31	113.42	82.63
3.68	6.17	9.63	9.40	8.12	13.54	38.07	92.74	88.36	65.93
2.87	7.91	10.13	11.04	5.29	8.24	62.57	102.62	102.62	27.98
5.93	7.38	9.42	8.76	4.82	35.16	54.46	88.74	88.74	23.23
7.33	5.19	7.94	9.53	3.81	53.73	26.94	63.04	63.04	14.52
$\sum X_1 =$ 26.68	$\sum X_2 =$ 38.66	$\sum X_3 =$ 44.95	$\sum X_4 =$ 49.38	$\sum X_5 =$ 31.13	$\sum X_{1_1}^2 =$ 157.87	$\sum X_2^2 =$ 326.28	$\sum X_3^2 =$ 408.45	$\sum X_4^2 =$ 456.18	$\sum X_5^2 =$ 214.29

Grand Total (T) = $\sum X_1 + \sum X_2 + \sum X_3 + \sum X_4 + \sum X_5$ =26.68+38.66+44.95+49.38+31.13=190.8

Correction Factor (C.F.) = $\frac{T^2}{N} = \frac{(190.8)^2}{25}$ =1456.1856

Total Sum of Squares (T.S.S.) = $\sum X_{1_1}^2 + \sum X_2^2 + \sum X_3^2 + \sum X_4^2 + \sum X_5^2 - C.F.$

=157.87+326.28+408.45+456.18+214.29-7.63=106.8844

Sum of square between samples (S.S.C.) = $\frac{(\sum X_1)^2}{n_1} + \frac{(\sum X_2)^2}{n_2} + \frac{(\sum X_3)^2}{n_3} + \frac{(\sum X_4)^2}{n_4} + \frac{(\sum X_5)^2}{n_5} - C.F.$

$= \frac{(26.68)^2}{5} + \frac{(38.66)^2}{5} + \frac{(44.95)^2}{5} + \frac{(49.38)^2}{5} + \frac{(31.13)^2}{5} - 7.63$ =70.69076

Sum of square within samples (S.S.W.) =T.S.S.-S.S.C. = 1555.44-1519.25=36.19