CHAPTER -1

INTRODUCTION

1.1 Background of the Study

Banking sector is an important part of the national economy. Banks take deposits, support the payment system and provide the largest source of funds on the market. Safe and sound banking system is of crucial importance for the financial stability and sustainable development. Nepal has a special characteristic of bank dominated financial sector. As the domestic capital and stock markets are in the initial stage of development, the banking sector largely dominates the entire financial sector.

While talking about the capital formation, Commercial Banks play a major role on it. Capital is one of the most important components for an organization. Actually, no organization can exist without capital. Without capital, it is impossible to establish any kind of business whether it is a general store or a big business house. Every organization is started with a zero position and only come onto existence when promoters, owners or shareholders finance on it as capital. Every organization should have enough capital to run business.

Counter parties from the risks like, credit and market risks. Otherwise the banks will use all the money of depositors in their own interests and depositors will have to suffer loss.

Capital adequacy has become one of the most significant factors for assessing the soundness of banking sector. Raise and utilization of funds are the primary functions of commercial Banks. As such, Commercial bank collects a large amount of deposits from general public. The depositors think that depositing their money in a bank is safe and relaxing. But, what does happen if the bank does not have enough capital funds to provide a buffer against future unexpected losses? Therefore, capital must be sufficient to protect a bank's depositors and counterparties from the risks like, credit and market risks. Otherwise the banks will use all the money of depositors in their own interests and depositors will have to suffer loss.

After the restoration of multiparty democracy, several Commercial Banks make a way to the business in Nepal. At present, Commercial banks hold a large share of economic activities of the country. Stock market has been dominated by commercial banks since a decade. Every day we can see trading of large amount of stock transactions of commercial banks. Not only in the stock market, but commercial bank also has been major contribution to generate revenue of country. They have been paying a large amount of tax every year. Banking sector has become a mainstay of the economy of the country.

Establishment of Commercial Banks is governing by Commercial Bank Act, 2031 BS and company act, 2053 BS. However, Nepal Rastra Bank (NRB), as a regulatory body for banks and financial institutions, has right to specify the capital requirement and other requirements. Being the Central bank of Nepal, NRB has responsibility to give special attention to the interest of depositors. It is to be noted that as per banking and financial statistics of NRB, the Commercial banks of Nepal have collected more than RS.297 billion money from depositors at the end of Fiscal year 2011/2012. Such a big amount of money should have to secure and NRB has the major responsibility to protect it.

In March 2001 NRB issued various directives to be complied by all Commercial Banks of the country. The directives consist of nine volumes. The NRB directives No. 1 include the capital adequacy norms for commercial banks indicating the requirement of maintaining capital fund to the prescribed ratios. The directives are said to be based on the internationally accepted norms of Basel Committee. The Basel Committee on banking supervision is a committee of banking supervisory authorities which has established by the central bank Governors of the group of ten countries in 1975. It consists of senior representative of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Sweden, Switzerland, United Kingdom and United states. It usually meets at the Bank of international settlement in Basel, Switzerland, where its permanent secretariat is located. The Basel Committee issued Basel capital Accord in 1988. The Basel Capital Accord was implemented worldwide by 1992 which is presently in practice. This Basel Accord has replaced by a new Basel Capital Accord 2006.

1.1.1 Historical Background

In Nepal, the banking is very old even the evolution of financial institution of Nepal is growing day by day now. Before the establishment of Tejarath Adda' in 1877 A.D. by Rana Prime minister Ranodeep Singh, the unorganized sectors, moneylenders, goldsmiths and landlords were in effect and they had universal domination in monetary matters. The modern banking system of Nepal is the result of vary old financial institution 'Tejarath Adda'. In Nepal, the first commercial bank Nepal Bank Limited was established in 1937. After a decade, the establishment of NBL, another commercial bank Rastriya Banijay Bank was established under the ownership of Nepal Government. Thereafter, Nepal government adopted open and liberalized policies in the country reflected by the structural adjustment process, which included privatization, tariff adjustments, liberalization of industrial licensing, easing of terms of foreign investment and more liberal trade and foreign exchange regime was initiated. With the adaptation of liberalization policy, there has been development of the domestic financial institutions. Prior to 1988, there was no uniform international regulatory standard for setting bank capital requirements.

In 1988, the Basel Committee on Banking Supervision (BCBS) developed the Capital Accord, which is known as Basel I, to align the capital adequacy requirements applicable especially to banks in G-10 countries. Basel introduced two key concepts. First, it defined what banks could hold as capital, as well as designating capital as Tier 1 or Tier 2 according to its loss-absorbing or creditor-protecting characteristics. The second key concept introduced in Basel I was that capital should be held by banks in relation to the risks that they face. The major risks faced by banks relate to the assets held on balance sheet. Thus, Basel I calculated banks' minimum capital requirements as a percentage of assets, which are adjusted in accordance to their riskiness and assigning risk weights to assets. Higher weights are assigned to riskier assets such as corporate loans, and lower weights are assigned to less risky assets, such as exposures to government.

The BCBS released the "International Convergence of Capital Measurements and Capital Standards: Revised Framework", popularly known as Basel II, on June 26, 2004. This framework was updated in November 2005 and a comprehensive version

of the framework was issued in June 2006. Basel II builds significantly on Basel I by increasing the sensitivity of capital to key bank risks. In addition, Basel II recognizes that banks can face multitude of risks, ranging from the traditional risks associated with financial intermediation to the day-to-day risks of operating a business as well as the risks associated with the ups and downs of the local and international economies. As a result, the new framework more explicitly associates capital requirements with the particular categories of major risks that banks face.

The new capital framework also recognizes that large, usually internationally active banks have already put in place sophisticated approaches to risk measurement and management based on statistical inference rather than judgment alone. Thus, the framework allows banks, under certain conditions, to use their own 'internal' models and techniques to measure the key risks that they face, the probability of loss, and the capital required to meet those losses. In developing the new framework, the Basel Committee wanted to incorporate many elements that help promote a sound and efficient financial system over and above the setting of minimum capital requirements. With this in mind, the Basel II framework incorporates three complementary 'pillars' that draw on the range of approaches to help ensure that banks are adequately capitalized in commensurate with their risk profile.

The Basel Committees on Banking Supervision's (BCBS) recommendations on capital accord are important guiding framework for the regulatory capital requirement to the banking industry all over the world and Nepal is no exception. Realizing the significance of capital for ensuring the safety and soundness of the banks and the banking system, at large, Nepal Rastra Bank (NRB) has developed and enforced capital adequacy requirement based on international practices with appropriate level of customization based on domestic state of market developments. The existing regulatory capital is largely based on the Basel committee's 1988 recommendations. With a view of adopting the international best practices, NRB has already expressed its intention to adopt the Basel II framework, albeit in a simplified form. In line with the international development and thorough discussion with the stakeholders, evaluation and assessment of impact studies at various phases, this framework has been drafted. This framework provides the guidelines for the implementation of Basel

II framework in Nepal. Reminiscent of the International convergence of capital measurements and capital standards, this framework also builds around three mutually reinforcing pillars, viz. minimum capital requirements, supervisory review process and disclosure requirements.

Because of the establishment of NRB, Nepal has come in huge change in the banking sectors. The establishment of commercial banks is going on. The pace of financial sector development enhanced rapidly after the financial liberation policy was introduced by government in 1984 AD. Then after, Commercial banks started to establish in Nepal. Now, there are 31 Commercial Banks, 88 Development Bank, 69 Finance companies, 16 cooperatives, 36 NGOs operating until mid July 2012.

1.2 Statement of the Problems

It is considered that adequacy and inadequacy of bank capital directly affects the banking transaction. The adequacy of bank capital is the most important aspect of a bank. The bank should pay attention to many things for the adequacy of capital.

Nepal Rastra Bank has issued a new set of directives to Commercial Banks consisting of nine parts. NRB claims that these directives are based in the internationally accepted banking norms of Basel Committee. Out of nine directives, the directive no.1, which was later revised, is related with the requirement of the maintenance of capital fund by commercial Banks. The capital adequacy ratio is derived on the basis of total risk weighted assets (TRWA). Earlier, the capital adequacy ratio was prescribed as 8% of TRWA. The directive no.1 which is related to capital fund has revised the capital adequacy ratio to be maintained by Commercial Banks as follows:

Table:-1.1

Capital adequacy ratio to be maintained by Commercial Banks

Time Table	Core Capital	Total Capital Fund
For FY 2063/64	5.5%	12%
For FY 2064/65	6%	10%
For FY 2065/66	6%	10%
For FY 2067/68	6%	10%
For FY 2068/69	6%	10%
For FY 2069/70	6%	10%

Source: Nepal Rastra Bank.

As well as, NRB has set up to increase the paid up share capital of national level commercial banks to RS 2 billion by the year 2009. Now, question arises, why these changes are required? While revising the capital adequacy norms, none of the existing commercial banks meet the standard. However, they are allowed to comply with the norms, stage by stage within the specific period.

The study deals with the following issues:

I. Whether there is proper care taken for maintaining capital adequacy or not and the commercial banks are operated on the basis of directives of capital adequacy issued by Nepal Rastra Bank or not?
II. What are the major problems faced by them in maintaining capital adequacy in selected commercial banks?
III. Whether there is tradeoff between risks of assets with the capital while fulfilling capital adequacy norms?
IV. Do commercial banks are able to improve the financial performance?
V. Do maintenance of capital adequacy is similar in different commercial banks in Nepal?

1.3Hypothesis

The following hypothesis has been thoroughly tested in the chapter 4 which are:

I. The capital fund and RWA are significantly correlated.

II. The capital fund and deposits are significantly correlated.
III. Total deposit and credit are significantly correlated.
IV. The capital fund and total credit are significantly correlated.
V. The capital adequacy ratio and profit margin ratio are significantly correlated.

1.4 Objective of the Study

The main objective of the study is to examine and evaluate the capital adequacy in commercial banks in Nepal considering the provisions made by Banks for International Settlements based on risk factors in assets. The specific objectives are as follows:

I. To study how the new act has provided operational autonomy and independence to the banks.
II. To study the capital adequacy directives and norms of NRB for the commercial banks.
III. To study impact of NRB capital adequacy directives and norms on commercial banks.
IV. To examine the capital adequacies of commercial banks, which are generally expected to operate above the limits, prescribed by given framework?
V. To examine the relationship of capital fund to deposit and credit
VI. To provides appropriate suggestions and recommendations on the basis of major findings.

1.5 Focus of the Study

The study is based on the capital funds of the banks which are supposed to be adequate as per the NRB directive no. 1, which is related with the capital adequacy directives and norms for overall commercial banks. The norms basically emphasize on the basic requirement of the capital fund that a commercial bank should posses. The fundamental objectives of the norms is to safeguard the interest of depositors as per these norms, bank capital has been divided in to two categories which are generally known as Tire-1 and tire-2. At present, there are total 31 Commercial banks in Nepal. Keeping in the view of the striving Commercial banks, the thesis report, as case study analyzes the matters, issue and problem related to capital funds of listed commercial

Banks. The thesis report is mainly focused in accordance of the capital adequacy norms of Nepal Rastra Bank (NRB) and implementation by these Commercial Banks.

1.6 Central Bank in Nepal as a Regulatory Body

Nepal Rastra Bank (NRB) is the central bank of Nepal. NRB was established to discharge the central banking responsibility including the development of the embryonic domestic financial sector in 1955 under NRB Act, 2012 BS. Now NRB is running under a new act, 2058 BS. Before 1955, the functions of central bank were performed by the government itself. Since the establishment of NRB, there has been a huge growth in both the number and the activities of the domestic financial institutions.

Being the central bank in the country, the ownership of Nepal Rastra Bank is with Nepal Government. But, the management of NRB is not controlled by Nepal Government. NRB has 12 branches throughout the kingdom of Nepal including the head office at Baluwatar and the main Banking office at Thapathali in Kathmandu.

To reflect this dynamic environment the functions and objective have been recast by NRB Act 2058. The primary function of NRB are to formulate necessary monetary and foreign exchange policies to maintain the stability in price and consolidate, to issue license to commercial Banks and financial institutions and to issue Nepalese Rupees Currency.

The bank is eminently aware that, for the achievement of the above objectives in the present dynamic environment, sustained progress and continued reform of the financial sector is of almost importance. Continuously aware of this great responsibility, NRB is seriously pursing various policies, strategies, and actions, all of which are conveyed in the annual report on monetary policy which provide a comprehensive review and evaluation of the previous monetary policy, justification and analysis of following year's monetary policy. The re-engineering of the NRB itself is one of the critical components of the reform agenda. To improve the financial sector legislative framework, some New Act have already come out draft legislations on bank and financial institutions, secured transactions, insolvency, Assets Management Company and anti-money laundering are expected to be soon

materialized, all with the goal of strengthening the financial sector through building on its healthy development and improved stability. NRB has established as the healthy development and improved stability. NRB has established as the regulatory body for banks and financial institutions of Nepal. So, it has right to constitute rules and regulations to be followed by Commercial Banks and financial institutions in the country. All the banks and financial institutions operate under the regulations of NRB. The establishment of such institutions is also in discretion of NRB. To regulate the operations of commercial banks, NRB has issued various directives which capital adequacy norms to be followed by commercial banks to get success in competitive environment. All commercial banks and other financial institutions can achieve targeted goal only when they follow leadership, guidance and suggestions of NRB.

To date, the following Commercial Banks are in operation in the leadership of Nepal Rastra Bank. They are:

1. Rastriya Banijya Bank
2. Nepal Bank Limited
3. Nabil Bank Limited
4. Nepal Investment Bank Limited
5. Standard Chartered Bank Nepal Limited
6. Himalayan Bank Limited
7. Nepal Bangladesh Bank Limited
8. Nepal SBI Bank Limited
9. Everest Bank Limited
10. Bank of Kathmandu Limited
11. Nepal credit and Commerce Bank Limited
12. Lumbini Bank Limited
13. NIC Asia Bank Limited
14. Kumari Bank Limited
15. Laxmi Bank Limited
16. Siddhartha Bank Limited
17. Agriculture Development Bank
18. Citizens Bank International Limited

19. Global IME Bank Limited
20. Machhapuchhre bank Limited
21. Sunrise Bank
22. Prime Bank
23. NMB Bank Limited
24. Grand Bank Limited
25. Kist Bank Limited
26. Janata Bank Limited
27. Mega Bank Limited Limited
28. Commerz & Trust Bank Nepal
29. Civil Bank Limited
30. Century Commercial Bank Limited
31. Sanima Bank Limited

1.7 Significance of the Study

The study will have a significant importance in the present context of banking business in Nepal. Commercial banks have collected more than R.297 billion deposits from depositors. We can observe that there is a lack of investment opportunity of such deposits. In such a situation, these deposits have to be protected by adequate capital fund of respective commercial banks. In fact, the banks should have adequate capital fund although there are plenty of investment opportunities. Presently, raising capital is a tough task. The growing non-performing Assets (NPA), being the main headache of commercial Banks, meeting the capital adequacy is very tough, it is not possible.

So, the study is a totally new in the field of banking sectors which will be more significant and it will provide appropriate suggestions to the commercial banks and their managers, accountants, policy makers and planners. This study will also provide literature to the researchers who want to further research in this field.

1.8 Limitation of the Study

The study is limited due to lack of availability of data of commercial banks from the establishment date, constraints of time and this thesis only focuses on capital adequacy norms and directives. Due to the limited time and resources constraints, this

study will neither be comprehensive nor extensive. This study is based on balance sheets, profits and loss accounts and other financial statements are considered as basic source of data.

Thus, the major limitations of the research are as follows:

I. Only the commercial banks in banking industries are considered for study purpose.
II. In addition to adequacy of capital, there are other factors such as investment management, socio-political environment; government programmers, corporate governance, efficient management etc. may not be covered by this study in intensive way. So result from this study may not be equally useful to all.
III. The secondary data are used to analyze and interpretations for result, so the accuracy of the finding depends on the reliability of available information.
IV. The study covers the time period of 2003 to 2012.
V. This thesis only concerned with fulfilling the requirement in Masters of business Studies and only secondary data are used for the study.

1.9Organization of the Study

The structure of the thesis report consists five chapters in total which have been briefly described as follows:

Chapter 1: Introduction

To starts the thesis report, this chapter includes the background of the study, focus of the study, meaning , functions and importance of central banks, introduction to NRB, introduction of commercial banks, statement of problem, objective of the study, significance of the study, limitation of the study, theoretical framework and problem hypothesis. This chapter has been targeted to help the reader to understand get the rhythm of the subject matter of the thesis report.

Chapter 2: Review of Literature

This chapter includes conceptual review, review of NRB capital adequacy norms, and review of empirical works. For this purpose, various books, journals and periodicals as well as internet have been utilized.

Chapter 3: Research Methodology

This thesis deals the methodology that includes research design, sources of data, sample selection, data collection techniques and procedure, tools for analysis of the study, and limitation of the methodology will include in this chapter.

Chapter 4: Presentation and Analysis of Data

This chapter focuses presentation of data in systematic format and analysis of collected data through statistical and mathematical techniques. As well as interpretation of analysis will be done in this chapter.

Chapter 5: Summary, Conclusion, and Recommendations

In this chapter, the summary of the entire thesis will be comprised. This chapter further describes the major findings of the thesis. Conclusion of the study will be including in this chapter. As well as, possible and viable recommendations will be presented in this chapter.

CHAPTER – 2

REVIEW OF LITERATURE

2.1 Conceptual Review

Capital adequacy is the core subject for long-term sustainability of any organization. It is an emerging topic in financial sector. It can play a vital role for the success of commercial banks. To bridge the gap of implementing and supervisory bodies for their effective results in performance, this study is conducted.

In 1975, an international committee was formed by the central banks and supervisory authorities of ten centralized countries to coordinate the surveillance exercised by national authorities over the international banks. This group of ten countries, known as the G-10 countries, included Belgium, Canada, France, Germany, Holland, Italy, Japan, Sweden, the United Kingdom and the United States. Since inception, the Basel Committee on Banking Supervision has met regularly at the Bank for International Settlement in Basel, Switzerland.

The Basel concordat 1975 provided a general statement on the responsibilities of national authorities for the supervision of international banks. This concordat was revised in 1983, paving the way for more standardized methods of bank supervision among central banks around the world.

In 1988, after consulting with bank supervisors around the world, the Basel Committee proposed a risk based capital adequacy framework. Underlying this framework, commonly known as the Basel Capital Accord, was the premise that a uniform approach to establishing minimum levels of capital will help to: a) Strengthen the soundness and stability of international banking system, b) Promote a fair and consistent basis for evaluating capital; and c) Diminish competitive inequalities among international banks. The weighted risk based framework proposed by the Basel Committee focuses on credit risk and takes into account both off balance sheet and on balance sheet credit risk exposure. The approach also distinguishes the varying degrees of risk inherent to different assets by assigning weights according to asset class. The Basel I Capital Accord 1988 has been endorsed by the Group of Ten

central-bank Governors. The Basel Committee on Banking Supervision comprises representatives of the central banks and supervisory authorities of the Group of Ten countries (Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, United Kingdom, and United States) and Luxembourg (Basel Committee on Banking Supervision, 1988:1).'

2.2 Overview: Capital and Capital Adequacy

Capital is a stock of resources that may be employed in the production of goods and services and the price paid for the use of credit or money, respectively.

Roseberg (1982) has defined capital in relations with banking as a long-term debts plus owner's equity. The efficient functioning of markets requires participants to have confidence in each other's stability and ability to transact business. Capital-rules help foster this confidence because they require each member of financial community to have, among other things, adequate capital. This capital must be sufficient to protect a financial organization's depositors and off- balance sheet risks. Top of the list are credit and market risks not surprisingly, banks are required to set aside capital to over two main risks. Capital standards should be design to allow a firm to absorb its loss to customers, counterparties and without disrupting the orderly functioning of financial markets.

Minimum capital fund standard are thus a vital tool to reducing systematic risks. They also play a central role in how regulators supervise financial institutions. But capital requirements have so far tended to be simple mechanical rules rather than applications of sophisticated risk-adjusted models. Such capital standard is widely known as capital adequacy.

Patheja (1994) has defined banks capital as common stock plus surplus plus undivided profits plus reserves for contingencies and other capital reserves. In addition since a bank's loan-loss reserves also serves as a buffer for absorbing losses, a broader definition of bank capital include this account.

The Basel Committee sets a standard for all the banking norms, which will be accepted by central banks of all big industrialist countries. Regarding the capital funds the committee has issued the Basel Capital Accord. The first Basel Capital Accord was issued in 1988 and was implemented by 1992. The committee has now issued

New Basel Capital Accor which is implemented by 2006 to overcome the drawbacks of the present capital accord. Central banks of developing and underdeveloped countries follow these standards. Nepal Rastra Bank also follows these standards and accordingly sets standard for commercial banks in Nepal.

According to the directives issued by NRB, the bank capital has been categorized in to two parts: core capital and supplementary capital. This categorization is also known as Tier -1 capital for core capital and Tier – 2 capitals for supplementary capital.

2.2.1Core Capital (Tier 1)

The key element of capital on which the main emphasis should be placed is the Tier 1 (core) capital, which comprises of equity capital and disclosed reserves. This key element of capital is the basis on which most market judgments of capital adequacy are made; and it has a crucial bearing on profit margins and a bank's ability to compete. The BCBS has therefore concluded that capital, for supervisory purposes, should be defined in two tiers in a way, which will have the effect of requiring at least 50% of a bank's capital base to consist of a core element comprised of equity capital and published reserves from post-tax retained earnings. In order to rank as Tier 1, capital must be fully paid up, have no fixed servicing or dividend costs attached to it and be freely available to absorb losses ahead of general creditors. Capital also needs to have a very high degree of permanence if it is to be treated as Tier 1.

The Tier -1 capital of the following components of capital:

a. Paid up capital (ordinary share)

b. Proposed bonus share

c. Share premium

d. Irredeemable preference shares

e. General Reserve Fund

f. Accumulated Profit/loss

g. Capital Redemption Reserve

h. Capital Adjustment Fund

i. Calls in advance

j. Other free reserves

The amounts in the following heads shall be deducted while calculating core capital:-

a. Goodwill

b. Amount invested in shares and securities of corporate bodies exceeding the limit imposed by this Bank.

c. All amount of investment made in shares and securities of the corporate bodies having own financial interests.

d. Fictitious assets

For this purpose, fictitious assets mean the fictitious expenses other than the expenses in research, development and computer software.

e. Credit and facilities made available to persons and groups prohibited by the prevailing laws.

Provided that in case the prevailing law has not prohibited to providing loan and facilities to such person or groups at the time of making available loans and facilities, this provision shall not be applicable until one year of such prohibition or expiry of the date of repayment of the loan, whichever is earlier.

f. The amount of purchasing of land and houses for self purposes not abiding by Directives of this Bank.

g. The amount invested in residence, buildings construction and land development exceeding the limit.

h. The share underwriting not could be sold within the prescribed time-limit.

2.2.2Supplementary Capital (Tier 2)

The Supplementary (Tier 2) Capital includes reserves which, though unpublished, have been passed through the profit and loss account and all other capital instruments eligible and acceptable for capital purposes. Elements of the Tier 2 capital will be reckoned as capital funds up to a maximum of 100 percent of Tier 1 capital arrived at, after making adjustments referred to in table 2.1. In case, where the Tier 1 capital of a bank is negative, the Tier 2 capital for regulatory purposes shall be considered as zero and hence the capital fund, in such cases, shall be equal to the core capital.

The Tier – 2 Capital consists of the following components:

a. Provisions for general loan loss

Only the amount provisioned for pass loan has to be included under this heading.

In case more loan loss provision has been made than the ratio specified by this Bank for pass and other loans, the amount of such additional loan loss provision may be included in the additional loan loss provision. Provided that the total amount under such heads shall not be allowed to be included in the supplementary capital so that it would exceed 1.25 percent of the total risk-weight assets.

b. Assets Revaluation Fund

While calculating supplementary capital, it shall be allowed to be calculated only up to 2 percent of the total supplementary capital including the amount for assets revaluation fund. Only the amount remaining in this fund or 2 percent of the total supplementary capital, whichever is lesser, shall be included in this fund.

c. Hybrid capital instruments

The following instruments shall be included under this head:-

(1) The issued securities which are unsecured, fully paid up and subordinated to the priority order of payment of depositors and creditors and available to absorb loses as well as liable or not liable to be changed in general capital;

(2) Instruments issued on the condition that they are not redeemable at the option of the holder except with the approval of Nepal Rastra Bank.

Provided that no other licensed institution shall be allowed to hold (purchase) the hybrid capital instruments issued by one licensed institution.

d. Unsecured Subordinated term loan:

The debt instruments having the maturity period of more than five years and issued without any collateral security with a condition of getting payment after the depositors and the redeemable preference shares having limited maturity period shall be included under this class. In order to reflect the diminishing value of their instruments, the licensed institution shall have to apply the discount (amortization) factor of these instruments at the rate of 20 percent for the last five years. In case any bank or financial institution has issued such instruments with a condition of converting them into ordinary shares in the long run or in various phases or of redeeming them having fulfilled the prescribed terms and conditions, then the amount converted in ordinary shares may be calculated as supplementary capital and the amount not converted into

shares may be calculated as supplementary capital by placing under this head. Provided that while issuing such instruments, the amount more than fifty percent of the core capital shall not be raised.

e. Exchange Equalization Fund

The amount of the exchange equalization fund maintained by a licensed institution engaged in the transaction of foreign exchange may be calculated for the purpose of supplementary capital.

f. Investment Equalization Fund

The amount of the investment equalization fund created under Directive No. 8 may be calculated for the purpose of supplementary capital.

2.2.3Total Capital Fund

Capital fund means the aggregate of core capital and supplementary capital. In case of the licensed institution belonging to class "A", the calculation of capital fund shall be made as referred to in schedule 2.5 of the Capital Adequacy Framework, 2007(updated in July, 2008) issued by this Bank.

2.2.4 Total Weighted Risk Assets

For the purpose of calculation of capital fund, the risk weighted assets has been classified into following two components:

(a) On balance sheet risk weighted assets

(b) Off-balance sheet risk weighted assets

Risk weighted on Balance Sheet Assets and off-balance sheet items

(a)For the purpose of calculation capital fund

The on balance sheet assets are divided as follows with assignment of separate risk weight-age. Accordingly, for determining the Total Risk Weighted Assets the amount as exhibited in the balance sheet assets shall be multiplied by their respective risk weight-age and then added together. Risk weights for on balance sheet items are given in Appendix C.

(b) Risk weighted off Balance Sheet items

For the purpose of calculation Capital Fund, the Off-Balance Sheet Items are divided as follows with assignment of separate risk weight-age. Accordingly, for determining the total Risk Weighted off Balance sheet assets, the amount of such transaction shall be multiplied by their respective risk-weights and then added together. Risk weights for off balance sheet items are given in Appendix C.

The total of the Tier-1 and Tier-2 capital is considered for calculating capital adequacy ratio. The capital adequacy ratio is based in total risk-weighted assets. Clark has defined capital adequacy as legal requirement that a financial institution (such as bank) should have enough capital to meet all its obligations and fund the services it offers. Basis has defined that capital adequacy aims at setting minimum level of capital as a function of risks. Thus capital should be risk based.

The capital adequacy ratio is yielded by the following formula:

- Capital Adequacy Ratio = $\frac{\text{Total capital Fund} * 100\%}{\text{Total Risk Weighted Assets}}$

2.3 Review of NRB Capital Adequacy Norms for Commercial Banks

With an objective to develop a healthy, competent and secured banking system for economic prosperity of the country and to safeguard the interest of depositors, NRB issued the directive no.1 regarding minimum capital fund to be maintain by Commercial Banks. NRB issued these capital adequacy norms by using the power given by Commercial Bank Act, 2031 (with amendments) Clause 14 (ka). These norms were issued under the Nepal Rastra Bank Act, 2012 (with amendments) Clause 23 Sub-Clause 1- provision for development and regulating banking system.

Prior to 1988, there was no uniform international regulatory standard for setting bank capital requirements. In 1988, the Basel Committee on Banking Supervision (BCBS) developed the Capital Accord, which is known as Basel I, to align the capital adequacy requirements applicable especially to banks in G-10 countries. Basel I introduced two key concepts. First, it defined what banks could hold as capital, as well as designating capital as Tier 1 or Tier 2 according to its loss-absorbing or creditor-protecting characteristics. The second key concept introduced in Basel I was that capital should be held by banks in relation to the risks that they face. The major risks

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The new capital framework also recognizes that large, usually internationally active banks have already put in place sophisticated approaches to risk measurement and management based on statistical inference rather than judgment alone. Thus, the framework allows banks, under certain conditions, to use their own 'internal' models and techniques to measure the key risks that they face, the probability of loss, and the capital required to meet that loss. In developing the new framework, the Basel Committee wanted to incorporate many elements that help promote a sound and efficient financial system over and above the setting of minimum capital requirements. With this in mind, the Basel II framework incorporates three complementary 'pillars' that draw on the range of approaches to help ensure that banks are adequately capitalized in commensurate with their risk profile.

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capital adequacy requirement based on international practices with appropriate level of customization based on domestic state of market developments. The existing regulatory capital is largely based on the Basel committee's 1988 recommendations.

With a view of adopting the international best practices, NRB has already expressed its intention to adopt the Basel II framework, albeit in a simplified form. In line with the international development and thorough discussion with the stakeholders, evaluation and assessment of impact studies at various phases, this framework has been drafted. This framework provides the guidelines for the implementation of Basel II framework in Nepal. Reminiscent of the International convergence of capital measurements and capital standards, this framework also builds around three mutually reinforcing pillars, viz. minimum capital requirements, supervisory review process and disclosure requirements.

Mr. Bir Bikram Rayamajhi, opening address, Seminar on draft **"Capital Adequacy Framework"** on 10th July, 2006- "The current Basel I capital framework adopted over around two decade ago, has served us well. According to the introduction of the new Accord, issued in June 2004: "The objectives were to maintain the aggregate level of minimum capital requirements, providing incentives to adopt the more advanced risk sensitive approaches of the revised framework." The new capital framework attempts to achieve these objectives with three mutual reinforcing pillars. The first pillar aligns minimum capital requirements more closely with banks' actual underlying risks. At the outset the first pillar is similar to the existing capital framework that provides a measure of capital relative to risk. The purely new are the second and third pillar.

The second pillar- supervisory review- allows supervisors to evaluate a bank's assessment of its own risks and determine whether that assessment seems reasonable. It is not enough for a bank or its supervisors to rely on the calculation of minimum capital under the first pillar. Supervisors should provide an extra set of eyes to verify that the bank understands its risk profile and is sufficiently capitalized against its risks. The third pillar- market discipline- ensures that the market provides yet another set of eyes. The third pillar is intended to strengthen incentives for prudent risk management. Greater transparency in banks' financial reporting should allow market participants to reward well-managed banks and penalize poorly managed ones. .....in a

nutshell, I think that the new capital framework represents a significant step towards achieving a more comprehensive and risk sensitive supervisory approach. Basel II is about much more than just setting better quantitative minimum capital requirements. It is about establishing incentive-based approaches to risk and capital adequacy management, within a comprehensive framework of three mutually supporting pillars. In my view, the contribution of better risk management, a stronger capital structure and improved transparency standards in the banking system can significantly improve financial stability.

The norms have prescribed the minimum capital fund requirement, on the basis of the risk – weight assets. The banks are required to maintain the prescribed proportion of minimum capital fund on the basis of weight risk assets as per the following time-table:

Table No: 2.1

Minimum capital fund requirement

Time Table	Core Capital	Total Capital Fund
For FY 2062/63	5%	12%
For FY 2063/64	5.5%	11%
For FY 2064/65	5.5%	11%
For FY 2065/66	6%	10%
For FY 2067/68	6%	10%
For FY 2068/69	6%	10%
For FY 2069/70	6%	10%

Source: Nepal Rastra Bank.

The sum of risk-weighted assets is the sum of total on – balance sheet risk –weighted assets and total off-balance sheet risk – weighted items.

The bank shall, at the end of Ashoj (mid October), Poush (mid January), Chaitra (mid April), and Ashad (mid July) of each fiscal year, prepare the statement of capital fund and other relevant statements on the basis of the financial statements as per the prescribed Form No.1 and Form no.2 and submit to the Banking Operations

department and Inspection and Supervision Department of this bank within one month from each quarter.

In the event of non- fulfillment of capital fund Ratio in any quarter, the bank shall fulfill the shortfall amount within next 6(six) month. Until the fulfillment of such capital fund, the bank shall not declare or distribute dividend to the shareholder under section 18 of commercial bank, Act, 2031. The shortfall in the capital fund may be rectified by issuing new shares and/or reallocations assets.

If any bank does not fulfill the minimum capital fund within the specified period, NRB may initiate any of the following actions.

I. Suspension of distribution of dividend (including bonus Share)
II. Suspension of opening new branch
III. Suspension of access to refinancing facilities of Nepal Rastra Bank
IV. Restriction on lending activities of the bank
V. Restriction on accepting new deposits
VI. Initiation of any other action by exercising the authority under section 32 Nepal Rastra Bank Act, 2012.

2.4 Review of International Policies

Basel Committee on Banking Supervision, **Report for the G7 Summit on the activities of the Basel Committee,** June 2006: This report, prepared for the Group of Seven (G7) Finance Ministers and Central Bank Governors, discusses the Committee's main efforts over the past year. It summarizes the Committee's contribution to the promotion of stability in the global banking system through its efforts to provide guidance on key banking supervisory issues and foster cooperation among banking supervisors.

The publication in June 2004 of the Basel II Framework represented the outcome of a multi-year effort by the Committee to bring capital adequacy regulations, which are a key underpinning of the safety and soundness of the global banking system, up to date with current business realities and risk management practices. Currently, the Committee is actively promoting cooperation among supervisors with the goal of fostering greater convergence in supervisory practices in implementing the new rules.

The Basel Committee reviewed and confirmed the calibration of the Basel II Framework in May 2006. The QIS results for the Basel Committee member countries show that minimum required capital under the Basel II Framework would decrease relative to the current Accord. For large, internationally active banks, minimum required capital would decrease by 6.8%, based on the results for the approach that participating banks will likely adopt after implementation. Taking into account the benign economic conditions prevailing in the final quarter of 2005 and the remaining uncertainties in the data, the Committee agreed that no adjustment of the scaling factor to credit risk-weighted assets would be necessary at this stage. The Committee intends to publish a detailed report on the outcome of QIS 5 in G10 and non-G10 countries in June 2006.

Basel Committee on Banking Supervision, **International Convergence of Capital Measurement and Capital Standards,** A Revised Framework Comprehensive Version, June 2006, the First pillar- **minimum capital requirements** needs credit, market and operational risk. The capital ratio is calculated using the definition of regulatory capital and risk-weighted assets. The total capital ratio must be no lower than 8%. Tier 2 capital is limited to 100% of Tier 1 capital. The Second Pillar – **Supervisory Review Process** discusses the key principles of supervisory review, risk management guidance and supervisory transparency and accountability produced by the Committee with respect to banking risks, including guidance relating to, among other things, the treatment of interest rate risk in the banking book, credit risk (stress testing, definition of default, residual risk, and credit concentration risk), operational risk, enhanced cross-border communication and cooperation, and securitization. The third pillar-**Disclosure requirements** The Committee believes that the rationale for Pillar 3 is sufficiently strong to warrant the introduction of disclosure requirements for banks using the Framework. Supervisors have an array of measures that they can use to require banks to make such disclosures. Some of these disclosures will be qualifying criteria for the use of particular methodologies or the recognition of particular instruments and transactions.

2.5 Review of Articles and Reports

Arturo Estrella, Sangkyun Park, and Stavros Peristiani (FRBNY Economic Policy Review, 2000)

Capital ratios have long been a valuable tool for assessing the safety and soundness of banks. The informal use of ratios by bank regulators and supervisors goes back well over a century In the United States, minimum capital ratios have been required in banking regulation since 1981, and the Basel Accord has applied capital ratio requirements to banks internationally since 1988. The Basel Committee on Banking Supervision (1999) is currently engaged in an effort to improve the Basel Accord and, once again, capital ratios are being discussed as part of the proposed solution. In this article, we examine some of the roles that capital ratios play in bank regulation and we argue that, to be successful in any of these roles, capital ratios should bear a significant negative relationship to the risk of subsequent bank failure. We then present empirical evidence of those relationships. We focus here on three types of capital ratios—risk weighted, leverage, and gross revenue ratios. For each ratio, we examine what makes it actually or potentially useful for bank regulation and we ask whether it is indeed significantly related to subsequent bank failure. Perhaps not surprisingly, we find that all three ratios are strongly informative about subsequent failures. Our analysis suggests that the most complex of the ratios—the risk-weighted ratio—is the most effective predictor of failure over long time horizons. However, perhaps somewhat surprisingly, we also find that the risk-weighted ratio does not consistently outperform the simpler ratios, particularly with short horizons of less than two years. Over the shorter time periods, the leverage and gross revenue ratios can play a crucial role as timely backstop thresholds that would trigger regulatory action if breached. They also have the advantage of being less costly to calculate and report. In this context, the trade-off between regulatory burden and predictive accuracy may not favor the risk-based measures. In the next section, we develop the conceptual arguments in favor of applying capital ratios in bank regulation. We then proceed to use the empirical evidence on U.S. bank failures to evaluate the effectiveness of the ratios in predicting bank failures.

Arturo Estrella, Sangkyun Park, and Stavros Peristiani (Capital Ratios and Credit Ratings as Predictors of Bank Failures June 2002**)**

We examine the power of various capital ratios — scaled by total assets, riskweighted assets and gross revenues — to forecast U.S. bank failures. Capital ratios are the centerpiece of the 1988 Basel Accord, and various ratios are currently under consideration in Basel in connection with one of the three "pillars" of a more comprehensive approach to capital adequacy. Using data for the period 1988-1993, which included a relatively large number of failures, we conclude that all three ratios we examine are very significant predictors of failure, and that the simple ratios are about as strong as the more complex risk-weighted measure. Simpler ratios are less costly and may be more broadly applicable than risk-weighted ratios. We also compare the performance of credit ratings as predictors of failure, since credit ratings have a formal role in current regulation, and since the information they provide is correlated with that provided by capital ratios. The number of failed banks with ratings is very small, and evidence in favor of ratings is somewhat mixed.

John Eneka Ezike and Oke **M.O (**Asian Economic and Financial Review, 2013)

A capital adequacy standard for banks that operates internationally is of major concern for bank regulators worldwide. In consequence, the Bank for International Settlements, (BIS) established a framework for measuring capital adequacy for banks in the group of ten (G10), industrialized nations of the world. The adoption of the standards in the city of Basle came to be referred as the Basle Capital Accord on Capital Adequacy Standard. The Capital adequacy Standard under the Basle accord has been widely accepted worldwide by bank regulators and was implemented by the Central Bank of Nigeria, effective December 2005. The objective of this study is to investigate the impact of the adoption of the Capital Adequacy Standards on the performance of Nigerian banks. The study involved the use of ordinary least squares (OLS) estimation technique to examine and determine the effect of the independent variables – loans and advances, shareholders funds, total assets and customer deposits – on the dependent variables – Earnings per share (EPS) and profit after tax. The results of the analysis showed that capital adequacy standards exert a major influence on bank performance. In addition the impact of the Nigerian monetary authority on the

new capital requirements was found to be complemented with the adoption of the Basle accord framework. The study concludes with the recommendation that the CBN should not rely only on the capitalization of banks as a determinant of bank performance but also should concentrate on efficient and effective bank supervision and risk management.

To analyze the predictive efficacy of capital ratios, our analysis utilizes standard measures defined by the existing capital adequacy rules. In the current regulatory framework, the risk-weighted capital ratio is defined as the ratio of tier 1 capital to risk weighted assets. The definition of leverage ratio is tier 1 capital divided by total tangible assets (quarterly average). To ensure full compatibility, the gross revenue ratio uses again tier 1 capital in the numerator divided by gross revenue. The measure of tier 1 capital applied in the numerator of all three ratios includes common stock, common stock surplus, retained earnings, and some perpetual preferred stock. Gross revenue is total interest and noninterest income before deducting any expenses.

Our database includes all FDIC-insured commercial banks that failed or were in business between 1989 and 1993. The sample period ends in 1993 because for the most part there were just a handful of bank failures after this period. Because risk-weighted capital measures were not implemented and reported until after 1990, it is difficult to estimate meaningful risk-weighted ratios in the early and mid-1980s. To compute the various capital ratios, we used information from the Consolidated Reports of Condition and Income (Call Reports). The Federal Reserve Board provides a formal algorithm for calculating risk-weighted ratios for years 1991 and after. Risk-weighted capital ratios for years 1988, 1989, and 1990 were estimated based on the Capital Adequacy Guidelines published by the Federal Reserve Board.

Mesut Dogan (International Journal of Business and Social Science, 2013)

Banking system plays an important role in the development of a country's economy and its financial stability. The aim of this study is to compare financial performances of foreign and domestic banks, which operate in Turkish Banking Sector. For this purpose, data of 10 domestic and 10 foreign banks, this operated, between the years 2005-2011 have been used. In this study, differences of domestic and foreign banks in terms of profitability, capital adequacy, asset quality, riskiness, size, liquidity and

management effectiveness have been put forth. As a result of the study, it is determined that asset quality, return on equities, total assets and management effectiveness of domestic banks are higher than foreign banks. On the other hand, domestic banks are determined to have a lesser capital adequacy ratio than foreign banks.

Adrian Blundell-Wignall and Paul Atkinson (OECD Journal)

Financial Market Trends Volume 2010) In previous studies, the OECD has identified the main hallmarks of the crisis as too-big-to-fail institutions that took on too much risk, insolvency resulting from contagion and counterparty risk, the lack of regulatory and supervisory integration, and the lack of efficient resolution regimes. This article looks at how the Basel III proposals address these issues, helping to reduce the chance of another crisis like the current one. The Basel III capital proposals have some very useful elements, notably a leverage ratio, a capital buffer and the proposal to deal with pro-cyclicality through dynamic provisioning based on expected losses. However, this report also identifies some major concerns. For example, Basel III does not properly address the most fundamental regulatory problem that the 'promises' that make up any financial system are not treated equally. This issue has many implications for the reform process, including reform of the structure of the supervision and regulation process and whether the shadow banking system should be incorporated into the regulatory framework and, if so, how. Finally, modifications in the overall risk-weighted asset framework are suggested that would deal with concentration issues.

Keshar J. Baral Health Check-up of Commercial Banks in the Framework of CAMEL: A Case Study of Joint Venture Banks in Nepal (The Journal of Nepalese Business Studies, 2005)

The history of modern commercial banking industry dates back to 1937 A.D in which year Nepal Bank Ltd. was incorporated. Till 1984, financial sector was closed to private sector and foreign investors. HMG/Nepal started to liberalize the financial sector in the first half of the 1980s. But it speeded up this process only in early 1990s. Private sector rushed into the finance industries especially after the restoration of democracy in 1990.

Most of the commercial banks came into operation during the decade of 1990s. Government of any countries highly monitors and controls the finance industry even in the liberalized market economy. Government does so due to its high gravity in the national economy, and to build up the confidence of private sector in its financial system. Nepal Rastra Bank

(NRB) as an apex monetary authority of the country started to monitor and control the finance industry especially at the end of the 1990s by issuing the directives to the financial institutions (FIs). It initiated the offsite and onsite supervision of FIs to maintain their sound financial health and to build up the confidence of private sector in the liberalized financial system and protect the interest of the investors. It has adopted the CAEL (capital adequacy, asset quality, earning and liquidity) system to check up the health of FIs. It has yet to use the CAMELS to evaluate the financial performance and check up the financial health. Independent outsiders also cannot use all components of CAMELS to check up the financial health of FIs in Nepal due to the full disclosures of required financial information to outsiders.

NRB dictated FIs to disclose the financial information in uniform way only in the fiscal year (FY) 2001/02. In this paper, attempt has been made to check up the financial health of joint venture banks in the framework of CAMEL.

Not only the commercial banks but also any FIs require regular health check up to maintain the confidence of private sector in financial system of the country and protect the interest of depositors, lenders, shareholders and other stakeholders. The gravity of the importance of sound financial sector has increased tremendously after the international financial turmoil of the second half of the 1990s. International monetary authorities such as International Monetary Fund and international FI like the World Bank have underpinned the need of healthy financial sector to build up the confidence of private sector in the liberalized financial system. Therefore, they have directed their member countries to reform the financial sector and conduct the regular health check up of FIs through onsite and offsite supervision. International FIs like the World Bank and Asian Development Bank (ADB) are supporting the projects run in the vein of reforming process of the financial sector of different countries. For example, the World Bank is constantly providing the technical and financial support

to reengineer NRB and restructure Nepal Bank Ltd. and Rastriya Banijya Bank (NRB 2005).

Ravi Prakash Sharma Poudel (International Journal of Arts and Commerce, 2012) The health of the financial system has important role in the country as its failure can disrupt economic development of the country. Financial performance is company's ability to generate new resources, from day-to-day operation over a given period of time and it is gauged by net income and cash from operation. The financial performance measure can be divided into traditional measures and market based measures. During the 1980's and 1990's when the financial and banking crises became worldwide, new risk management banking techniques emerged. To be able to manage the different types of risk one has to define them before on can manage them. The risks that are most applicable to banks risk are: credit risk, interest rate risk, liquidity risk, market risk, foreign exchange risk and solvency risk.

Risk management is the human activity which integrates recognition of risk, risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources whereas credit risk is the risk of loss due to debtor's non-payment of a loan or other line of credit (either the principal or interest or both). Default rate is the possibility that a borrower will default, by failing to repay principal and interest in a timely manner. A bank is a commercial or state institution that provides financial services, including issuing money in various forms, receiving deposits of money, lending money and processing transactions and the creating of credit. Credit risk management is very important to banks as it is an integral part of the loan process. It maximizes bank risk, adjusted risk rate of return by maintaining credit risk exposure with view to shielding the bank from the adverse effects of credit risk. Bank is investing a lot of funds in credit risk management modeling. The case in point is the Basel II accord. There is need to investigate whether this investment in credit risk management is viable to the banks. This study therefore seeks to investigate the impact of credit risk management on a bank's financial performance in Nepal. The general objectives of the study were to establish the impact of credit risk management on the financial performance of banks. The specific objectives were: to establish the impact of default rate on performance; to establish the impact of debt collection on

performance and; to establish the impact of cost per loan assets on performance. Various studies related to financial and banking sector services, policies, liberalization and development has been done in the country. To the best of my knowledge, no in-depth studies have been conducted to investigate the impact of credit risk management in the banks' performance in Nepal. This research intends to fill a gap in research as the first in-depth study in effective credit risk management.

2.6 Review of Related Studies

There are many studies has made by the previous student about the role of central bank. But the focus of their segment is diversified in to different field such as: role on banking development, economic development, financial development, problems incurred etc. Basically the major findings, conclusions and recommendation presented by the previous students are presented as the review of related studies.

An attempt has been made to provide a comparative for evaluating and interpreting the significance of one's finding, which are presented as:

Jurg Blum, **Do capital adequacy requirements reduce risks in banking?** Journal of Banking & Finance 23 (1999), 755-771, in a dynamic framework it is shown that capital adequacy rules may increase a bank's riskiness. In addition to the standard negative effect of rents on risk attitudes of banks a further inter temporal effect has to be considered. The intuition behind the result is that under binding capital requirements an additional unit of equity tomorrow is more valuable to a bank. If raising equity is excessively costly, the only possibility to increase equity tomorrow is to increase risk today.

Usha Subedi, **NRB Unified Directives on Capital Adequacy Norms and its impact, A case study of NIC Bank Ltd.** (2065), states that Commercial banks of Nepal are bound by the NRB Directives and are currently bound by Unified Directives issued for all financial institutions. The directive no. 1 has set norms on capital adequacy for commercial banks. Every commercial bank has to meet the requirement of capital adequacy as stated by the directive. Capital adequacy is the portion of capital fund with regards to risk weighted assets that a commercial bank holds. Capital

adequacy is required to safeguard the money of the depositors as the banks are playing with the money they collected from the depositors.

Kanti Shrestha, **Capital Adequacy and its Significance to Commercial Banks (2007)**, found that New directive of NRB are made with a view to protect the deposit of depositors, which also enhances the financial strength of the banks. Even then it has adverse effect in profitability of the banks but this decreasing profit will affect the banks only for short term. This study also reveals that there is a significant impact of NRB directives of capital adequacy on the various aspects of the commercial banks and it also helps in maintaining the stability of commercial banks in the financial market and to uplift the banking sector in Nepal to international standard.

The amendment of the new capital adequacy ratio, not only shows the negative sides but also there are positive sides of new directives. Recently the problems of banks are increasing operating cost and decreasing loan amount resulting decrease in profits of the bank. But is a show it is only for short term because the directives are more effective to protect the banks from bad loans, which protect the bank from bankruptcy as well as protection of deposits of depositors. Increase in capital adequacy ratio strengthens the banks financial position. This will improve the reputation of the banks and increase the goodwill. Above all it can be concluded newly issued directives are more effective than previous one although it has brought some problem toward banks. To increase the decreasing profit of the banks, they should search the alternative such like more investments in other business, bank should adopt new technology according to demand of time and must not depend on only interest income for profits.

Pathak, G.K. (2000), in his thesis, has found the capital adequacy ratios of NIBL andNBL are fluctuating in nature over the period of his study. Pathak has further concluded that both the banks have been maintaining capital adequacy ratio as directed by the central bank in order to safeguard the depositors' interest. However, it is found from student's t-test that NIBL has higher capital adequacy ratio than that of NGBL on average. It can be concluded that NIBL has maintained excess capital fund to safeguard the depositor's interest.

Wagle (2000) in his thesis entitled- "A Study on Trends of Saving, Investment and Capital Formation in Nepal" has indicated that capital fund has significant and positive relation with both deposit and loans. It means increase (decrease) in capital fund increase (decrease) deposits as well as loans. However the degrees of relationship were different. But relation of capital with profit was positive and insignificant. It indicated less of increase or decrease in profit is due to capital fund or capital fund is least responsible in changing profit. Bank should increase capital fund to increase the capital fund ratio according to increase in deposit.

Dhakal (2006) in his study entitled "A comparative study of Capital Adequacy of Joint Venture Banks in Nepal especially of Nepal Arab Bank Ltd. and Nepal Investment Bank Ltd." concludes that the liquidity position of both the banks is below the normal standard of 2:1. Comparatively this ratio of NIBL is better on an average. Both the banks are found to be efficient in utilizing most of their total assets. Capital structure is highly leveraged, capital adequacy ratio of NIBL is better than that of NABIL and the profitability position of both the banks is not recorded as satisfactory. Based on the findings of analysis, the research suggests finding out the root cause of weak liquidity position to improve the liquidity of both banks. Similarly, both the banks are suggested to maintain improve capital structure by increasing equity base, to extend loan and advances to utilize more of the total deposits, to minimize operational expenses or to mobilize resources more efficiently and to extend their banking facilities even in the rural areas.

Kandel (2007) in his study entitled "Capital Adequacy of Commercial Banks in Nepal especially of Nepal Bank Limited, Himalayan Bank Limited and Nepal Investment Bank Limited." concludes that After detail analysis of capital adequacy directives issued by Nepal Rastra Bank based on Capital Accord 1988, International practices on capital adequacy, the compliance status on capital adequacy by selected commercial banks and their management effort to built strong capital base, following conclusions are drawn:

During this time, the operating environment of the banks has changed radically, and their risk management systems have also improved. In the new conditions, the

calculation of capital charges under the current regime has proved insufficient because it covers only credit risk. Accordingly, a revision of the capital adequacy framework is justified in order to capture the various factors affecting banks' risk exposure. However, the proposed changes make the assessment of capital adequacy a significantly more complex procedure than under the current framework.

HBL has surplus core and supplementary capital by Rs 772.83 million and Rs 489.64 million in FY 2004/5 and in all the years the bank is successful to maintain capital adequacy requirement. In NIBL, there was surplus core and supplementary capital by Rs. 421.66 million and Rs 78.14 million in FY 2004/5 and in all the years the bank is successful to maintain capital adequacy requirement except FY 2002/3. In NBL, there is deficit core capital and capital fund by Rs -24559.02 million and Rs -27614.92 million in FY 2004/5 and in all the years, the bank was failed to maintain capital adequacy requirement.

Sedhain (2009) in his study entitled "Capital Adequacy of Nepalese Commercial Banks" (Based on Basel-II Implementation in Nepal) concludes that risk management system of the commercial banks as well as the operating environment of the commercial banks has improved significantly after the implementation of Basel-II in Nepal. The calculation of the capital charge under the current regime has provided sufficient because it covers all the three components of capital risk. One of the challenges of commercial banks to maintain capital standard is found to be non-performing assets that are growing in volume and magnitude. This is mainly due to defective lending policies, there is also challenge created from increase in loan loss provision and non-banking assets provision. This has made regulation to undertake stock monitoring and supervision.Previously about 25% of the total commercial banks were unable to maintain capital adequacy norms based on core capital to risk weighted assets. But the rate of banks maintaining low or negative capital fund has been significantly decreased by the end of 2008. Unlike others Nepal Bank Limited has not yet been able to maintain the required total capital ratio with the risk weighted framework. Other banks seem satisfactory in terms of their capita condition with respect to total risk weighted exposure.

As per the analysis of Basel capital regulation framework it has been concluded that it has helped in developing suitable prudential norms to save the banks and financial institutions from financial crisis and signals of failure. Due to the revision of capital adequacy framework, it is concluded that it has significantly changed the operating procedure of the commercial banks. Since there are the provisions for supervisory/regulatory authorities and the banks themselves would be granted more discretionary power on application of the provisions, the maintenance of required capital adequacy has got some broad area. When the new changes are made on July 8, 2008, the capital adequacy of the commercial banks seems to be showing resistance to change.

Lama (2009) in her study "NRB Unified Directives on Capital Adequacy Norms and its Impact with reference to Nepal Industrial and Commercial Bank Limited" concludes that commercial banks of Nepal are bound by the NRB directives and are currently bound by Unified Directives for all financial institutions. Every commercial bank has to meet the requirement of capital adequacy as stated by the directive. NIC Bank is found to be successful to comply with requirements of capital adequacy norms. The capital-to-deposit ratio of the bank is adequate and satisfactory. The CD ratio of the bank is very low and needs to be improved immediately. Although the bank is successful to meet the capital adequacy requirement, it seems to be ineffective to fulfill other capital and deposit ratios which are also very much important in regard of safeguarding the money of the depositors. The bank should highly focus on optimum utilization of the deposits.

2.7 Research Gap

From the above literature, it can be concluded that capital adequacy is the pre-requisite for running commercial bank smoothly in the national and international context. It is going to be a serious and emerging mater. Here we discussed about Capital adequacy management in the context of U.S.A., Turkey, Nigeria and Nepal. The result shows, Capital adequacy should be maintained for the welfare and benefit of the investors and bank itself. In Nepal, Previous researchers analyzed financial performance of individual bank and as a whole of banking industry. Here, I tried to show the relationship of capital adequacy ratio between

government, Joint venture and public banks. Capital adequacy can be determined by various factors. Among them, country's environment and fiscal policy in terms NRB directives and adequate fund may be the strong determinant for capital adequacy management in the commercial banks. Present study tries to define different accord and directives of central bank in Nepal by applying those various facts in the context of Nepalese commercial banks. It can be very useful or important in capital adequacy management. Thus, present study will be fruitful to those interested person parties, scholars, professor, student, businessman and government for academically as well as policy perspective. Hope this Study will help to others in futures in the related field.

CHAPTER – 3

RESEARCH METHODOLOGY

3.1 Research Design

To solve the problem of capital adequacy in banks and financial institutions, research methodology is followed in order to achieve the basic objectives and goals of this research work. By using the secondary sources of data and information, various quantitative techniques have been used to establish relationship between various variables.

This study covers relevant data collection, tabulation and compilation of data, to find out required economic parameters, analysis of compiled data and economic parameters. Various statistical and financial tools has been used to examine facts in order to evaluate capital adequacy situation of commercial banks, comparing inter-bank units of selected commercial banks and the average of banking industries.

3.2 Nature of Data

The data have used in this study are only quantitative. Only secondary data has been employed here. Secondary data have been taken from the all sampled banks, the annual report published by relevant banks, economic bulletins and banking and statistics report etc. same published by NRB and the relevant banks, some newspapers and also from websites. Likewise, unpublished master level's thesis and studies have been taken as a source of data. The study covers the analysis of ten year's data from the fiscal year 2003 to 2012.

3.3 Population and Sample

There are 31 Commercial Banks are operating in all over the country. Here, only 17 Commercial Banks are considered as sample for the study and all banks are regarded the population for the research work.

Following selected banks are taken as sample which is represents the whole bank as government, joint-venture and public, they are all including taken into the consideration of the study.

Table:-3.1

Selected Commercial Banks for research

S.N.	Name of the Commercial Banks	Operation date(A.D.)	Total Capital (in Rs millions) (mid July 2012)	Head Office
A.	**Government Banks:**			
1.	Nepal Bank Limited	1937-11-15	(3008.00)	Kathmandu
2.	Rastriya Banijya Bank	1966-01-15	(4738.00)	Kathmandu
B.	**Joint Venture Banks:**			
1	Nabil Bank Limited	1984-07-16	6921.00	Kathmandu
2	Standard Chartered Bank Limited	1987-01-30	5019.00	Kathmandu
3	Himalayan Bank Limited	1993-01-18	5700.76	Kathmandu
4	Nepal SBI Bank Limited	1993-07-07	3999.00	Kathmandu
5	Nepal Bangladesh Bank Limited		2323.00	Kathmandu
6	Everest Bank Limited	1994-10-18	4643.10	Kathmandu
C.	**Public Banks:**			
1	Nepal Investment Bank Limited	1986-02-27	7397.00	Kathmandu
2	Bank of Kathmandu Nepal	1995-03-12	3240.64	Kathmandu
3	Nepal Credit and Commerce Bank	1996-10-14	1923.00	siddharthanagar
4	Nepal Industrial and Commercial Bank	1996-07-21	2643.00	Biratnagar

5	Lumbini Bank Limited	1998-07-17	2112.00	Narayangadh
6	Machhapuchhre Bank Limited	2000-10-03	2789.00	Pokhara
7	Kumari Bank Limited	2001-04-03	2760.00	Kathmandu
8	Laxmi Bank Limited	2002-04-03	2649.55	Birgunj
9	Siddhartha Bank Limited	2002-12-24	3022.00	Kathmandu

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

3.4 Data Collection Procedures

The data and information are collected from secondary sources. For the collection of secondary data and information, directives of Nepal Rastra Bank, Annual Report of Commercial Banks, various publications of Nepal Rastra bank, magazines, and other publications have been used. For the other related information various books and periodical have been referred and library is taken in consideration for the better research work.

3.5 Data Analysis Tools

Before analyzing the data, the randomly collected data have been arranged and presented systematically in the tables, graphs and charts which will explain a lot about the data and information collected.

The following tools have been used to analysis and interpret the obtain data for the research study.

3.5.1 Financial Tools

Ratio analysis is the best tool for financial analysis. Ratios can be taken as expression of relationship between two items or group of items and therefore may be calculated in any number. By Ratio analysis, we can find out the relationship between variables.

Pandey emphasizes that a ratio is used as benchmark for evaluating financial position and performance of the firm.

The following Ratios are related to the banks which ultimately used to analyze the data:

a) Capital Adequacy Ratio

Capital adequacy ratio is the foremost tool to analyze the capital fund of a bank. The fundamental objective of this research study is to examine capital adequacy of commercial banks.

The capital adequacy ratio is based on total risk-weighted assets of the bank. Capital adequacy ratios are measures the amount of bank's capital expressed as a percentage of its risk weighted assets exposures. This ratio is used to examine adequacy of total capital fund, which is yielded by the following formula:-

Total Capital Adequacy Ratio = $\frac{Total\ Capital\ Fund * 100}{TRWA}$

b) Capital Deposit Ratio

The capital to deposit ratio is an important tool for measuring capital adequacy ratios of banks. But, this ratio can not reflect the capital adequacy of a bank.

Patheja has stressed that the deposit ratio has enjoyed the longest use of any ratio devise to measure and determine capital adequacy. The capital to deposit ratio is derived by the following formula:

Capital Deposit Ratio = $\frac{Total\ Capital\ Fund\ * 100}{Total\ Deposit\ Collected}$

c) Capital to Credit Ratio

Banks may use a number of techniques to mitigate the risks to which they are exposed. The prime objective of this provision is to encourage the banks to manage credit risk in a prudent and effective manner. At this context, it is important and very useful capital adequacy technique. It measures how portion of capital is available with comparison to credit. The capital to credit ratio is derived by the following formula:

Capital to credit ratio= $\frac{Total\ capital\ \ * 100\%}{Total\ Credit}$

d) Credit to Deposit Ratio

The credit to deposit ratio (CD Ratio) is a major tool to examine the liquidity of a bank. CD ratio measures the ratio of fund that a bank has utilized in credit out of the deposits total collected. More the CD Ratio more the effectiveness of the bank to utilize the fund it collected. The CD Ratio is derived by the following formula:

$$\text{CD Ratio} = \frac{Total\ Credit \quad *100\%}{Total\ deposit}$$

e) Profit Margin Ratio

It is not the techniques of capital adequacy but it is used here to define the relation between capital and profit.

The profit margin ratio is derived by the following formula:

$$\text{Profit Margin Ratio} = \frac{Net\ profit \quad *100\%}{Total\ Revenue}$$

e) Analysis between Capital Adequacy Ratio and Profit margin Ratio

The profit margin ratio is one of the important and useful tools to measure the financial performance of the commercial banks. It is not the techniques of capital adequacy but it is used here to define the relation between capital adequacy ratio and profit margin ratio of commercial banks in Nepal.

3.5.2 Statistical Tools

The following statistical tool is used to analyze the data:

a)Karl Pearson Correlation Analysis:

Correlation analysis is defined as the statistical technique, which measues degree and direction of relationship between the variables.

The relation between two variables is correlated by Karl Pearson's Correlation Coefficient. The following is the formula proposed by Karl Pearson for calculation of correlation coefficient.

$$r12 = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X^2 - (\sum X)^2}\sqrt{N\sum Y^2 - (\sum Y)^2}}$$

It is noted that the numerical measurement of relationship between the two variables is denoted by the symbol “r” whose values ranges from -1 to +1.

i.e. $-1 \leq r \leq +1$

Conditions:

- If r = 0, there is no relationship between the variables.
- If r < 0, there is negative relationship between the variables.
- If r > 0, there is positive relationship between the variables.
- If r = -1, the relationship is perfectly negative.
- If r = +1, the relationship is perfectly positive.

b)Hypothesis

Hypothesis is a statement about the relationship between two or more variables which needs to be investigated for its truth. It is an assumption that is made about the population parameter and then its validity is tested. It may or may not be found valid on verification. The act of verification on the basis of sample evidence is called statistical hypothesis or test of significance. By testing hypothesis we can find out whether it deserves the acceptance or rejection of the hypothesis.

Generally, two complementary hypotheses are set up at the one time. If one hypothesis is accepted, then the other hypothesis is rejected, and vice- versa, the two complementary hypotheses are null hypothesis and alternative hypothesis denoted by H_0 and H_1 respectively. On the basis of number of the sample t- test is used for the study because the sample size is only fifteen. Thus t- test formula is given by:

$$r= \frac{r\sqrt{N-2}}{\sqrt{1-r^2}}$$

Where,

r = Calculated value of correlation coefficient

n= Number of observations

The hypotheses have been tested with at a 90% level of confidence, i.e. 5% level of significance. If calculated value of t ≤ tabulated value of t, it is not significant and H_0 is accepted, or H_1 is rejected, and vice- versa.

CHAPTER – 4

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter deals with the presentation, analysis and interpretation of the available data and information of commercial banks. To obtain best result, the data and information have been analyzed according to research methodology as mentioned in the chapter – 3. The main purpose of such analysis is to obtain answer of the research questions or to test the hypotheses. Thus, the presentation of data is the basic organization and classification of the data for the analysis.

Now a day, Commercial Banking sector is growing and expanding very fast on the guidance and suggestions of Nepal Rastra bank. Commercial Banking sectors are well renowned among the people because they are providing various types of modern services to their customers. So, the people are lured by commercial banks to take extra and modern services. So, in this chapter it is analyzed that whether commercial banks are following directives, norms of NRB or not, customers saving is secure or not ?

4.2 Capital Fund of Commercial Banks

Capital fund is summation of Tier -1 capital and Tier-2 capital. Tier -1 capital is also known as core capital and Tier-2 capital is known as supplementary capital. Hence, the total capital fund of bank derived from these two components of capital. The capital funds of commercial banks have been illustrated hereinafter overall.

Table No. : - 4.1

Capital Fund Commercial Banks

(Amount in Millions Rs.)

Year (Mid July)	Government Banks	Joint Venture Bank	Public Bank	Total
2003	(31448.06)	6757.43	4180.85	(20510.32)
2004	(29816.24)	7142.24	5128.29	(17545.71)
2005	(27803.59)	7843.53	6209.78	(13750.29)
2006	(22873.60)	11099.92	7521.82	(4251.86)
2007	(23600.52)	7597.76	8326.97	(7675.79)
2008	(22907.20)	11632.83	13815.77	2541.40
2009	(19227.20)	17016.20	18749.60	16538.60
2010	(13198.80)	14760.04	16030.63	17591.87
2011	(12030.64)	17759.53	18920.45	24649.34
2012	(7746.00)	28605.86	28536.19	49396.05

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

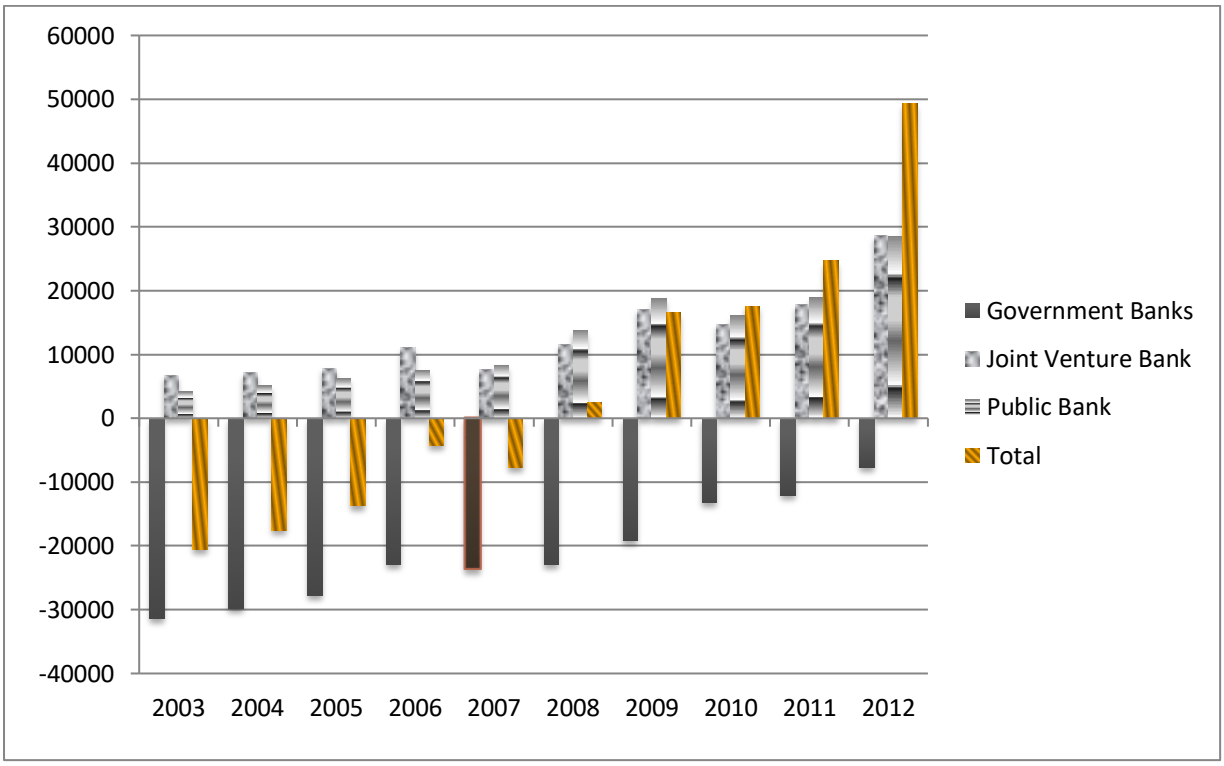
The capital fund is the summation of Tier-1 and tier-2 capital. In mid July 2012, the Total Capital Fund of Government bank is (Rs 7746.00)million which is negative figure and shown that there is need of huge capital to safe the depositor's deposit. If the bank goes to dissolve, the deposit of depositor are collapsed because of there is no sufficient capital in bank to repay the deposit. But in the case of joint venture and public banks there is sufficient capital account required by NRB directives.

A capital of Nepalese commercial banks is in negative position up to the fiscal year 2007, although the negative structure of capital has been lessened at a galloping race in the year 2006.Then again growth to positive position thereafter. Capital in the years ranging from 2009 seemed to have been highly fluctuating, which fluctuates the retained earnings of certain Government owned banks especially Nepal bank Limited and Rastriya Banijaya Bank. From this, it can be said that the capital fund of commercial banks may witness a growth in the years to come if the banking

environment remains congenial. Due to the negative high position of capital of government bank in the years from 2003 to 2006, it seems the negative capital of commercial bank and highly increases in capital from joint venture and public banks year 2008 to 2012, the capital of Nepalese commercial banks are positive increasing and maintained way.

Figure:-4.1

Capital Fund of Commercial Banks



Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

The figure 4.1 shows that the total fund of commercial Banks is in an increasing trend up to the fiscal year 2006, then its decline dramatically in 2007 due to negative core capital. And again start to rise from 2008, than after due to highly increase in capital. The movement of capital is upward up to year 2012.In the research period, capital fund of government banks are decreasing in negative i.e. it is improving its capital but it is fluctuating. Since 2008, its figure has shown that it is increasing smoothly. During the 2007 to 2012 government banks decreased its negative figure by largely. If the

bank can manage this ratio, the bank can take long period to remove the negative figure of total capital.

The figure 4.3 shows the growing trend of capital fund of the joint venture and public banks during the research period. The trend shows that there are in increasing trend. As a result the total capital is increased in their average ratio. The increment in the capital fund shows that Joint venture and public banks has been trying to increase its capital base to comply with the requirements of NRB as prescribed in Capital Adequacy Norms for commercial bank.

4.3 Capital Adequacy Ratios of Commercial Banks

In general, Nepal Rastra Bank issues various directives including capital adequacy related directives. All the banks and financial institutions licensed by NRB should implement those directives. Regarding the compliance status, NRB also monitor and inspect those banks and prepares the reports of compliance status. 'Capital adequacy, loan classification and provisioning, ceiling on investment in share and debentures and other regulatory requirement as well as financial conditions of the commercial banks are regularly monitored through these reports (NRB, 2006:17).

The Capital is the permanent fund supplied by the owners of the business. It is a fundamental resource. In accrue the business. First, bank/non-banks should strengthen their capital positions so that long-term fixed assets and infrastructure investments that do not directly generate cash flows can be funded. Then, aside from the capital used to meet the funding requirements for fixed assets and infrastructure investments that don not directly generates cash 60 flows can be funded. Then, aside from the capital used to meet the funding requirements for fixed assets and infrastructure investments, it is used to absorb unusual losses and to continue to conduct business when resources are not available or have been withdrawn. The strength of the capital position is an important signal to the public as to the safety of their deposits. Therefore, capital strength is important not only for the individual bank/non-bank but also for the banking system as a whole (NRB, 2002:5)."

Nepal Rastra Bank had issued a revised capital adequacy directive in April, 2001. The revised regulation on capital adequacy requires the banks to maintain a capital ratio

consistent with international standards. That is, all banks are required to observe the 8 percent risk weighted capital adequacy ratio proposed by Basle Committee by July 2001, and according to Nepal Rastra Bank "The minimum capital adequacy ratio of 10 percent is considered a minimum level because the original capital adequacy framework is based on credit risk and does not incorporate interest rate risk of other forms of risk or other forms of risk.

The Capital Adequacy Ratios of commercial banks in Nepal is shown as below:

Table No. : - 4.2

Capital Adequacy Ratios (Capital fund/Total RWA)

Year (Mid July)	Government Banks	Joint Venture Banks	Public Banks	Average
2003	(37.83%)	11.84%	13.86%	(12.04%)
2004	(35.05%)	10.95%	11.94%	(9.08%)
2005	(31.41%)	10.81%	11.06%	(6.33%)
2006	(43.65%)	13.62%	10.71%	(2.08%)
2007	(42.80%)	8.28%	9.32%	(3.25%)
2008	(37.89%)	9.68%	11.56%	0.85%
2009	(26.32%)	11.54%	12.10%	4.41%
2010	(16.54%)	12.61%	12.98%	5.49%
2011	(14.92%)	12.06%	13.11%	6.62%
2012	(7.32%)	12.45%	12.81%	8.85%

Source: Annex-11

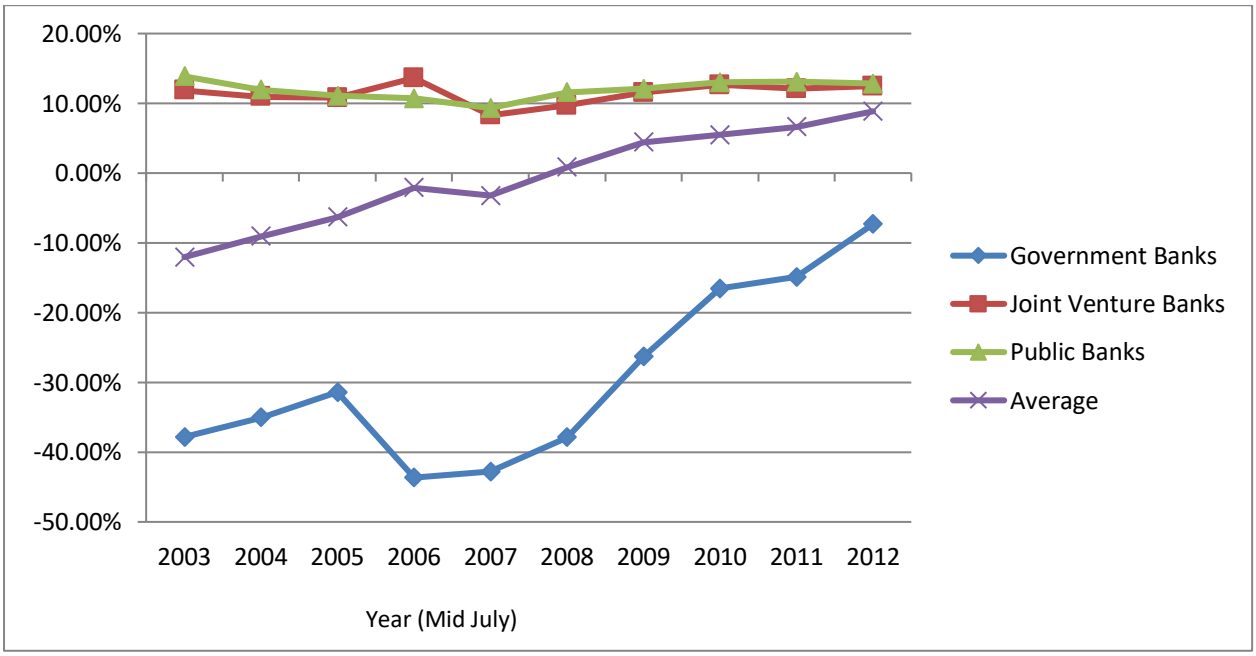
The table 4.2 displays the decreasing trend of the Capital Adequacy Ratios of Government Banks in negative figure which shows that Government banks has been improving its negative figure of capital adequacy ratio. It is (37.83%) in fiscal year 2003 and only (7.32%) in 2012. Due to the negative figure of core capital, the capital adequacy ratio is in negative figure. It shows there are some problems in government bank to maintain capital adequacy ratio. The table 4.2 displays the trend of the Capital Adequacy Ratios of Joint Venture Banks and Public Banks, which has been

maintaining the minimum capital requirement. The capital adequacy ratio of joint venture banks is 11.84% in 2003, it fluctuate some fiscal year and move to 12.15% in 2012. The ratio of public banks also fluctuates but maintained at 12.81% in 2012 from 13.86% in 2003.

This shows the competency of Joint Venture and Public banks is to maintain the capital adequacy ratio directed by authorized body. The banks are very successful to maintain the capital adequacy ratio because there is nominal gap between bank's actual capital adequacy ratio and required capital adequacy ratio. It explains the good combination of total capital fund and total risk weighted exposures. The banks' depositors and creditors safe either capital fund is high or risk exposure is low. Therefore, the portfolio of capital fund and risk weighted exposures is considerable to maintain the capital adequacy ratio.

Figure:-4.2

Capital adequacy ratios of Commercial Banks



Source: Annex-11

The capital adequacy ratios of the Nepalese banking industry have depicted a favorable trend during 2012. There are various reasons for this improvement. The banks, during the period, on an average have performed well and some of them have

raised capital from the market, which improved the overall capital position of the industry. All banks, except for government banks were able to post handsome profits. Some banks were able to distribute cash dividends and bonus shares to its shareholders. At the same time, some banks raised finance from the market through issue of right shares during the year except some problematic banks.

It is the negative capital base of government banks that has resulted on the negative capital base of the entire banking industry. Although, the public banks have started to improve their financial condition, it is far from an acceptable standard. The public banks, due to their size, have a relatively significant degree of sensitivity to the entire industry's performance and their improvement has been echoed in the improvement of the entire industry's capital.

On the other hand, from the above figure, it is concluded that increasing and decreasing shape of RWA and Total Capital Fund is same direction but increasing rate of RWA is higher than Total Capital Fund and decreasing rate of Total Capital Fund is greater than the RWA. The correlation between total capital fund and RWA is 0.97356052. (See Annex- 1), The calculated value of the correlation coefficient states that there is a highly positive correlation between total capital fund and RWA i.e. when total capital fund increases the value of RWA also increases. When the result is tested by using hypothesis of t test at the 5 percent level of significance, the result shows that the total Capital amount and the Total RWA are correlated as shown in Annex -2.

4.4 Capital fund to Deposit Ratios

Being the main function of a Commercial Bank, every commercial bank collects deposit from general public. Verm & Malhotra has mentioned that a commercial bank usually has access to three sources of fund namely, capital fund, deposits and borrowings. Collection of idle money and lending it into productive sector is the main function of the commercial banks. It increases the financial activities towards the country and creates the sources of fund for the investors. Nepal is one of the poorest countries in the world and the people have low income. So, it is difficult to collect money from people, although commercial banks of Nepal are enabling to do so to

some extent by offering attractive product. The deposit position of the commercial banks is shown in the following table:

Table No. : - 4.3

Capital to Deposit Ratios (Capital/Deposits)

Year (Mid July)	Government Banks	Joint Venture Banks	Public Banks	Average
2003	(42.47%)	8.78%	14.00%	(11.34%)
2004	(38.92%)	8.30%	11.43%	(8.45%)
2005	(35.54%)	8.75%	10.81%	(6.10%)
2006	(28.19%)	10.42%	10.22%	(1.63%)
2007	(26.54%)	6.44%	8.89%	(2.55%)
2008	(24.26%)	8.19%	11.38%	0.71%
2009	(17.12%)	9.50%	11.76%	3.67%
2010	(11.92%)	7.34%	9.05%	3.60%
2011	(9.97%)	7.94%	10.48%	4.70%
2012	(5.39%)	11.04%	12.93%	7.92%

Source: Annex-12

The individual analysis of sub sector, The Capital Fund to Deposit ratio of government banks is regularly increasing but not sufficiently. It is negative due to negative capital fund. The ratio is (42.47%) in 2003 and (5.39%) in 2012.

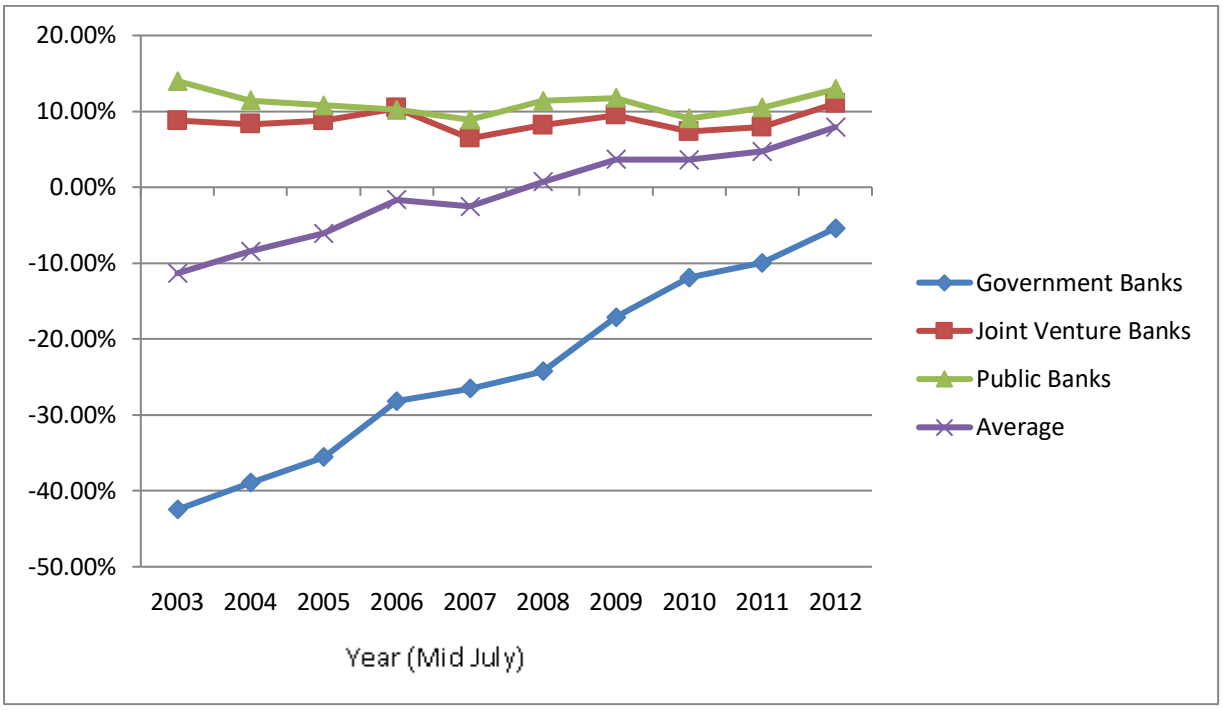
The ratio of joint venture and public banks are more fluctuate; it's regularly up and down. But it is in satisfactory level.

The above table shows that the proportion of Total Deposit is greater than the Total Capital Fund. It is increasing but not in the same way, it shows more fluctuation. Due to the small spread between the rate on saving and fixed deposit, people are attracted towards the saving accounts than fixed accounts which is shown in the interest rate structure in the commercial banks in the previous years. Not only had the small interest spread but the lack of investment opportunities also brings the money of people to the saving accounts, although it also has a very low interest rate. Capital fund to total deposit ratio is in increasing position up to financial year 2006, then start

to decline up to financial year 2007 and thereafter again it starts increasing. Total deposit is rapidly increased throughout the financial years. The deposit position of commercial banks is shown in the following graph:

Figure:-4.3

Capital to Deposit Ratios (Capital/Deposits)



Source: Annex-12

The above graph shows that total capital fund to deposit ratio of commercial banks has an upward trend whereas the other has a downward trend under long term evaluation. Total capital fund have negative slope curve which is founded from the fiscal year 2003 to 2007 after that it started to upward.

The correlation between total capital fund and total deposit is 0.984032408 (see Annex- 3). The calculated value of the correlation coefficient states that there is a highly positive correlation between total capital fund and total deposits i.e. when total capital fund increases the value of total deposit is increases and vice versa. When the result is tested by using hypothesis of t test at the 5 percent level of significance, the result shows that the total Capital amount and the deposits are correlated as shown in Annex - 4.

4.5 Capital Fund to Credit Ratios

The deposits received by bank are not allowed to lie idle by the bank. After keeping a certain portion of deposits as reserves, the bank gives the borrowers in the form of loan or credit with different type and features. While depositors are the main source of cash for banks, creditors are the main source of income for the banks. Most of the portion of investment made by the commercial banks is occupied by private sector so the view of individual creditors also should be derived in order to find out the performance of the commercial banks. In this sense, it is very important to find out the capital to credit ratio. It shows the portion of capital out of it credit. The capital to credit Ratios of commercial banks in Nepal is shown as below:

Table No. : - 4.4

Capital fund to Credit Ratios (Capital fund/Total Credit)

Year (Mid July)	Government Banks	Joint Venture Banks	Public Banks	Average
2003	(66.17%)	15.46%	17.08%	(17.73%)
2004	(64.13%)	14.14%	14.92%	(13.41%)
2005	(48.40%)	13.54%	13.05%	(8.44%)
2006	(57.25%)	16.93%	12.74%	(2.58%)
2007	(60.25%)	9.76%	10.97%	(3.98%)
2008	(52.95%)	11.99%	13.52%	1.05%
2009	(38.04%)	14.59%	14.07%	5.50%
2010	(21.72%)	11.05%	10.95%	5.16%
2011	(18.92%)	11.52%	12.27%	6.63%
2012	(11.04%)	16.57%	16.73%	11.95%

Source: Annex-13

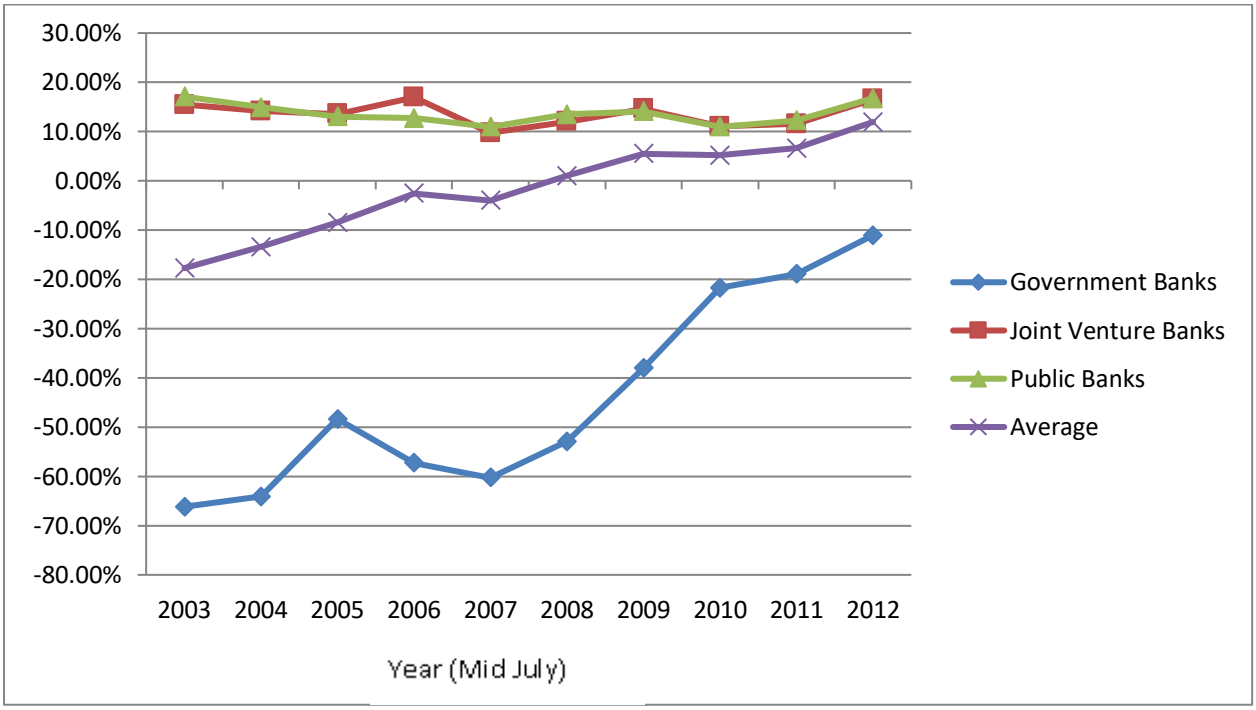
The capital to credit ratio of government banks is regular negative but it is in decreasing trend it is (66.17%) in 2003 and now (11.04%) in 2012. As a result of it, the credit deposit (CD) ratio of government bank is very weak and fluctuates. On the other side, the capital to credit ratios of government and public banks fluctuate but in

good position. It directly affect to the CD ratio. The CD ratio of joint venture and public banks are in good and stable position.

The ratio of commercial banks in Nepal is also affected by the ratio government bank, as a result, it is high negative in 2003 (17.73%), then starts to increase and maintained so far. The ratio is move to 11.95% in 2012.

Figure:-4.4

Capital Fund to credit ratio of Commercial Banks



Source: Annex-13

Here, the trend of capital to credit ratio of all sector and average is up and down in preliminary research period, after that slowly starts to increase. The line of average ratio is aggressively increases due to the ratio of government banks. The correlation between total capital fund and total deposit is 0.971067 (see Annex- 5). The calculated value of the correlation coefficient states that there is a highly positive correlation between total capital fund and total credits i.e. when total capital fund increases the value of total credit is increases. When the result is tested by using hypothesis of t test at the 5 percent level of significance, the result shows that the deposit amount and the Credits are correlated as shown in Annex - 6.

4.6 Credit to Deposit Ratio

In which manner the deposit position is increasing, the credit position of the commercial banks is also growing continually. The strength of the commercial banks is measured by the credit position created by it, because interest is the main income source of the commercial banks, which is obtained from deducting the interest liabilities to the deposits from the interest earning from credit. So, the growing position of the commercial banks indicates that the strength of this sector is increasing.

Analyzing the present financial environment, it is very difficult for credit expansion to the commercial banks because they are walking a tight-rope right now. The prevailing internal insurgency in Nepal compel commercial banks to lower to lower the investment in medium sized and mega projects. The problem as such hinders the pace of project, i.e. having medium magnitudes. Deposit of uncongenial atmosphere for making investment, the commercial bank enables to show the consistent performance to same extent. The epitome of this is the commercial banks are enhancing the growth rate of credit position in a mild manner.

We know that the deposit collection is not only important function of commercial banks, but also its investment in a proper way. The maximum utilization of the deposit maximizes the profit and increases the performances of commercial banks. Therefore, deposit collection and credit expansion are two major functions of commercial banks. We see that both the position of deposit collection and credit expansion of them are increasing every year for the study period, but in the sense of the maximum utilization of deposit, we have to find out how much deposit can be invested. And, the growth rate of deposit and credit is same or different? For the systematic study we see the position and ratios of commercial banks in a single table representing the ten-year period.

Table No. : - 4.5

Credit to Deposit (CD) Ratios of commercial banks in Nepal

Year (Mid July)	Government Banks	Joint Venture Banks	Public Banks	Average
2003	64.18%	56.80%	81.94%	63.97%
2004	59.35%	58.68%	76.58%	63.02%
2005	73.43%	64.61%	82.86%	72.33%
2006	49.24%	61.55%	80.26%	63.00%
2007	44.06%	66.04%	81.02%	64.21%
2008	45.81%	68.29%	84.13%	67.73%
2009	45.00%	65.11%	83.61%	66.64%
2010	54.88%	66.48%	82.60%	69.69%
2011	52.66%	68.93%	85.36%	70.84%
2012	48.78%	66.66%	77.28%	66.29%

Source: Annex-14

The CD ratio of government banks is ups and downs in different fiscal year. It is 64.18% in 2003, it decrease to 59.35% in 2004 and suddenly climb to 73.43% in 2005 and then fluctuate regularly and move to 48.78% in 2012. The range of CD ratio of government commercial banks over the past ten year is 29.70% (73.43%-44.06%). It is not good sign for long term prospective.

The CD ratio of joint venture banks is constant and satisfactory. It is 56.8% in 2003 and 66.66% in 2012. But some fluctuation in the middle research period.

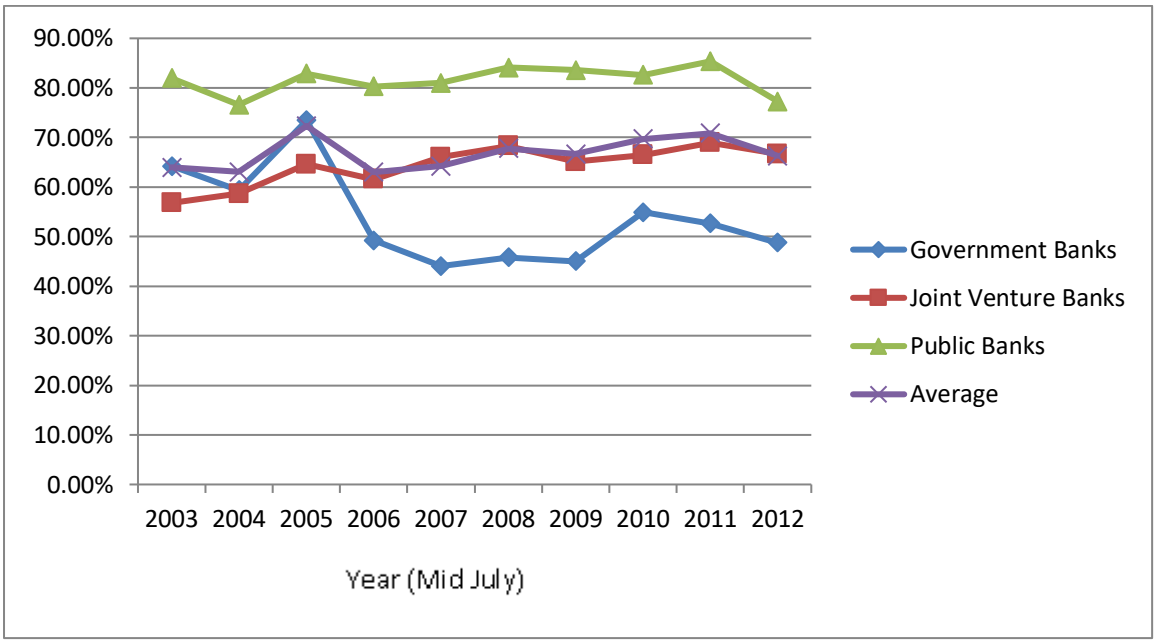
But on the other hand CD ratio of public banks is strong and comparatively more than government and joint venture bank. The ratio is 81.94% in 2003 and fluctuates up and down and moves to 85.36% in 2011 but decrease to 77.27% in 2012.

It shows that the performance for the ratio of credit as of total deposit has improve but not sufficient. There are only around 10% increases in nine years period which is not sufficient for the economic development of country. The ratio has been fluctuation every financial year but not growth highly due to more deposit collection than credit

making, which reduces the credit ratio below although the deposit collection and credit expansion both are in increasing trend. The graph chart of the deposit and credit position can be shown this figure more clearly as:

Figure:-4.5

Credit to Deposit (CD) Ratios of commercial banks in Nepal



Source: Annex-14

The above figure shows that the movement of the deposit collection and utilization has the same. We know that with passing of years Commercial Banks are able to collect more deposits to their accounts and same way they invest it. So, the increment in the both side makes the percentage growth rate similar.

The correlation coefficient between deposit collection and credit expansion is 0.995903 (see Annex-7), which is nearly equal to 1. This indicates the movement of deposit collection as well as the credit expansion has about same speed with same magnitude i.e. nearly to perfect positive correlation. When the result is tested by using hypothesis of t test at the 5 percent level of significance, the result shows that the deposit amount and the Credits are correlated as shown in Annex -8.

4.7 Profit Margin Ratios

The profit margin ratio is one of the important and useful tools to measure the financial performance of the commercial banks. It is not the techniques of capital adequacy but it is used here to define the relation between capital and profit. Here first trying to show the net profit of commercial banks as:

Table-:4.6

Profit Margin Ratio (Net profit/Total Revenues)

Year (Mid July)	Government Banks	Joint Venture Banks	Public Banks	Average
2003	22.23%	33.46%	17.80%	27.99%
2004	(0.54%)	34.60%	16.92%	19.08%
2005	21.56%	33.41%	15.33%	24.34%
2006	54.10%	35.98%	8.07%	33.93%
2007	31.20%	34.74%	21.17%	29.24%
2008	34.58%	35.41%	27.63%	32.47%
2009	33.34%	37.25%	26.67%	32.30%
2010	22.36%	28.05%	19.74%	23.51%
2011	19.43%	22.90%	15.07%	19.03%
2012	14.45%	21.32%	13.15%	16.86%

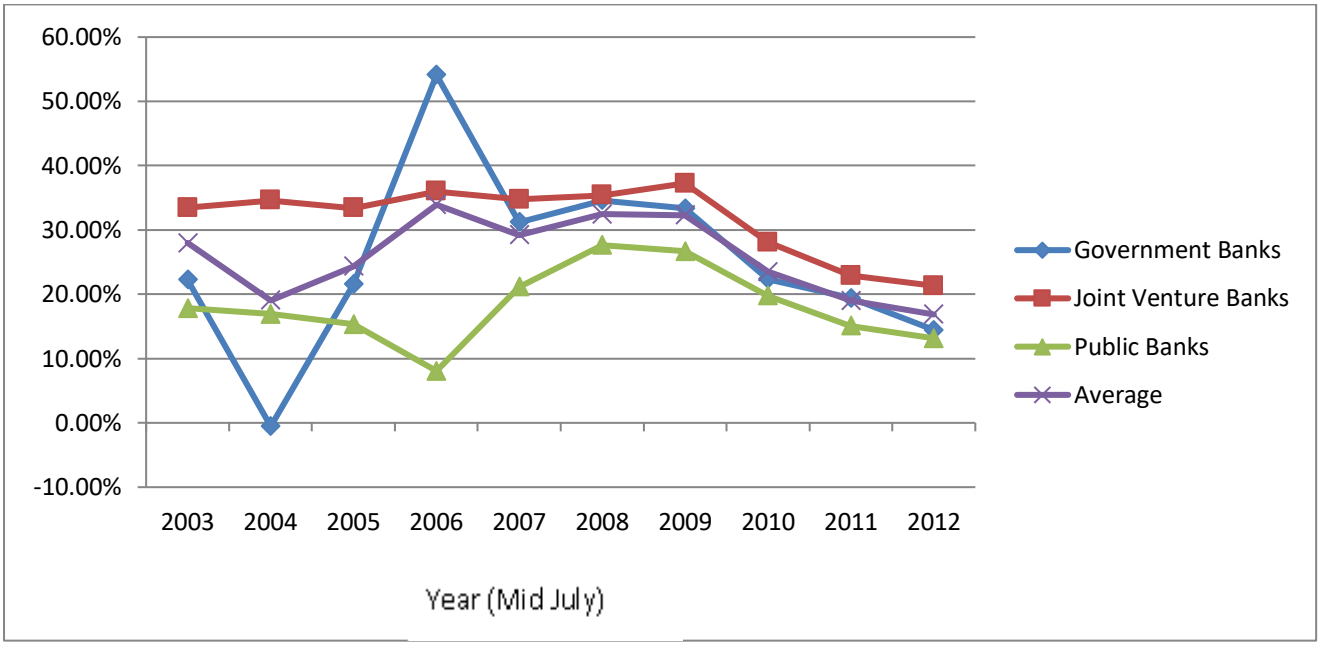
Source: Annex-15

Here the profit margin of Government is positive (22.23%) in the starting phase of research period in 2003 but it increase to (0.54%) in 2004 and thereafter fluctuate more and less and move to 34.58% in 2008 and regularly declines after 2009 and move to 14.45% in 2012.The profit margin ratio of joint venture banks is more consistent up to 2009(37.25% from 33.46% in 2003) and starts to decline and the series is not stop so far and maintain at 21.32% in 2012.One the other hand same problem have been faced by public banks. It has also consistent ratio up to 2008 and start to decline regularly.

The average net profit margin ratio of the commercial bank is fluctuate and not satisfactory.

Figure:-4.6

Profit Margin Ratio (Net profit/Total Revenues)



Source: Annex-15

The above figure shows the profit margin trends of Nepalese commercial banks. It is ups and downs for starting research period and finally catches the downward way. There are more similarities in fluctuating in all sectors of commercial banks.

4.8 Analysis of Capital Adequacy ratio and Profit Margin ratio of Nepalese commercial banks

Because of adequate capital is thought to reduce a bank's risk, regulates determine the capital ratio that is defined as capital divided by assets. Regulations have become increasingly concerned that some banks do not holds enough capital and increased capital requirements. On the other hand, profit margin is the ratio of net income to operating income. It is powerful analytical tool. Here, trying to show the comparative analysis between two ratios as follows:-

Table No. : - 4.7

Capital adequacy ratio and Profit margin ratio of commercial bank in Nepal

year	Capital Adequacy Ratio	Net Profit Margin
2003	(12.04%)	27.99%
2004	(9.08%)	19.08%
2005	(6.33%)	24.34%
2006	(2.08%)	33.93%
2007	(3.25%)	29.24%
2008	0.85%	32.47%
2009	4.41%	32.30%
2010	5.49%	23.51%
2011	6.62%	19.03%
2012	8.85%	16.86%

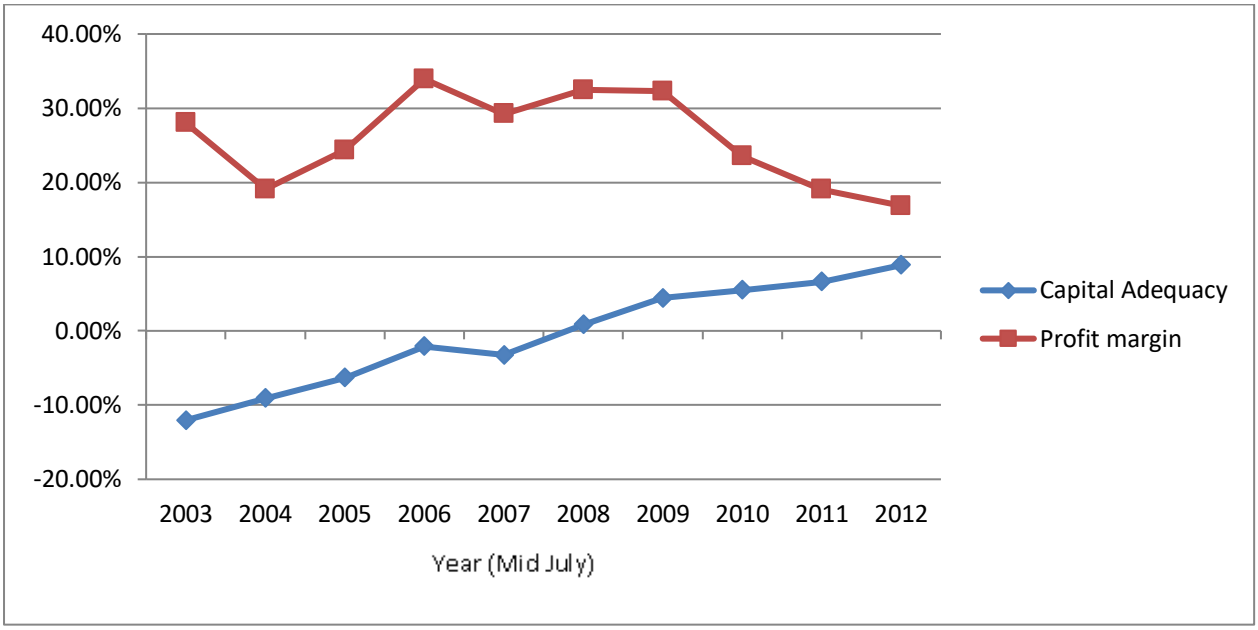
Source: Annex-11 & 15

The above table 4.6 shows the capital adequacy ratio and profit margin ratio of Nepalese commercial banks. The capital adequacy ratio is negative in half part of research and become positive then after. It is also described at table 4.2 and net profit margin is fluctuates in different year differently. It is 27.99% in 2003 then decrease to 19.08% in 2004 then starts to increase and move to 33.93% in 2006. Again it declines to 29.24% in 2007 but again up to 32.47% in 2008 after that it regularly falls and now remains at 16.86% in 2012. Comparatively, these two ratios are strongly related in negative direction.

The figure given below also show the relationship between two ratios:-

Figure:-4.7

Capital adequacy ratio and Profit margin ratio of commercial bank in Nepal



Source: Annex-11 & 15

The above graph shows that Capital adequacy ratio has an upward trend whereas the profit margin ratio has a downward trend under long term evaluation. Total capital adequacy ratio have negative slope curve which is founded from the fiscal year 2003 to 2007 after that it started to upward.

The correlation between total capital fund and profit margin ratio is -0.216988022 (see Annex- 9). The calculated value of the correlation coefficient states that there is a negative correlation between Capital adequacy ratio and profit margin ratio i.e. when total capital adequacy ratio increases the profit margin ratio is increases.

When the result is tested by using hypothesis of t test at the 5 percent level of significance, the result shows that the capital adequacy ratio and the profit margin ratio of commercial banks in Nepal is not correlated as shown in Annex -10. Various other factors plays vital role in the process: like the economics recession, increasing number of banks and financial institutions, political instability, lack of banking awareness to the people and etc.

4.9 Study of Response of Officials of Commercial Banks

Regarding the impact of capital adequacy norms I studied the questionnaire was developed by previous thesis maker or researcher. After studying such questionnaire, some of the related answers are as follows:

The questionnaire related options of the bank officials towards the capital and capital adequacy. All the officials agreed unanimously that the central bank should issue capital adequacy norms for commercial banks. All the respondents answered that an adequate capital fund will always safeguard the interest of depositors.

However, in some questions, the officials found to be disagreeable. Out of total, some questions, some respondents answered that the capital adequacy ratio prescribed by NRB is perfect whole remaining answered that it is high. It seemed that the officials are not quite satisfied with the prescribed capital adequacy ratios. As well as respondents said that the changes brought in by NRB are necessary while the remaining said that it is not all necessary. Some respondents answered that the weighted on risk-weighted assets prescribed by NRB are just ok while other officials said that it should be revised.

While responding to 'what role does NRB play for the development of commercial banks, and then 18 percent responded for advisory role, 20 percent responded for controlling role, 25 percent responded for supportive role and 12 percent responded for policy making role' – (Research department of NRB).

From the above explanation of the study of the questionnaire of the bank officials, more respondents suggest that supportive role is important to expand and development the branch of commercial banks. Some participant suggests that there must be appropriate controlling role and better policy for the commercial banks.

4.10 Major Findings

To jump to the conclusion, the following findings have been made on the basis of analysis of various kinds of information obtained from secondary information. For the purpose, the findings have been presented as major findings based on analysis of secondary information. From the analysis of various data obtained from secondary information the following findings have been extracted:

1. During this time, the operating environment of the banks has changed radically, and their risk management systems have also improved. In the new conditions, the calculation of capital charges under the current regime has proved insufficient because it covers only credit risk. Accordingly, a revision of the capital adequacy framework is justified in order to capture the various factors affecting banks' risk exposure.
2. The government bank had not sufficient capital and it is in negative so far but the joint venture and public banks are found to have maintained the sufficient positive capital fund to risk weighted assets based on average data of last 10 years. The conclusion made from the analysis is that the banks are free from risk to absorb losses arising from the activities of interest earning and fee generating.
3. Both capital fund and risk weighted assets are in a growing trend although the rate of increment varies. The capital fund and RWA of commercial banks are highly correlated.
4. The CD ratio of the commercial bank is in good position. The CD ratio of government banks is less than other joint venture and public banks, seen high with the good average. On the other side, credit and deposits of Nepalese commercial banks are highly correlated.
5. Government commercial banks had not compiled positive requirement in the maintenance of capital fund to credit ratio. On the other hand, Joint venture and Public Banks are able to comply the capital fund with credit based on average data of last 10 years. There is also positive relationship between capital fund and credits of commercial banks in Nepal.
6. The capital to deposit ratio of government is also negative but it is improving, although not sufficiently. The joint venture and Public banks maintain the ratio with very good way. The relation between capital and deposit is also positive.
7. The capital adequacy ratio of commercial banks is increasing positively but the net profit margin ratio of commercial banks is decreasing. The position of total deposit and total credit has been increasing trend but the ratio of

increasing credit is lower than ratio of increasing deposit. It seems that deposit is not properly invested in productive sectors.

So, there is negative relationship between Capital adequacy ratio and profit margin ratio.

8. Numbers of financial institution i.e. commercial banks increasing every year. It adds central bank's more responsibility and accountability to improve and operate financial sector well.

CHAPTER – 5

SUMMARY, CONCLUSION & RECOMMENDATIONS

In this chapter researcher presents the briefing of the whole study, which is presented in three parts as: summary, conclusion and recommendation. So, this is the gist of whole study, in which a reader can obtain the study in a summarized form. Revision of all parts of the study is presented in the summary, in conclusion the whole study is compared with the objective and the required steps taken by commercial banks are presented as suggestions as recommendation.

5.1 Summary

This research aimed at studying capital adequacy directives and norms for commercial banks set by NRB. Raise and utilization of funds are the primary functions of commercial banks. As such, commercial banks collect a large amount of deposits from general public. Capital must be sufficient to protect a bank's depositors and counterparties from the risk like, credit and market risks. Otherwise the bank will use all the money of depositors in their own interest and depositors will have to suffer from loss forever. Any commercial bank should have adequate capital to support the stability and sustainability of its operation. Capital adequacy is a measure of commercial bank's capital as a percentage of its RWA, such as the loans it has provided and the securities it holds. This parameter reveals whether a particular bank has sufficient capital to absorb unexpected losses. This is requested to maintain customer confidence and preventing the bank from going bankrupt.

The study of capital adequacy has its own importance in this research process. The fundamental objectives of this research is to analyze the commercial banks have sound and enough financial position or not, in term of capital adequacy and impact of changing regulations, and the strategies initiated by commercial banks to meet the changing regulations. Thus, capital adequacy ratios have been calculated to check the adequacy as per the norms. Capital to deposit ratios and credit to deposit ratio which are key ratios of commercial banks, have also been checked. Analysis has been done to check the relationship of capital fund with deposit and credit.

Capital fund of bank consist of core capital and supplementary capital. The bank has to maintain capital fund as per the directives issued by NRB. The conceptual part of the study has been presented in chapter two. To arrive the basic objectives of the study, research methodology have been developed where data are gathered and process through various techniques. The required of secondary data are collected from various books, thesis, journals and internet.

The collected data through various instruments and sources are edited, coded, processed, analyzed and tabulated using simple mathematical, financial and statistical methods, so far the qualitative data are concerned, they will be ordered analyzed and descriptively presented. Various books, articles, reports and journals related to the study have been reviewed to sharpen the concepts, tools and techniques of the research.

The thesis has been prepared with the study of capital adequacy ratios of Government Bank, Joint Venture Bank, public Bank as well as Whole system of Nepalese commercial banks. The study showed that the capital adequacy requirement and its affect in banking system. Total capital fund of government bank is negative and it cannot secure depositor deposit but joint venture and public Bank has sufficient fund prescribed by NRB. Risk Weighted Exposures has been increasing over the research almost all research banks.

The correlation coefficient of Total Capital Fund and Total Risk Weighted Exposures, capital to deposit ratio, capital to credit ratio and CD ratio are significant for Nepalese commercial Bank. But correlation coefficient between CAR and profit margin ratio is negative.

This is final part of the research and it brings out Findings, Summary, Conclusion and Recommendation. It attempts to offer various recommendations based on the findings summarized in the chapter four.

5.2 Conclusion

As per objectives, analysis of the data for the study following conclusion have been drawn:

Nepalese commercial banks are directed and bounded by the directives of NRB. The directives No.1 has set norms of capital adequacy for commercial banks. Every commercial bank has to meet the requirement of capital adequacy as stated by the directive. Capital adequacy is the portion of capital fund in regard of risk weighted assets that commercial banks hold. Capital adequacy is required to safeguard the money of depositors which are collected from them. It is found that all commercial banks have maintained the capital adequacy norms and directives of NRB. The total capital ratio to be maintained by the commercial banks have been scheduled 10% during the study periods, except the fiscal year 2003/04 to 2004/05 in which year regulatory body has fixed the ratios. The reason to increase those ratios is to discourage the commercial banks to invest the excessive credit risk assets and to protect the public from bank failure. The bank seems to be free from risk to absorb losses that may arise from the interest earning and fee generating activities even having the supplementary capital lesser required ratios. This is because of greater ratios of core capital than required ratios demanded by NRB.

The Capital adequacy ratio and its other indicator of commercial banks are in improving but the all indicator of government bank are worst and in poor condition. The capital adequacy ratio, capital to deposit ratio, capital to credit ratio of government bank are negative so far and other ratios like CD ratio, profit margin are also in weak condition. But there is very good sign at the joint venture and public banks. The every ratio and indicator of these banks are very good and strong.

The banks have found actual capital growth rate moving ups downs whereas statutory capital requirement is continuously increasing. However, total capital ratios are always higher than standard ratios. The growth of capital fund and risk weighted assets are in same direction but proportionate increment is not found matching with each other.

The high positive correlation between Total Capital Fund and Total Risk Weighted Exposures, capital to deposit ratio, capital to credit ratio and credit and Deposit indicates that there is positive relationship between these variables. Hence, the variables move in the same direction. Majority of respondent are found with the present capital adequacy norms of NRB are suitable. This suggests that norms set by

NRB as regulatory body are justifiable. Most of the commercial banks have welcomed the maintaining the all ratios, component of capital adequacy. Though majority of commercial banks agreed that the enforcement of directive no.1 has affected the capital adequacy position of the commercial bank, but they denied that enforcement of directive no.1 is the main reason for decrease in core capital and supplementary capital ratio.

According to research department of NRB, many of the respondents have suggested NRB to educate the importance of capital fund to all commercial banks so that they will be able to meet its norms in future.

5.3 Recommendations

From the above studies we come to make the recommendations in two parts, first part of recommendation is suggestions to Nepal Rastra Bank and second part of recommendation is suggestions to Commercial Banks which are presented on below:

5.3.1 Recommendations to Nepal Rastra Bank

One of the objectives of the study is to point out the impact of changing regulation of central bank on the capital adequacy position of the commercial banks. For the purpose, some questionnaires, view of commercial banks, depositors and investors collected by previous researcher have been studied. The suggestions to Nepal Rastra Bank as central bank based on the above study are as follows:

1. NRB supervision of capital adequacy in Nepal must aim to promote and maintain the safety, soundness and integrity of the Nepalese banking and financial system and of each institution with in system.
2. Although new NRB regulations are satisfactory but not working properly. NRB must control over the banks who are not maintaining capital adequacy and other ratios.
3. NRB should make the regulations for commercial banks to make investment in productive sectors and to avoid investment in unproductive sectors. Even, recently NRB made the rules on this topic which is very good for economic development of the country but such rules are not followed by financial institutions properly.

4. NRB must ensure for the promotion of institutional good, governance, accountability and financial discipline and growth of economic system of the country. Appropriate policy and guidelines need to be formulated and brought in to effect strictly.
5. Commercial Banks seem not to be following the capital adequacy norms strictly. Total capital adequacy ratio is excessive due to higher ratio of core capital. Thus, NRB is suggested to implement its policy strictly so as to increase the public confidence and protect banks from failure.
6. NRB should give emphasis on implement of such regulations made by NRB in practical.
7. NRB should also give emphasis on education the commercial banks about the importance of capital fund. In this regard as hybrid capital instrument and unsecured subordinated term debt are new concept in Nepalese capital market, NRB may help commercial banks to float such instruments. Furthermore, NRB could also help the commercial banks to formulate scientific capital plan.
8. 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.
9. 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.

5.3.2 Recommendations to Commercial Banks

As already mentioned in the first chapter, the objective of the study is to focus various aspects and provide appropriate suggestions on the basis of findings for the future improvement of commercial bank relation to capital adequacy position as well as economic development of the country. The suggestions to commercial banks based on the findings are as follows:

1. The central bank has already instructed all the commercial banks to increase their paid capital to Rs.2 billion by the end of fiscal year 2065/66. Since paid up capital

is a part of capital fund, while making the capital plan first priority should be given to increase paid up capital in order to meet the requirements of NRB.

2. Joint Venture and Public banks are found to have maintained the total capital adequacy ratio at adequacy level. But Government banks capital ratio is lesser than actual ratio demanded by regulatory body. Thus, to the government banks are suggested to increase the capital ratio to requires level and to the Joint venture and Public banks suggested to maintain the ratio coming fiscal year.
3. Since there are 31 commercial banks in market and some more are certain to be establish in the near future. It is high ratio considering the size of country so; they should seriously adopt consumer oriented strategy. If not they may have to loss their loyal customer and return their business.
4. Commercial Banks have lack of theoretical knowledge regarding the capital structure. They have not given significant attention to the capital structure matter. Capital structure or capital adequacy is a serious matter; it affects EPS, value of the firm, cost of capital. So, commercial banks should concentrate on this.
5. It can be seen that almost all of the commercial banks are urban based, they should try to make their operation broad by moving to rural areas. The saving from the rural areas is seemed to be neglected by the banks, without which they can't contribute to the economic development of the country. Some of banks are started to operation in rural areas but it should follow by every commercial banks. In the process, the efficient strategy should be issue the share of banks to the rural people and attract them by convincing bank is your own organization. It also helps the banks to maintain the capital ratio.
6. Formation of scientific capital plan is the best solution for the banks to meet the capital adequacy norms. This is revealed by the studying the response of respondent have suggested the commercial banks not fulfilling the capital adequacy norms in the past to formulate scientific capital plan. The effective implementation of right strategy at right time plays an important role. If main projection in the capital plan does not work, alternative option should be immediately develop.

7. The board of directors of each bank shall be responsible for establishing maintaining at all times an adequate level of capital.
8. To improve the capital adequacy position in Government bank, prepared capital plan by bank should be implemented as soon as possible. The measures, internal resource mobilization/strengthening and external fund should be adopted in Government bank. Internal Resource Mobilization can be from: Improving the profitability position of the bank. To the public and joint venture banks, strength and use the resources efficiently to increase profit.
9. Also utilize the merge policy of NRB, which helps the commercial banks to improve capital position as well as profitability situation.

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Annex – A

Table of Risk-Weighted on On-Balance Sheet and Off- Balance Sheet Assets Items:

Particular	Weighted
(A) On- Balance Sheet Assets	
• Cash Balance	0
• Gold (tradable)	0
• Balance with NRB	0
• Investment in Govt. Securities	0
• Investment in NRB Bonds	0
• Fully Secured Loan against Govt. Securities	0
• Fully Secured Loan against own FD Receipt	0
• Balance with domestic bank & financial institution	20
• Fully Secured FDR loan of fixed deposit of other banks	20
• balance with foreign bank	20
• Money at call	20
• Loan against guarantee of internationally rated banks	20
• Other investment with internationally rated banks	20
• Investments in shares, debentures and bonds	100
• Other investments	100
• Loan, Advances and Bill purchases	100
• Fixed Assets	100
• All other assets	100
(B)Off-Balance Sheet Items	
• Bills Collection	0
• Forward Foreign Exchange Contract	10
• Letter of credit (maturity less than 6 month)	20
• Guarantees	20
• Letter of credit (maturity more than 6 month)	50
• Bid Bond	50
• Performance Bond	50
• Advance Payments Guarantee	100
• Financial Guarantee	100
• Other Guarantees	100
• Irrevocable Loan Commitment	100
• Contingent Liability in respect of income tax	100
• All other contingent liabilities	100

Source: NRB Directives N

Annex – B

Table of Total Capital Fund

Capital	Current Period	Previous Period
(A)Core Capital (Tier-1)		
• Paid up Equity Share Capital		
• Irredeemable Non-Cumulative Preference Share		
• Share premium		
• Proposed Bonus Equity Share		
• Statutory General reserve		
• retained Earnings		
• Un-audited current year cumulative profit		
• Capital redemption reserve		
• Capital adjustment reserve		
• Dividend equalization reserves		
• Other free reserves		
• Less: Goodwill		
• Less: Miscellaneous expenditure non written-off		
• Less: Investment in equity in licensed financial institutions		
• Less: Investment in equity of institutions with financial interest		
• Less: Investment in equity of institutions in excess of limits		
• Less: Investment arising out of under writing commitments		
• Less: Reciprocal crossholdings		
• Less: Other deductions		
(B)Supplementary Capital (Tier-2)		
• Cumulative and/ or redeemable preference share		
• Subordinated term debt		
• Hybrid Capital Instruments		
• General loan loss provisions		
• Exchange equalization reserve		
• Investment adjustment reserve		
• Assets revaluation reserve		
• Other reserves		
Total Capital Fund (Tier-1 and Tier-2)		

Source: NRB Directives Form No.1

Annex – 1

Calculation of Correlation between total Capital Fund and RWA of Commercial bank:

(Amount is in Rs Billion)

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

Now, Karl Pearson's Correlation Coefficient (r):

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

Fiscal year	Capital Fund (X)	RWA (Y)	X^2	Y^2	X*Y
2003	-20.51032	170.3825	420.6732265	29030.19631	-3494.599597
2004	-17.54571	193.25466	307.8519394	37347.36361	-3390.790221
2005	-13.75029	217.20071	189.0704751	47176.14842	-2986.572751
2006	-4.25186	204.11058	18.07831346	41661.12887	-867.8496107
2007	-7.67579	236.20743	58.91775212	55793.94999	-1813.078629
2008	2.5414	300.05983	6.45871396	90035.90158	762.572052
2009	16.5386	375.43499	273.52529	140951.4317	6209.169126
2010	17.59187	320.40877	309.4738901	102661.7799	5636.589429
2011	24.64934	372.20588	607.5899624	138537.2171	9174.629286
2012	49.39605	558.45993	2439.969756	311877.4934	27585.71463
N=10	46.98329	2947.72528	4631.609319	995072.6109	36815.78371

$$= \frac{10*36815.78371-(46.98329)(2947.72528)}{\sqrt{10*4631.609319-(46.98329)^2}\sqrt{10*995072.6109-(2947.72528)^2}}$$

=0.97356052

Therefore, the correlation between total capital funds and RWA of commercial banks for 10 years plan is 0.97356052.

Annex – 2

Test of Hypothesis -1

For total capital fund and RWA of commercial banks

Null Hypothesis (H_0): Total Capital Fund and RWA are not correlated.

Alternative Hypothesis (H_1): Total capital Fund and RWA are correlated.

Number of observations (N) = 10

Correlation coefficient (r) = 0.97356052

Here symbolically,

H_0: p=0, i.e. Total Capital Fund and RWA of commercial banks are not correlated.

H_1: p≠0 (Two-tailed) i.e. Capital Fund and RWA of commercial banks are correlated.

Level of significance (∝) =5% =0.05

Test of statistics: Under Null Hypothesis

$$t = \frac{r\sqrt{N-2}}{\sqrt{1-r^2}}$$

$$t = \frac{0.97356052*\sqrt{10-2}}{\sqrt{1-(0.97356052)^2}} = 12.0545$$

Now, $t_{cal} = 12.0545$

Degree of freedom (d.f) = N-2 =10-2 =8

Table value of t at 5% level of significance at degree of freedom at is

$t_{0.05}(8) = 2.306$

t_{cal} =1 2.0545 > 2.306

Since, calculated t is greater than the tabulated value, H_0 is rejected and H_1 is accepted. Thus, it is concluded that the capital fund and RWA of commercial banks are correlated.

Annex – 3

Calculation of Correlation between total Capital Fund and Total Deposit of Commercial bank:

(Amount is in Rs Billion)

Fiscal year	Capital Fund (X)	Deposits (Y)	X^2	Y^2	X*Y
2003	-20.51032	180.8731	420.6732265	32715.0783	-3709.77
2004	-17.54571	207.547	307.8519394	43075.75721	-3641.56
2005	-13.75029	225.3118	189.0704751	50765.40722	-3098.1
2006	-4.25186	261.2552	18.07831346	68254.27953	-1110.82
2007	-7.67579	300.5158	58.91775212	90309.74605	-2306.7
2008	2.5414	357.9221	6.45871396	128108.2297	909.6232
2009	16.5386	450.9357	273.52529	203343.0055	7457.845
2010	17.59187	488.96644	309.4738901	239088.1794	8601.834
2011	24.64934	524.971	607.5899624	275594.5508	12940.19
2012	49.39605	623.5412	2439.969756	388803.6281	30800.47
N=10	46.98329	3621.83934	4631.609319	1520057.862	46843.02

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

Now, Karl Pearson's Correlation Coefficient (r):

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

$$= \frac{10*46843.02-(46.98329)(3621.83934)}{\sqrt{10*4631.609319-(46.98329)^2}\sqrt{10*1520057.862-(3621.83934)^2}}$$

=0.984032408

Therefore, the correlation between total capital funds and RWA of commercial banks for 10 years plan is 0.984032408.

Test of Hypothesis -2

For Total capital fund and Total Deposit of commercial banks

Null Hypothesis (H_0): Total Capital Fund and Total Deposits are not correlated.

Alternative Hypothesis (H_1): Total capital Fund and Total Deposits are correlated.

Number of observations (N) = 10

Correlation coefficient (r) = 0.984032408

Here symbolically,

H_0: p=0, i.e. Total Capital Fund and Total Deposit of commercial banks are not correlated.

H_1: p≠0 (Two-tailed) i.e. Capital Fund and Total Deposit of commercial banks are correlated.

Level of significance (∝) =5% =0.05

Test of statistics: Under Null Hypothesis

$$t = \frac{r\sqrt{N-2}}{\sqrt{1-r^2}}$$

$$t = \frac{0.984032408.*\sqrt{10}-2}{\sqrt{1}-(0.984032408)^2}$$

Now, $t_{cal} = 15.6416$

Degree of freedom (d.f) = N-2 =10-2 =8

Table value of t at 5% level of significance at degree of freedom at is

$t_{0.05}(8) = 2.306$

$t_{cal} = 15.6416 > 2.306$

Since, calculated t is greater than the tabulated value, H_0 is rejected and H_1 is accepted. Thus, it is concluded that the capital fund and Deposits of commercial banks are correlated.

Annex – 5

Calculation of Correlation between total Capital Fund and Total Credits of Commercial bank:

(Amount is in Rs Billion)

Fiscal year	Capital Fund (X)	Credits (Y)	X^2	Y^2	X*Y
2003	-20.51032	115.7082	420.6732	13388.39	-2373.21
2004	-17.54571	130.7953	307.8519	17107.41	-2294.9
2005	-13.75029	162.2622	189.0705	26329.02	-2231.15
2006	-4.25186	164.5799	18.07831	27086.54	-699.771
2007	-7.67579	192.9551	58.91775	37231.67	-1481.08
2008	2.5414	242.4281	6.458714	58771.38	616.1068
2009	16.5386	300.5225	273.5253	90313.77	4970.221
2010	17.59187	340.7753	309.4739	116127.8	5994.875
2011	24.64934	371.8956	607.59	138306.3	9166.981
2012	49.39605	413.3579	2439.97	170864.8	20418.25
N=10	46.98329	2435.28	4631.609	695527.1	32086.32

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

Now, Karl Pearson's Correlation Coefficient (r):

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

$$= \frac{10*32086.32-(46.98329)(2435.28)}{\sqrt{10*4631.609319-(46.98329)^2}\sqrt{10*695527.1-(2435.28)^2}}$$

=0.971067

Therefore, the correlation between total capital funds and total Credits of commercial banks for 10 years plan is 0.971067.

Test of Hypothesis -3

For Total Capital Fund and Total Credit of commercial banks

Null Hypothesis (H_0): Total Capital Fund and Total credit are not correlated.

Alternative Hypothesis (H_1): Total Capital Fund and Total Credit are correlated.

Number of observations (N) = 10

Correlation coefficient (r) = 0.971067

Here symbolically,

H_0: p=0, i.e. Total Capital Fund and Total Credit of commercial banks are not correlated.

H_1: p≠0 (Two-tailed) i.e. Total Capital Fund and Total Credit of commercial banks are correlated.

Level of significance (∝) =5% =0.05

Test of statistics: Under Null Hypothesis

$$t = \frac{r\sqrt{N-2}}{\sqrt{1-r^2}}$$

$$t = \frac{0.971067*\sqrt{10-2}}{\sqrt{1-(0.971067)^2}}$$

t = 11.5013

Now, t_{cal} = 11.5013

Degree of freedom (d.f) = N-2 =10-2 =8

Table value of t at 5% level of significance at degree of freedom at is

$t_{0.05}(7)$ = 2.306

t_{cal} = 11.5013> 2.306 Since, calculated t is greater than the tabulated value, H_0 is rejected and H_1 is accepted. Thus, it is concluded that the total Capital Fund and total credit of commercial banks are correlated.

Annex – 7

Calculation of Correlation between total Credits and Total Deposit of Commercial bank:

(Amount is in Rs Billion)

Fiscal year	Credits (X)	Deposits (Y)	X^2	Y^2	X*Y
2003	115.7082	180.8731	13388.39	32715.0783	20928.5
2004	130.7953	207.547	17107.41	43075.75721	27146.17
2005	162.2622	225.3118	26329.02	50765.40722	36559.59
2006	164.5799	261.2552	27086.54	68254.27953	42997.35
2007	192.9551	300.5158	37231.67	90309.74605	57986.06
2008	242.4281	357.9221	58771.38	128108.2297	86770.37
2009	300.5225	450.9357	90313.77	203343.0055	135516.3
2010	340.7753	488.96644	116127.8	239088.1794	166627.7
2011	371.8956	524.971	138306.3	275594.5508	195234.4
2012	413.3579	623.5412	170864.8	388803.6281	257745.7
N=10	2435.28	3621.83934	695527.1	1520057.862	1027512

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

Now, Karl Pearson's Correlation Coefficient (r):

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

$$= \frac{10*1027512-(2435.28)(3621.83934)}{\sqrt{10*695527.1-(2435.28)^2}\sqrt{10*1520058-(3621.83934)^2}}$$

= 0.995903

Therefore, the correlation between total Credits and total Deposits of commercial banks for 10 years plan is 0.995903.

Test of Hypothesis -4

For Total Deposit and Total Credit of commercial banks

Null Hypothesis (H_0): Total Deposits and Total credit are not correlated.

Alternative Hypothesis (H_1): Total Deposit and Total Credit are correlated.

Number of observations (N) = 10

Correlation coefficient (r) = 0.995903

Here symbolically,

H_0: p=0, i.e. Total Deposit and Total Credit of commercial banks are not correlated.

H_1: p≠0 (Two-tailed) i.e. Total Deposit and Total Credit of commercial banks are correlated.

Level of significance (∝) =5% =0.05

Test of statistics: Under Null Hypothesis

$$t = \frac{r\sqrt{N-2}}{\sqrt{1-r^2}}$$

$$t = t = \frac{0.995903*\sqrt{10}-2}{\sqrt{1}-(0.995903)^2}$$

t = 31.1497

Now, t_{cal} = 31.1497

Degree of freedom (d.f) = N-2 =10-2 =8

Table value of t at 5% level of significance at degree of freedom at is

$t_{0.05}(7) = 2.365$

t_{cal} = 31.1497 > 2.306. Since, calculated t is greater than the tabulated value, H_0 is rejected and H_1 is accepted. Thus, it is concluded that the total deposit and total credit of commercial banks are highly correlated.

Annex – 9

Calculation of Correlation between Capital adequacy Ratios and Profit margin ratios of Commercial bank:

Fiscal year	Capital Adequacy ratios (X)	Profit margin ratios (Y)	X^2	Y^2	X*Y
2003	(0.1204)	0.2799	0.01449616	0.07834401	-0.0337
2004	(0.0908)	0.1908	0.00824464	0.03640464	-0.01732
2005	(0.0633)	0.2434	0.00400689	0.05924356	-0.01541
2006	(0.0208)	0.3393	0.00043264	0.11512449	-0.00706
2007	(0.0325)	0.2924	0.00105625	0.08549776	-0.0095
2008	0.0085	0.3247	0.00007225	0.10543009	0.00276
2009	0.0441	0.3230	0.00194481	0.104329	0.014244
2010	0.0549	0.2351	0.00301401	0.05527201	0.012907
2011	0.0662	0.1903	0.00438244	0.03621409	0.012598
2012	0.0885	0.1686	0.00783225	0.02842596	0.014921
N=10	(0.0656)	2.5875	0.04548234	0.70428561	-0.02556

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

Now, Karl Pearson's Correlation Coefficient (r):

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

$$= \frac{10*(-0.02556)-(-0.0656)(2.5875)}{\sqrt{10*0.04548234-(-0.0656)^2}\sqrt{10*0.70428561-(2.5875)^2}}$$

= -0.216988022

Therefore, the correlation between Capital adequacy Ratios and Profit margin ratios of commercial banks for 10 years plan is -0.216988022.

Test of Hypothesis -5

For Total Capital adequacy Ratios and Profit margin ratios of Commercial bank:

Null Hypothesis (H_0): Total Capital adequacy Ratios and Profit margin ratios of Commercial bank are not correlated.

Alternative Hypothesis (H_1): Total Capital adequacy Ratios and Profit margin ratios of Commercial bank are correlated.

Number of observations (N) = 10

Correlation coefficient (r) = -0.216988022

Here symbolically,

H_0: p=0, i.e. Total Capital adequacy Ratios and Profit margin ratios of Commercial bank are not correlated.

H_1: p≠0 (Two-tailed) i.e. Total Capital adequacy Ratios and Profit margin ratios of Commercial bank are correlated.

Level of significance (∝) =5% =0.05

Test of statistics: Under Null Hypothesis

$$t = \frac{r\sqrt{N-2}}{\sqrt{1-r^2}}$$

$$t = \frac{-0.216988022*\sqrt{10-2}}{\sqrt{1-(-0.216988022)^2}}$$

t = -0.6287

Now, t_{cal} = -0.6287

Degree of freedom (d.f) = N-2 =10-2 =8

Table value of t at 5% level of significance at degree of freedom at is

$t_{0.05}(7) = 2.306$

t_{cal} = -0.6287 < 2.306. Since, calculated t is less than the tabulated value, H_0 is accepted and H_1 is rejected. Thus, it is concluded that the Total Capital adequacy Ratios and Profit margin ratios of commercial banks are not correlated.

Annex-11

Capital fund to Risk Weighted Assets(RWA) Ratio of Commercial Banks in Nepal												
	Government Banks			Joint venture Banks			Public Banks			Total		
	capital fund	RWA	capital fund ratio	capital fund	RWA	Capital fund ratio	Capita fund	RWA	Capital fund ratio	capital fund	RWA	capital fund ratio
2003	-31448.60	83129.69	-37.83%	6757.43	57088.34	11.84%	4180.85	30164.22	13.86%	-20510.32	170382.25	-12.04%
2004	-29816.24	85068.79	-35.05%	7142.24	65222.7	10.95%	5128.29	42963.17	11.94%	-17545.71	193254.66	-9.08%
2005	-27803.59	88504.87	-31.41%	7843.52	72556.31	10.81%	6209.78	56139.53	11.06%	-13750.29	217200.71	-6.33%
2006	-22873.60	52397.83	-43.65%	11099.92	81503.2	13.62%	7521.82	70209.16	10.71%	-4251.86	204110.19	-2.08%
2007	-23600.52	55145.80	-42.80%	7597.76	92042.51	8.25%	8326.97	89319.12	9.32%	-7675.79	236507.43	-3.25%
2008	-22907.20	60452.02	-37.89%	11632.83	120122.1	9.68%	13815.77	119485.8	11.56%	2541.40	300059.83	0.85%
2009	-19227.20	73056.88	-26.32%	17016.2	147404.1	11.54%	18749.6	154974.3	12.10%	16538.60	375435.19	4.41%
2010	-13198.80	79785.22	-16.54%	14760.04	117094	12.61%	16030.63	123529.6	12.98%	17591.87	320408.77	5.49%
2011	-12030.60	80660.31	-14.92%	17759.53	147246.1	12.06%	18920.45	144299.5	13.11%	24649.38	372205.88	6.62%
2012	-7746.00	105765.38	-7.32%	28605.86	229851.6	12.45%	28536.19	222843	12.81%	49396.05	558459.93	8.85%

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

Annex-12

Capital Fund to Deposit Ratio of Commercial Banks in Nepal												
	Government Banks			Joint venture Banks			Public Banks			Total		
	capital fund	Deposit	Capital fund to deposit ratio	capital fund	Deposit	Capital fund to deposit ratio	capital fund	Deposit	Capital fund to deposit ratio	capital fund	Deposit	Capital fund to deposit ratio
2003	-31448.60	74046	-42.47%	6757.43	76961.7	8.78%	4180.85	29865.4	14.00%	-20510.32	180873.1	-11.34%
2004	-29816.24	76602.1	-38.92%	7142.24	86066.7	8.30%	5128.29	44878.2	11.43%	-17545.71	207547	-8.45%
2005	-27803.59	78233.4	-35.54%	7843.52	89631	8.75%	6209.78	57447.4	10.81%	-13750.29	225311.8	-6.10%
2006	-22873.60	81145.6	-28.19%	11099.92	106525.1	10.42%	7521.82	73584.5	10.22%	-4251.86	261255.2	-1.63%
2007	-23600.52	88907.8	-26.54%	7597.76	117895.4	6.44%	8326.97	93712.6	8.89%	-7675.79	300515.8	-2.55%
2008	-22907.20	94442.5	-24.26%	11632.83	142039.9	8.19%	13815.77	121439.7	11.38%	2541.40	357922.1	0.71%
2009	-19227.20	112322.4	-17.12%	17016.2	179176.8	9.50%	18749.6	159436.5	11.76%	16538.60	450935.7	3.67%
2010	-13198.80	110753.1	-11.92%	14760.04	201008.6	7.34%	16030.63	177204.7	9.05%	17591.87	488966.4	3.60%
2011	-12030.60	120728.3	-9.97%	17759.53	223666.2	7.94%	18920.45	180576.5	10.48%	24649.38	524971	4.70%
2012	-7746.00	143817.6	-5.39%	28605.86	259061.4	11.04%	28536.19	220662.2	12.93%	49396.05	623541.2	7.92%

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

Capital Fund to Credit Ratio of Commercial Banks in Nepal												
	Government Banks			Joint venture Banks			Public Banks			Total		
	capital fund	Credit	Capital fund to Credit Ratio	capital fund	Credit	Capital fund to Credit Ratio	capital fund	Credit	Capital fund to Credit Ratio	capital fund	Credit	Capital fund to Credit Ratio
2003	-31448.60	47525	-66.17%	6757.43	43711.6	15.46%	4180.85	24471.6	17.08%	-20510.32	115708.2	-17.73%
2004	-29816.24	45923.4	-64.93%	7142.24	50503.2	14.14%	5128.29	34368.7	14.92%	-17545.71	130795.3	-13.41%
2005	-27803.59	57450.4	-48.40%	7843.52	57911.9	13.54%	6209.78	47599.9	13.05%	-13750.29	162962.2	-8.44%
2006	-22873.60	39956	-57.25%	11099.92	65564.6	16.93%	7521.82	59059.1	12.74%	-4251.86	164579.7	-2.58%
2007	-23600.52	39172.56	-60.25%	7597.76	77858.7	9.76%	8326.97	75923.79	10.97%	-7675.79	192955.1	-3.98%
2008	-22907.20	43265.3	-52.95%	11632.83	96996	11.99%	13815.77	102166.8	13.52%	2541.40	242428.1	1.05%
2009	-19227.20	50550.1	-38.04%	17016.2	116667.4	14.59%	18749.6	133305	14.07%	16538.60	300522.5	5.50%
2010	-13198.80	60779.2	-21.72%	14760.04	133630.4	11.05%	16030.63	146365.7	10.95%	17591.87	340775.3	5.16%
2011	-12030.60	63576	-18.92%	17759.53	154171.4	11.52%	18920.45	154148.2	12.27%	24649.38	371895.6	6.63%
2012	-7746.00	70147.7	-11.04%	28605.86	172688.4	16.57%	28536.19	170521.8	16.73%	49396.05	413357.9	11.95%

Annex - 14

Credit to Deposit Ratio of Commercial Banks in Nepal												
	Government Banks			Joint venture Banks			Public Banks			Total		
	Credit	Deposit	Credit to Deposit Ratio	Credit	Deposit	Credit to Deposit Ratio	Credit	Deposit	Credit to Deposit Ratio	Credit	Deposit	Credit to Deposit Ratio
2003	47525	74046	64.18%	43711.6	76961.7	56.80%	24471.6	29865.4	81.94%	115708.2	180873.1	63.97%
2004	45923.4	76602.1	59.95%	50503.2	86066.7	58.68%	34368.7	44878.2	76.58%	130795.3	207547	63.02%
2005	57450.4	78233.4	73.43%	57911.9	89631	64.61%	47599.9	57447.4	82.86%	162962.2	225311.8	72.33%
2006	39956	81145.6	49.24%	65564.6	106525.1	61.55%	59059.1	73584.5	80.26%	164579.7	261255.2	63.00%
2007	39172.56	88907.8	44.06%	77858.7	117895.4	66.04%	75923.79	93712.6	81.02%	192955.05	300515.8	64.21%
2008	43265.3	94442.5	45.81%	96996	142039.9	68.29%	102166.8	121439.7	84.13%	242428.1	357922.1	67.73%
2009	50550.1	112322.4	45.00%	116667.4	179176.8	65.11%	133305	159436.5	83.61%	300522.5	450935.7	66.64%
2010	60779.2	110753.1	54.88%	133630.4	201008.6	66.48%	146365.7	177204.7	82.60%	340775.3	488966.4	69.69%
2011	63576	120728.3	52.66%	154171.4	223666.2	68.93%	154148.2	180576.5	85.36%	371895.6	524971	70.84%
2012	70147.7	143817.6	48.78%	172688.4	259061.4	66.66%	170521.8	220662.2	77.28%	413357.9	623541.2	66.29%

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank

Profit Margin Ratios of Commercial Banks in Nepal

	Government Banks			Joint venture Banks			Public Banks			Total		
	Net Profit	Total Revenue	Net Profit margin	Net Profit	Total Revenue	Net Profit margin	Net Profit	Total Revenue	Net Profit margin	Net Profit	Total Revenue	Net Profit margin
2003	658.9	2963.5	22.23%	2436.4	7281.5	33.46%	396.8	2229.3	17.80%	3492.1	12474.3	27.99%
2004	-28.7	5311.1	-0.54%	2495.3	7212.7	34.60%	602.9	3563.3	16.92%	3069.5	16087.1	19.08%
2005	1787.9	8297.1	21.55%	2484	7434.9	33.41%	754.5	4922.1	15.33%	5026.4	20654.1	24.34%
2006	4302.9	7954.3	54.10%	3124.7	8685.3	35.98%	555.9	6891.7	8.07%	7983.5	23531.3	33.93%
2007	2195.1	7035.4	31.20%	3412.2	9822.1	34.74%	1777.2	8395.8	21.17%	7384.5	25253.3	29.24%
2008	2692.1	7785.7	34.58%	4277.8	12081.7	35.41%	2956	10698.6	27.63%	9925.9	30566	32.47%
2009	3079.1	9235.1	33.34%	6200.1	16646.3	37.25%	3853	14778	26.07%	13132.2	40659.4	32.30%
2010	2439.3	10907.6	22.36%	5653.3	20156.4	28.05%	4128.6	20915.9	19.74%	12221.2	51979.9	23.51%
2011	2142.7	11030.5	19.43%	5846	25524	22.90%	3916.7	25995.7	15.07%	11905.4	62550.2	19.03%
2012	1852.9	12823.5	14.45%	6424	30124.3	21.32%	3669.9	27918.1	13.15%	11946.8	70865.9	16.86%

Source: Banking and Financial Statistics Mid-July 2012, Nepal Rastra bank