CHAPTER I

INTRODUCTION

1.1 Background of the Study

The commercial banks are the heart of our financial system. They accept deposits from millions of persons, government and business units and other organizations. They make funds available through lending and investing activities to borrowers like individuals, business firms and government. Commercial banks also provide technical and administrative assistance to industries and trade.

Banks are those financial institutions that offer the widest range of financial services especially credit, savings, and payments services-and perform the widest range of financial functions of any business firm in the economy.[1]

Commercial Banks are those banks that pool together the savings of their community and arrange for their productive use. They supply the financial needs of modern business by various means. They accept deposits from the public on the condition that they are repayable on demand or on short notice. Commercial banks are restricted to invest funds in corporate securities. They grant loans in the form of cash credit and overdraft.

Banking sector is the most dynamic part of the economy, which collects unused funds and mobilizes it in needed sectors. It is heart of trade, commerce and industry. In Nepalese context, commercial banks have comparatively good performance among the public limited companies. In Nepal joint venture banks and private sector banks perform better than other government banks because of their management efficient.

[1] Peter S.Rose, ***Commercial Bank Management*** (New York:Tata McGraw-Hill Companies, 2002) 7-8.

Exponential growth is expected in every segment of the financial service industry. The emerging network economy is challenging all financial institutions. This challenge requires new business models and new ways of approaching relationships with customers and business partners. To meet the changing demands of the marketplace, companies in the Banking Industry face three main business imperatives:[2] enhance the customer experience and improve revenue growth, improve efficiency and flexibility and comply with regulations and manage risk.

1.2 Statement of the Problem

Banking institutions today form the heart of the financial structure of any country, whether it is developed or developing. In a developing economy the role of banks is more challenging than in a developed economy. Banks are making special efforts to assist the weaker section to enable them to undertake self-employment venture or to acquire income generating capital assets to improve their standard of living.

Many commercial banks are in operated in Nepal. Their main objectives are to earn profit and provide different services to the people for the development of trade, industry and agriculture in country. The banking industry is growing fast. Trading of share of commercial banks dominate the secondary market. But their performance does not justify the price of their share. Investors normally look into the market price of share but do not do their performance analysis. Therefore, this study has attempted to solve the following research questions:

1. How the commercial banks are managing their capital adequacy and financial leverage?

[2] Americas Market Intelligence – SMB Analysis Team, ***SMB Americas Banking Industry Assessment,*** June 5, 2009, http://www1.ibm.com/partnerworld/pwhome.nsf/vAssetsLookup/SMB_Americas_Banking_Industry_Assessment_External_Final.pdf/$File/SMB_Americas_Banking_Industry_Assessment_External_Final.pdf.

2. What is the risk adjusted assets of commercial banks and quality of their assets?
3. How the banks are managing their expenses with respect to revenues?
4. What are the level and stability of commercial banks earnings?
5. What is the liquidity position (current market value with book value) of commercial banks?
6. How the earnings of banks are affected by changes in interest rates?

1.3 Objectives of the Study

The fundamental objective of this study is to analyze the financial performance of banking industry in the framework of CAMELS. It helps to compare the performance of banks having similar size and products. In this light, the following specific objectives are set in this study:

1. To analyze capital adequacy and financial leverage of commercial banks;
2. To analyze the risk adjusted assets and quality of commercial banks;
3. To evaluate the efficiency of commercial banks with respect to managing their expenses relative to their revenues;
4. To analyze the level and stability of earnings of commercial banks;
5. To assess commercial banks liquidity position; and
6. To assess the sensitivity of commercial banks earnings with respect to the change in interest rate risk.

1.4 Importance of the Study

Every research has its own importance because it aims to gain knowledge and to add the new literature to the existing field. The significance of this study is to compare and rating among the commercial banks in the framework of CAMELS on cross sectional analysis. This study will be fruitful for commercial banks in enhancing its financial performance. Besides these, the study is an important for the commercial banks, researchers, investors, scholars, students, governments and many other parties.

1.5 Delimitations of the Study

This study focuses on the financial analysis of the commercial banks in the framework of CAMELS system. Only FY 2007/08 data is taken into the consideration for the study purpose. Mostly, the analysis of the study is based on its annual reports.

1.6 Organization of the Study

This study has been organized into five chapters - Introduction, Review of Literature, Research Methodology, Data Presentation and Analysis and Summary, Conclusions and Recommendation. The first chapter includes background, statement of the problem, objectives, importance, delimitation of the study and organization of the study. The second chapter deals with conceptual framework and review of related studies. The third chapter describes research design, population and sample, nature and sources of data and data collection procedures. The fourth chapter deals with data presentation and analysis. The last chapter deals with summary, conclusions and recommendations.

CHAPTER II

REVIEW OF LITERATURE

This chapter presents the review of literature relevant to the financial performance analysis of commercial banks. Previous studies are the foundation of the present study. Therefore, this chapter is divided into two sections – conceptual framework and relevant studies.

2.1 Conceptual Framework

This sub-chapter presents the conceptual aspect of the study. It includes the concept of commercial banks, functions of commercial banks and concept of financial performance analysis.

2.1.1 Concept of Commercial Bank

Commercial banks represent the largest group of depository institutions measured by asset size.[3] Commercial banks are those, which are engaged in performing the routine banking business.

A bank is an organization that engages in the business of banking – it accepts FDIC – insured deposits and makes loan. Banks perform three basic functions: they provide a leading role in the payments system, they intermediate between depositors and borrowers by offering deposit and loan products and they provide a variety of financial services – encompassing fiduciary services, investment banking and off balance sheet risk taking.[4]

Commercial banks are common in all industrialized countries. Commercial banks are the most important source of loans to small businesses.

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[3] Anthony Saunders and Marcia Millon Cornett, ***Financial Markets and Institutions*** (Mc Graw-Hill Higher Education) 320.

[4] Benton E.Gup and James W. Kolari, Commercial Banking (Asia: John Wiley and Sons Pvt. Ltd., 2005) 25-26.

Commercial banks play a dominant role in the money and capital markets and are worthy of detailed study of we are to understand more fully how the financial department stores of the financial system. They offer a wider array of financial services than any other financial institution, meeting the credit, payments and savings needs of individuals, businesses and governments.

An institution which accepts deposits, makes business loans, and offers related services. Commercial banks also allow for a variety of deposit. These institutions are run to make a profit and owned by a group of individuals, yet some may be members of the Federal Reserve System. While commercial banks offer services to individuals, they are primarily concerned with receiving deposits and lending to businesses.[5] Commercial banks offer the public both deposit and credit services, as well as a growing list of newer and more innovative services, such as investment advice, security underwriting and finance planning.

A commercial bank is not a philanthropic institution. On the other hand, it is an institution that operates for profits. Like other industrial or commercial enterprise, a bank too, seeks to earn maximum income through the suitable employment of its resources. It is a financial intermediary – a sort of a middleman between people with surplus funds and people in need of funds. It accepts deposits for the purpose of lending or investment and thereby hopes to make a profit – profits which are adequate enough to enable the bank to pay interest at the prescribed rates to its depositors, meet establishment expenses, build reserve, pay dividend to the shareholders, etc. In general, commercial banks are those financial institutions, which play the role of financial intermediary in collection and disbursement of funds from surplus unit to deficit unit.

Investopedia says: Commercial banking activities are different than those of investment banking, which include underwriting, acting as an intermediary between an issuer of securities and the investing public,

[5] Charles Schwab, Featured Sponsor, February 13, 2009 <http://www.investorwords.com/955/commercial_bank.html>.

facilitating mergers and other corporate reorganizations, and also acting as a broker for institutional clients.[6]

2.1.2 Historical Development of Commercial Bank in Nepal

In Nepalese context, the development of banking industry is relatively recent. The record of banking system of Nepal gives detail account of mixture life. Landlord, shopkeepers and rich merchants have acted as lender in the unorganized money market. In 723 A.D., Gunakam Dev had borrowed money to rebuild the Kathmandu valley. At the end of 8th century (780 A.D.), it was recorded that the new era known as Nepali Sambat was introduced by Shankadhar a sudra merchant of Kantipur, after having paid all the outstanding debts in the country.

The King of Kantipur Jayasthiti Malla was launched "Tanka Dhari", which is a special name for the history of banking in Nepal. At the end of 14th century, we further came across the term 'Tanka Dhari', meaning money dealer, which is one of the sixty four caste classified on the basis of occupation. In 11th century, during Malla regime there were an evidence of professional Money Lenders and Indegeneous Bankers. The silver coin age, which came into existence in Nepal in the 12th century, is said to have marked a new epoch in the economic history. However, due to the absence of regulatory bodies, the moneylenders used to charge high rate of interest and other extra dues on loans extended.

After the establishment of "Tejarath Adda" during the year (1877-1885) A.D. by the government of Kathmandu valley, the banking system was flourished which helped general public to provide credit facilities as very low interest rate. The "Tejarath Adda" extended the loan to the public against the collateral of gold and silver. Hence, the establishment of "Tejarath Adda" could be regarded as pioneer foundation of banking in Nepal. The "Tejarath Adda" could not run and extend the advance requirement to general public

[6] From Wikipedia, **the free encyclopedia**, February 15, 2009 http://www.answers.com/topic/commercial_bank.

due to the lack of financial support, as no other financial institutions were set up.

In 20th century, it has started an evolution of modern banking system in Nepal with the establishment of Nepal Bank Limited. His Majesty of Government was established two commercial banks in Nepal. The first bank of the country 'Nepal Bank Ltd' was established in 1937 A.D. as a semi-government organization with an objective to render services to the people and contribute the nation's development. Another commercial bank fully owned by the government, named as the 'Rastriya Banijya Bank' was established in 1966 A.D. With a view of providing financial support to the farmers Agriculture Development Bank of Nepal (ADB/N) was established in the government sector in 1967 A.D.

Likewise, establishment of Nepal Rastra Bank undoubtedly, was an important event in the economic history of Nepal, was established on April 26, 1956. After the establishment of NRB, a number of financial institutions were established.

There is a tremendous growth in the number of financial institution in Nepal in the last two decades. The decades of 1980s has its historical significance in the development of financial system in Nepal. The financial liberalization policy introduced by the government in mid-eighties paved the way for the faster, healthier and competitive development of financial system in Nepal. The financial liberalization initiated by the establishment of Nepal Arab Bank Ltd (now, NABIL Bank Ltd.) with the joint venture of Emirates Bank International Limited, Dubai, U.A.E. in 2041 B.S., which was the first joint venture bank in Nepal. In 1984 opened a new vista for the establishment and promotion of financial institutions.

After then Nepal Indosuez Bank Limited (now, Nepal Investment Bank Ltd.) was jointly owned by French Banque Indosuez and Nepal Grindlays Bank Ltd. (now, Standard Chartered Bank Nepal Ltd.) has been established in the country with the joint venture of ANZ Grindlays Bank, U.K. respectively. These three banks have started the sophisticated banking business in Nepal.

After the liberalization of the financial sector, financial sector has made a hall-mark progress both in terms of the number of financial institutions and beneficiaries of financial services.

By mid-January 2009, NRB licensed bank and non-bank financial institutions totaled 235. Out of them, 25 are commercial banks, 59 are development banks, 78 finance companies, 12 micro-credit development banks, 16 saving and credit co-operatives, and 45 non-government organizations (NGOs).[7]

By the end of Ashadh 2066, all together 26 commercial banks are in operation. Among them we have 3 Public Banks and 17 Private Banks are fully owned by Nepalese investors out of which 6 are Joint Venture Banks in collaboration with the foreign investment partners.

2.1.3 Functions of Commercial Banks

In the beginning, commercial bank's functions were confined to accepting deposit and giving loans. However, their functions have now increased manifold. Commercial banks are found operating throughout the world.

Banks and other financial intermediaries are special kind of middlemen. Banks are able to avoid illiquidity while borrowing short and lending long by using several business practices.

The commercial banks in Nepal provide the following main banking functions:

Accepting Deposits: Commercial banks principal function is obtaining deposits from depositors and savers by offering high degree of liquidity, less risky, high denominations and interest rates. In these days, a bank accepts different kinds of deposit accounts from its customers: current, saving, fixed, call deposit a/c and other deposits. The first is the 'savings' deposits on which the bank pays interest relatively at low rate to the depositors. Depositors are allowed to withdraw their money by cheque up to a limited amount during a

[7] Banking and Financial Statistics, no. 52, Mid January-2009, February 10, 2009<http://www.nrb.org.np/>.

week or a year. Businessmen keep their deposits in current accounts known as demand deposits. They can withdraw any amount available in their current account by cheque without notice. The bank does not pay interest on such accounts. A bank accepts fixed or time deposits from savers who do not need money for a stipulated period from 6 months to longer periods ranging up to 10 years or more.

Advance and Loans: One of the primary functions of a commercial bank is to advance loans to its customers. Commercial banks use deposits to provide loans for the borrowers. In these days, banks may provide every type of loan that is legally permissible and for long time period. A bank lends a certain percentage of the cash lying in deposits at a higher interest rate than it pays on such deposits. This is how it earns profits. The bank advances loans in the following ways: cash credit, term loans, call loans, overdraft and discounting bills of exchange.

Credit Creation: Credit creation is one of the most important functions of the commercial banks. When a bank advances a loan, it opens an account in the name of the customer and does not pay him in cash but allows him to draw the money by cheque according to his needs. By granting a loan, the bank creates deposit.

Foreign Trade Operation: A commercial bank's next valuable function is finances foreign trade of its customers by accepting foreign bills of exchange and collecting them from foreign banks. It also transacts other foreign exchange business-buying and selling of foreign currency.

Agency Services: A bank is a type of financial intermediary; it acts as an agent of its customers while collecting and paying cheque, bills of exchange, drafts, dividends etc. It can provide brokerage services-buying and selling securities for their customers and may act as a securities dealer. Further, it pays subscriptions, insurance premium, utilities bills and other similar charges on behalf of its clients. It also performs as a trustee and executor of the property and will of its customers. Moreover, the bank acts as consultants to

its clients. For these services, the bank charges a normal fee while it renders others free of charge.

Miscellaneous Services: Banks also act as custodian of valuable of the customers by providing locker facility where they can keep their jewelry and valuable documents. It issues various forms of credit instruments, such as cheque, drafts and travelers' cheque etc. which facilitate transactions. It renders underwriting services to companies and helps in the collection of funds from the public. Lastly, it provides statistics on money market and business trends of the economy.

Financial intermediation between depositors and borrowers is crucial to the growth and stability of the economy. Economic growth depends on a large volume of savings and the effective allocation of the savings to productive and profitable uses.[8]

2.1.4 Supervision of Bank

Supervision of banks and financial institutions is one of the prime responsibilities of the supervisory authority. Effective supervision of these institutions is an essential component of a strong economic environment. The task of supervision is to ensure that banks operate in a safe and sound manner and that they hold capital and reserves sufficient to support the risks that arise in their business. Strong and effective banking supervision contributes in enhancing effective macroeconomic policy along with financial stability in any country. While the cost of banking supervision is high, the cost of poor supervision has proved to be even much higher.[9]

2.1.4.1 Meaning of Supervision

Simply stated, the exercise of the supervisor's responsibility for a third party is called supervision. Financial institutions are supervised in most, if not all, countries. However, the nature of the supervision and its detailed application varies greatly from country to country depending upon,

[8].Gup and Kolari, ***Commercial Banking*** 10.

[9]Surendra Man Pradhan, Supervision Framework, ***Nepal Rastra Bank in 50 yrs*** (Lalitpur: Sajha Prakashanko Chhapakhana, July 2005) 137.

principally, the character of its industry, its size and complexity and the objectives and priorities.[10]

One important purpose of supervision and examination is to reduce the hazards of asymmetric information between bank managers and the public regarding the riskiness of the bank's loan portfolio and thus assure depositors that the bank is a safe place to deposit funds.[11]

2.1.4.2 Need of Supervision

Central Banks need to supervise banking institutions because banks play a critical role in the working of a market economy. The balance sheets of banks are virtually a mirror of the economic and commercial life of a country. The basic objective of NRB supervision is to conduct a direct assessment of the overall condition of the banking institutions based on off-site and on-site evaluation of the institution's capital, assets, management, earnings, liquidity, and a review of their records, systems and internal control and to determine whether the institution has complied with relevant mandatory and detection of frauds, malpractices, abuses of power by management and staff and undesirable trends and imprudent practices, such as deterioration in the quality of loan portfolio and the concentrations of risks.[12]

The philosophical foundation of Nepal Rastra Bank supervision is based upon the core principles for effective supervision developed by the Basle Committee on Banking Supervision consisting of member countries. The Committee has been examining how best to expand its efforts aimed at strengthening prudential supervision in all countries so as to improve the strength of financial systems. [13]

- The key objective of supervision is to maintain stability and confidence in the financial system resulting into reduced risk of loss to depositors and other stakeholders.

[10] Banking Supervision Annual Report 2007**,** 10. February 20, 2009 <http://www.nrb.org.np>.

[11] Michael R. Baye and Dennis W. Jansen, ***Money, Banking and Financial Markets: An Economic Approach*** (U.S.A.: A.I.T.B.S. Publishers & Distributions, 1996) 204.

[12] Pradhan, "Supervision Framework", ***Nepal Rastra Bank in 50 yrs***, 137-138.

[13] ***Ibid***, 138.

- Supervision is conducted and pursued on the basis of market discipline by enhancing good financial discipline, corporate governance and enhancing market transparency and surveillance.
- Supervisors are presumed to have operational independence along with necessary means and powers to gather information both on and off-site the authority to enforce its decisions.
- Supervisors must have a good knowledge of banking business.
- Supervisors must ensure to the extent possible, that the risks incurred by banks are being properly managed.
- Effective banking supervision requires that the risk profile of individual banks be assessed and supervisory resources allocated.
- Close cooperation with other supervisors and auditors is essential.
- Banking supervision should foster an efficient and competitive banking system that is responsive to the public need for good quality accordingly.

Supervisors must ensure that banks have resources appropriate to undertake risks, including adequate capital, sound management capabilities and effective control systems and accounting records financial services at a reasonable cost. For strengthening effective supervision certain infrastructure elements are of paramount significance.

2.1.4.3 Methods of Supervision

Basically, there are two approaches - the off-site and the on-site. An off-site supervisory approach, which undertakes an assessment of the soundness of banks based exclusively on an analysis of information obtained from statutory returns submitted by the institutions or an on-site examination whereby the total effort of the supervisor with a view to concluding on the soundness of the banks, is directed at the execution of inspections at the premises of the bank are the two extreme forms of supervisory approaches. Bank Supervision Department has been conducting on-site examination of commercial banks, every year. At the same time, off-site supervision of banks is conducted all round the year. The off-site supervision and on-site inspection

goes hand in hand but gradually, the onus is shifting towards the off-site supervision. The findings of an off-site supervision serve as the basis of an on-site examination and the returns submitted by the banks for off-site supervision are verified at the on-site examination. Thus, the importance of both forms of supervision cannot be undermined and this mixed approach of supervision is likely to continue in the forthcoming days as well.[14]

Modern bank supervision uses information gathered from on-and off-site supervisory tools as the starting point for its analysis. The larger banks and bank holding companies are monitored by on-and off-site inspectors (examiners), who keep abreast of any information that can be found, including news reports, Wall Street analyses, and traditional quarterly financial data. Most smaller and midsized banks are initially monitored with automated analysis of quarterly financial statements and then, if risk is identified, are reviewed by analysts in addition to regular on-site examinations. Periodic on-site safety-and-soundness examinations begin with off-site pre-exam reviews of quarterly and other pertinent data. This information is then checked in on-site examinations provide extensive financial information that is not generally available to the public, such as the current status of performing and nonperforming loans, loan classifications and the adequacy of loan-loss provisions, and bank capital; on-site examinations also provide a close-up view of managerial abilities and expertise.[15]

2.1.5 Financial Performance Analysis Methods

Financial performance analysis is the process of identifying the financial weakness and strengthness of the organization. Financial performance measure reflects strategic, operating and financing decision.

2.1.5.1 ROE (Return on Equity)

A return on equity framework is used to describe the trade-offs between profitability and risk and provide measures that differentiate between

[14] Banking Supervision Annual Report 2007, 12-13. February 20, 2009 <http://www.nrb.org.np>.

[15] Timothy J. Curry, Peter J. Elmer, and Gary S. Fissel, "Using Market Information to Help Distressed Institutions: A Regulatory Perspective", ***FDIC Banking Review,*** February 18, 2009.

high-and low-performance banks. ROE model helps to analyze bank profitability and identifies specific measures of credit risk, liquidity risk, interest rate risk, operational risk, and capital risk. The ratios are used to assess the performance of the banking organizations introduced earlier.[16]

ROE helps to identify weaknesses and problem areas are by analyzing financial statements. In particular, an analysis of selected accounting ratios-ratio analysis-allows a bank manager to evaluate the bank's current performance, the change in its performance over time (time series analysis of ratios over a period of time), and its performance relative to that of competitor banks (cross-sectional analysis of ratios across a group of firms). The ROE framework starts with the most frequently used measure of profitability, ROE, and then breaks it down to identify strengths and weaknesses in a bank's performance. The resulting breakdown provides a convenient and systematic method to identify strengths and weaknesses of a bank's profitability. Identification of strengths and weaknesses, and the reasons for them provides an excellent tool for bank managers as they look for ways to improve profitability.[17]

ROE is calculated by using this formula:

$$\text{ROE} = \frac{\text{Net Income}}{\text{Book Value of Shareholder's Equity}}$$

2.1.5.2 RAROC (Risk Adjusted Return on Capital)

RAROC is risk-adjusted profitability measurement and management framework for measuring risk-adjusted financial performance and for providing a consistent view of profitability across business (strategic business units/divisions). RAROC and related concepts such as RORAC and RARORAC are mainly used within (business lines of) banks and insurance companies. RAROC is defined as the ratio of risk-adjusted return to economic capital.

[16] Timothy W. Koch and S. Scott Mackonald, ***Bank Management,*** (Singapore: Thomas Asia Pvt. Ltd., 2004) 95-110.

[17] Saunders and Cornett, ***Financial Markets and Institutions***, 385.

Development of the RAROC methodology began in the late 1970s, initiated by a group at Bankers Trust. Their original interest was to measure the risk of the bank's credit portfolio, as well as the amount of equity capital necessary to limit the exposure of the bank's depositors and other debt holders to a specified probability of loss. Since then, a number of other large banks have developed RAROC with the aim, in most cases, of qualifying the amount of equity capital necessary to support all of their operating activities – fee based and trading activities, as well as traditional lending.[18]

RAROC systems allocate capital for two basic reasons: risk management and performance evaluation. For performance-evaluation purposes, RAROC systems assign capital to business units as part of a process of determining the risk-adjusted rate of return and, ultimately, the economic value added of each business unit. While making these RAROC assessments, institutions can forecast their economic performances, maintain financial integrity and boost confidence among stakeholders.

The risk-adjusted return on capital (RAROC) calculation is based on the trade-off between risk and return.[19]

$$\text{Project RAROC} = \frac{\text{Projected risk Z adjusted net revenue}}{\text{Project risk}}$$

$$\text{Post-deal RAROC} = \frac{\text{Actual net revenue}}{\text{Project risk}}$$

2.1.5.3 EVA (Economic Value Added)

Economic Value Added is the financial performance measure that comes closer than any other to capturing the true economic profit of an enterprise. EVA also is the performance measure most directly linked to the creation of shareholder wealth over time. EVA-based financial management and incentive compensation system that gives managers superior information

[18] Value Based Management.net RAROC-Risk Management-Basel II, April 27, 2009 <http://www.valuebasedmanagement.net/methods_raroc.html/>.

[19] The Flexibility of RAROC, **Teradata Magazine** 7, no.1 (March 2007) March 1, 2009 <http://www.teradata.com/tdmo/v07n01/Viewpoints/IndustryInsights/RAROC.aspx>.

- and superior motivation - to make decisions that will create the greatest shareholder wealth in any publicly owned or private enterprise.[20]

EVA can be calculated as net operating after taxes profit minus a charge for the opportunity cost of the capital invested. EVA is an estimate of the amount by which earnings exceed or fall short of the required minimum rate of return for shareholders or lenders at comparable risk. Unlike Market-based measures, such as MVA, EVA can be calculated at divisional (Strategic Business Unit) level. Unlike Stock measures, EVA is a flow and can be used for performance evaluation over time. Unlike accounting profit, such as EBIT, Net Income and EPS, EVA is Economic and is based on the idea that a business must cover both the operating costs AND the capital costs.[21]

EVA can be used to set organizational goals, measure performance, determine bonuses, communicate with shareholders and investors, motivate managers, prepare capital budget, do the corporate valuation and analyze equity securities.

EVA is calculated by:

EVA = Net Operating Profit After Taxes (NOPAT) – {Capital × The Cost of Capital}

2.1.5.4 Capital, Assets, Management, Earnings, Liquidity, Sensitivity (CAMELS)

Indicators of the current health of the financial system are derived primarily by aggregating data on the soundness of individual financial institutions. One commonly used framework for analyzing the health of individual institutions is the CAMELS framework, which looks at six major aspects of a financial institution: capital adequacy, asset quality, management soundness, earnings, liquidity, and sensitivity to market risk. [22]

Capital: Capital adequacy ultimately determines how well financial institutions can cope with shocks to their balance sheets. Thus, it is useful to track capital-adequacy ratios that take into account the most important

[20]Bennett Stewart, The Real Key to Creating Wealth, What is EVA?, April27,2009 <http://www.sternstewart.com/evaabout/whatis.php>.

[21] Value Based Management.net, Economic Value Added(EVA), April 26, 2009 <http://www.valuebased management.net/methods_eva.html>.

[22] Paul Hilbers, Russell Krueger, and Marina Moretti, **"**New Tools for Assessing Financial System Soundness," **Finance & Development** 37, no. 3 (September 2000) February 7, 2009 <http://www.imf.org/externak/pubs/ft/fandd/2000/09/index.htm>.

financial risks—foreign exchange, credit, and interest rate risks—by assigning risk weightings to the institution's assets.

Assets: The solvency of financial institutions typically is at risk when their assets become impaired, so it is important to monitor indicators of the quality of their assets in terms of overexposure to specific risks, trends in nonperforming loans, and the health and profitability of bank borrowers—especially the corporate sector.

Management: Sound management is key to bank performance but is difficult to measure. It is primarily a qualitative factor applicable to individual institutions. Several indicators, however, can jointly serve—as, for instance, efficiency measures do—as an indicator of management soundness.

Earnings: Chronically unprofitable financial institutions risk insolvency. Compared with most other indicators, trends in profitability can be more difficult to interpret—for instance, unusually high profitability can reflect excessive risk taking.

Liquidity: Initially solvent financial institutions may be driven toward closure by poor management of short-term liquidity. Indicators should cover funding sources and capture large maturity mismatches.

Sensitivity to Market Risk: Banks are increasingly involved in diversified operations, all of which are subject to market risk, particularly in the setting of interest rates and the carrying out of foreign exchange transactions. In countries that allow banks to make trades in stock markets or commodity exchanges, there is also a need to monitor indicators of equity and commodity price risk.

Indicators of market perceptions—such as the prices/yields of financial instruments and the creditworthiness ratings of financial institutions—are often used to supplement the information obtained through the CAMELS framework.

2.1.6 Corporate Rating of "CAMELS"

The system of inspection and supervision of the banking and the non-banking financial institutions is to be followed on a certain standard norm. In this regard, the Bank for International Settlement (BIS) has formulated an important standard, which is called CAMELS system. The evaluation of financial institution is done on the basis of it. In the case of Nepal, the Nepal Rastra Bank, adopting this system, has made it the main basis of the on site and off site supervision.

The Basle Committee on Banking Supervision of the Bank of International Settlements (BIS) has recommended using capital adequacy, assets quality, management quality, earnings and liquidity (CAMEL) as criteria for assessing a FI in 1988.[23] The sixth component, sensitivity to market risk (S) was added to CAMEL in 1997.[24] However, most of the developing countries are using CAMEL instead of CAMELS in the performance evaluation of the FIs. But Nepal is using CAMELS.

Bank supervisory authorities assign each bank a score on a scale of one (best) to five (worst) for each factor. If a bank has an average score less than two it is considered to be a high quality institution, while banks with scores greater than three are considered to be less-than-satisfactory establishments. The system helps the supervisory authority identify banks that are in need of attention. Ratings of 1 or 2 are assigned to institutions in fundamentally sound financial condition. Rating 3 represents the institutions may be unsatisfactory and weaknesses in financial condition so there will be needed for change in policies and procedures. Ratings 4 and 5 indicate the existence of serious problems that, if not resolved then possibility of insolvency.

However, consistent with supervisory policy, most banks downgraded to a 4 or 5 are subject to formal enforcement actions, and these actions have

[23] Guidelines for the Financial Governance and Management of Investment Projects Financed by the ADB.

[24] Alton R. Gilbert, Andrew P. Meyer and Mark D. Vaughan, "The Role of a CAMEL Downgrade Model in Bank Surveillance" **Working Paper 2000-021A**, The Federal Reserve Bank of St. Louis (2000) February 10, 2009 <http://research.stlouisfed.org/wp/2000/2000-021.pdf>.

been made public since 1989. Institutions with a CAMEL rating of 4 can continue in business for as long as several years before either returning to an improved rating, moving to a worse rating, or being declared insolvent by their primary regulator. A rating of 5 indicates a high probability of failure, usually within the next 12 months.[25]

2.1.6.1 Composite Ratings

Composite ratings are based on a careful evaluation of an institution's managerial, operational, financial, and compliance performance. The six key components used to assess an institution's financial condition and operations are: capital adequacy, asset quality, management capability, earnings quantity and quality, the adequacy of liquidity, and sensitivity to market risk. The rating scale ranges from 1 to 5, with a rating of 1 indicating: the strongest performance and risk management practices relative to the institution's size, complexity, and risk profile; and the level of least supervisory concern. A 5 rating indicates: the most critically deficient level of performance; inadequate risk management practices relative to the institution's size, complexity, and risk profile; and the greatest supervisory concern. The composite ratings are defined as follows: [26]

Composite 1: FIs in this group are sound in every respect and generally have components rated 1 or 2. Any weaknesses are minor and can be handled in a routine manner by the board of directors and management. These financial institutions are the most capable of withstanding the vagaries of business conditions and are resistant to outside influences such as economic instability in their trade area. These financial institutions are in substantial compliance with laws and regulations. As a result, these financial institutions exhibit the strongest performance and risk management practices relative to the institution's size, complexity, and risk profile, and give no cause for supervisory concern.

[25] Curry, Elmer and Fissel, ***FDIC Banking Review.***

[26] **FDIC Law, Regulations, Related Acts**, **"**Uniform Financial Institutions Rating System" May 7, 2009 <http://www.fdic.gov/regulations/laws/rules/5000-900.html>.

Composite 2: FIs in this group are fundamentally sound. For a financial institution to receive this rating, generally no component rating should be more severe than 3. Only moderate weaknesses are present and are well within the board of directors' and management's capabilities and willingness to correct. These financial institutions are stable and are capable of withstanding business fluctuations. These financial institutions are in substantial compliance with laws and regulations. Overall risk management practices are satisfactory relative to the institution's size, complexity, and risk profile. There are no material supervisory concerns and, as a result, the supervisory response is informal and limited.

Composite 3: FIs in this group exhibit some degree of supervisory concern in one or more of the component areas. These financial institutions exhibit a combination of weaknesses that may range from moderate to severe; however, the magnitude of the deficiencies generally will not cause a component to be rated more severely than 4. Management may lack the ability or willingness to effectively address weaknesses within appropriate time frames. Financial institutions in this group generally are less capable of withstanding business fluctuations and are more vulnerable to outside influences than those institutions rated a composite 1 or 2.

Additionally, these financial institutions may be in significant noncompliance with laws and regulations. Risk management practices may be less than satisfactory relative to the institution's size, complexity, and risk profile. These financial institutions require more than normal supervision, which may include formal or informal enforcement actions. Failure appears unlikely, however, given the overall strength and financial capacity of these institutions.

Composite 4: FIs in this group generally exhibit unsafe and unsound practices or conditions. There are serious financial or managerial deficiencies that result in unsatisfactory performance. The problems range from severe to critically deficient. The weaknesses and problems are not being satisfactorily addressed or resolved by the board of directors and management. Financial

institutions in this group generally are not capable of withstanding business fluctuations. There may be significant noncompliance with laws and regulations. Risk management practices are generally unacceptable relative to the institution's size, complexity, and risk profile. Close supervisory attention is required, which means, in most cases, formal enforcement action is necessary to address the problems. Institutions in this group pose a risk to the deposit insurance fund. Failure is a distinct possibility if the problems and weaknesses are not satisfactorily addressed and resolved.

Composite 5: FIs in this group exhibit extremely unsafe and unsound practices or conditions; exhibit a critically deficient performance; often contain inadequate risk management practices relative to the institution's size, complexity, and risk profile; and are of the greatest supervisory concern. The volume and severity of problems are beyond management's ability or willingness to control or correct. Immediate outside financial or other assistance is needed in order for the financial institution to be viable. Ongoing supervisory attention is necessary. Institutions in this group pose a significant risk to the deposit insurance fund and failure is highly probable.

2.1.7 Component Analysis of CAMELS

The descriptions of the CAMELS components are made as under:

2.1.7.1 Capital Adequacy

Regulators have followed “the capital is king” approach during the late 1990s. Well-capitalized banks have been allowed to expand the range of products they offer including establishing affiliates that can underwrite and deal in securities. Well-capitalized banks’ regulatory burdens are lessened as well. The difficulty is in identifying which firms are truly well capitalized and which firms need additional capital. A specific bank’s capital is adequate depends on how much risk the bank assumes. Banks with low-quality assets, limited access to liquid funds, severe mismatches in asset and liability

maturities and durations, or high operational risk should have more capital. Low-risk forms should be allowed to increase financial leverage.[27]

First, international standards recognize a broader definition of "capital," the numerator of the ratio. Capital is divided into two components: Tier 1 and Tier 2. Tier 1capital is referred to as core or basic equity and is comprised of paid up capital, capitalized grants and accumulated, reported retained earnings (e.g. profits) of a banking institution. Tier 2 capital, or supplementary capital, includes subordinated debt, hybrid debt/equity capital instruments, general provisions, loan loss reserves, asset revaluation reserves and undisclosed reserves. So Tier 2 capital can include quasi-equity – the financing we propose for covering operating deficits going forward! These two elements of capital are combined to meet the minimum capital requirement of a bank. The one catch is that Tier 2 capital is limited to a maximum of 100% of the total of Tier 1 Capital. So of the minimum 8% capital required, Tier 2 capital can meet up to 4%.Capital is used very widely in the world of finance and means different things to different people. In the banking industry, capital is used more specifically to refer to the financial strength of the organization, which is the sum of Tier I and Tier II capital.[28] Tier 2 capital is the secondary source of equity. Capital Adequacy is a ratio which measures the minimum amount of total capital.

Capital is necessary for the bank to operate. While many areas of a bank are important and subject to scrutiny, capital adequacy is the area that triggers the most regulatory action. This action is largely based on the three major ratios used in the assessment of capital adequacy, which are:

- The Tier 1 Risk-Based Capital Ratio.
- The Total Risk-Based Capital Ratio.
- The Tier 1 Leverage Ratio.

[27] Koch and Macdonald, ***Bank Management,*** 83-484.

[28] David S. Gibbons and Jennifer W. Meehan, **Financing Microfinance for Poverty Reduction** "The International Capital Adequacy Standards", (June 24, 2002): 33-35, May 7, 2009 <http://www.microcreditsummit.org/papers/financing_final.pdf>.

The capital adequacy of an institution is rated based upon, but not limited to, an assessment of the following evaluation factors:

- Size of the bank
- Volume of inferior quality assets
- Bank's growth experience, plans and prospects
- Quality of capital retained earnings
- Access to capital markets
- Non-ledger assets and sound values not shown on books (real property at nominal values, charger-offs with firm recovery values, tax adjustments).

The FDIC Improvement Act of 1991, which created a link between enforcement actions and the level of capital held by a bank. This supervisory link is commonly known as Prompt Corrective Action (PCA) and aims to resolve banking problems early and at the least cost to the bank insurance fund. PCA has classified the banks as:

Well-Capitalized: To be considered well-capitalized, a bank will meet the following conditions.

- Total risk-based capital ratio is 10 percent or more,
- Tier 1 risk-based capital ratio is 6 percent or more, and
- Tier 1 leverage ratio is 5 percent or more.

In addition to these ratio guidelines, to be well capitalized a bank cannot be subject to an order, a written agreement, a capital directive or a PCA directive.

Adequately Capitalized: To be considered well capitalized, a bank will meet the following conditions:

- Total risk-based capital ratio is at least NRB minimum capital adequacy ratio requirement.
- Tier 1 risk-based capital ratio is at least NRB minimum Tier 1 capital ratio requirement.
- Tier 1 leverage ratio is at least 4 percent.

Undercapitalized: To be considered undercapitalized, a bank will meet the following conditions:

- Total risk-based capital ratio is less than 8 percent,
- Tier 1 risk-based capital ratio is less than 4 percent, or
- Tier 1 leverage ratio is less than 4 percent.

Significantly Undercapitalized: To be considered significantly undercapitalized, a bank will meet the following conditions:

- Total risk-based capital ratio is less than 6 percent,
- Tier 1 risk-based capital ratio is less than 3 percent, or
- Tier 1 leverage ratio is less than 3 percent.

A financial institution is expected to maintain capital commensurate with the nature and extent of risks to the institution and the ability of management to identify, measure, monitor, and control these risks. The effect of credit, market, and other risks on the institution's financial condition should be considered when evaluating the adequacy of capital. The types and quantity of risk inherent in an institution's activities will determine the extent to which it may be necessary to maintain capital at levels above required regulatory minimums to properly reflect the potentially adverse consequences that these risks may have on this institutions' capital.

The capital adequacy of an institution is rated based upon, but not limited to, an assessment of the following evaluation factors: [29]

- The level and quality of capital and the overall financial condition of the institution.
- The ability of management to address emerging needs for additional capital.
- The nature, trend, and volume of problem assets, and the adequacy of allowances for loan and lease losses and other valuation reserves.

[29] **FDIC Law, Regulations, Related Acts.**

- Balance sheet composition, including the nature and amount of intangible assets, market risk, concentration risk, and risks associated with nontraditional activities.
- Risk exposure represented by off-balance sheet activities.
- The quality and strength of earnings, and the reasonableness of dividends.
- Prospects and plans for growth, as well as past experience in managing growth.
- Access to capital markets and other sources of capital, including support provided by a parent holding company.

To determine capital adequacy, best practice institutions measure capital based on unexpected loss, or volatility around expected loss, and compare their estimate of required capital with financial resources available to cover unexpected loss--common equity and loan loss reserves. Since expected loss is covered by future margin income, expected loss is not included in the measurement of economic capital. Likewise, future margin income is excluded from the financial resources available to cover losses.[30]

BASEL Capital Accord

The original Basel Accord is a credit risk framework introduced in 1988 with which the Basel Committee on Banking Supervision defined capital standards for international banks in member countries (G-10 countries). The objective was to limit the banks' business risks by way of banking supervision, thereby strengthening the financial system. In order to meet the requirements of ongoing developments in banking, the Basel Committee began revising these requirements in 1999 and the new capital accord (hence referred to as "Basel II") will go into effect in 2007.

New Basel Capital Accord – "Basel II"

In January 2001 the Basel Committee on Banking Supervision issued a proposal for a New Basel Capital Accord (Basel II) that, revised it again. The

[30] John S. Walter, Economic capital, "performance evaluation, and capital adequacy at Bank of America", ***RMA Journal,*** (March 2004) May 4,2009 <http://findarticles.com/p/articles/mi_m0ITW/is_6_86/ai_n14897455/pg_3>.

proposal is based on three mutually reinforcing pillars that allow banks and supervisors to evaluate properly the various risks that banks face. These pillars are:[31]

1. Minimum capital requirements, which seek to refine the measurement framework set out in the 1988 Accord (dealing with credit risk, operational risk and market risk),
2. Supervisory review of an institution's capital adequacy and internal assessment process, and
3. Market discipline through effective disclosure to encourage safe and sound banking practices.

In context of implementing BASEL II from July 2007, NRB organized a workshop to inform the officers and employees of Bank Supervision Department of Nepal Rastra Bank. Likewise with a view to implementing BASEL II in Nepalese banking sector, an Accord Implementation Group with a participation of commercial banks representatives was formed to prepare necessary directives. A one-day interaction program was also organized in participation of chief executives of commercial banks.[32]

Capital Adequacy Norms Set by NRB

Banks and financial institutions are to be classified as A, B, C and D as per the minimum paid-up capital requirement prescribed by NRB which is also based on the geographical areas to be covered. The existence of banks and non-banks financial institutions in a formal and organized way is collectively known as the financial system of a country. Only commercial banks are authorized to conduct full-fledged banking services.[33]

According to the NRB unified directives for Banks and Financial Institutions Umbrella Act 2063 B.S., the capital funds of a bank comprise the following: Total Capital Fund=Core Capital + Supplementary Capital

[31] Value Based Management.net RAROC-Risk Management-Basel II, April 27, 2009 <http://www.valuebasedmanagement.net/methods_raroc.html/>.

[32] Economic Report 2004/05 (Kathmandu: Nepal Rastra Bank Central Office Research Department, Statistics Division) 75.

[33] ***Nepal Rastra Bank in 50 years,*** 396.

Core Capital: Core capital of a bank includes paid up equity, share premium, non-redeemable preference shares, general reserve and accumulated profit and loss. However, where the amount of goodwill exists, the same shall be deducted for the purpose of calculation of the core capital.

Supplementary Capital: Supplementary capital includes general loan loss provision, exchange fluctuation reserve, assets revaluation reserve, hybrid capital instruments, unsecured subordinated term debt and other free reserves not allocated for a specific purpose.

Nepal Rastra Bank Act for Banking and Financial Institution is effective from 1st Shrawan 2058 (July 16th 2001). According to the NRB directive 2063, minimum paid-up capital requirement for establishment of commercial banks is as under:

Standard	National Level	Regional Level*	4-10 District*	1-3 District*
"A"	Rs. 200 million		-	-
"B"	RS. 64 million	-	Rs. 30 million[a/] Rs. 20 million	Rs. 30 million[a/] Rs. 10 million
"C"	Rs. 30 million[a/] Rs.20 million	- -	- -	Rs. 30 million[a/] Rs. 10 million
"D"[b/]	Rs. 10 million	Rs.6 million#	Rs. 2 million[c/]	Rs. 1 million

Source: *NRB Directives in 2063*

* to operate all over Nepal except Kathmandu Valley.

a/ to formulate only those financial institutions who do leasing transactions

b/ only for saving and credit co-operatives financial institutions.

c/ including 5 districts of hilly area.

operates in development regional area.

Nepal Rastra Bank (NRB) is set to bring in a new Bank and Financial Institution Act with a view to facilitate mergers and acquisitions amongst financial institutions. In the wake of opening up of Nepal's financial sector as

per the obligations made to the WTO, NRB is introducing a new umbrella act governing commercial and development banks as well as finance companies. The process and legal framework for mergers and acquisitions or amalgamation of financial institutions are not clearly spelled out right now. "The forthcoming law will address the current problem and pave the path for a smooth process for mergers and acquisitions." The central bank's recent decision was to double paid-up capital requirement for financial institutions. FIs failing to meet the deadline to raise their capital would not be excused. "All these provisions are being made for their own sake to make financial institutions vibrant and strong, when Nepal opens up for all in 2010."[34]

2.1.7.2 Assets Quality

Asset quality is one of the most critical areas in determining the overall condition of a bank. The primary factor effecting overall asset quality is the quality of the loan portfolio and the credit administration program. Loans are usually the largest of the asset items and can also carry the greatest amount of potential risk to the bank's capital account.

Bank assets fall into one of four general categories: loans, investment securities, non-interest cash and due from banks, and other assets. An evaluation of the bank's asset quality includes-particularly the probability of defaults on interest and principal payments in the loan portfolio-loan review policies, interest rate risk profile, liquidity profile, cash management and internal audit procedures, and management quality.[35]

The assets of the banking industry comprises of various assets, but is dominated by loans, which accounts for almost half of the total assets. The dominance of loans in the total assets is followed by other assets and investment, in that order.

Non-Performing Assets

In the distant past, banks had to deal with only few cases of bad-loans. So, they used to take legal actions against chronic defaulters of bank-loans.

[34] The Himalayan Times, Business, 9, Friday, April 27, 2009.
[35] Koch and Macdonald, ***Bank Management,*** 484.

For the last ten/twelve years, banks are suffering from a large chunk of non-performing loans (assets) as a consequence of economic as well as non-economic factors in the country. By international parameter, non-performing assets of a bank should not exceed ten percent while such an indicator is estimated to have been crossed 26 percent, (Rs. 31 billion in aggregate) mainly due to the increase in willful defaulters in the government, semi-government and private sector banks.[36]

NPA has affected the profitability, liquidity and competitive functioning of Public and Private Sector Banks and finally the psychology of the bankers in respect of their disposition towards credit delivery and credit expansion.

The asset quality rating reflects the quantity of existing and potential credit risk associated with the loan and investment portfolios, other real estate owned, and other assets, as well as off-balance sheet transactions. The ability of management to identify, measure, monitor, and control credit risk is also reflected here. The evaluation of asset quality should consider the adequacy of the allowance for loan and lease losses and weigh the exposure to counterparty, issuer, or borrower default under actual or implied contractual agreements. All other risks that may affect the value or marketability of an institution's assets, including, but not limited to, operating, market, reputation, strategic, or compliance risks, should also be considered.

The asset quality of a financial institution is rated based upon, but not limited to, an assessment of the following evaluation factors: [37]

- The adequacy of underwriting standards, soundness of credit administration practices, and appropriateness of risk identification practices.
- The level, distribution, severity, and trend of problem, classified, nonaccrual, restructured, delinquent, and nonperforming assets for both on- and off-balance sheet transactions.

[36] **Debt Recovery Tribunal,** May 8, 2009 <http://www.drtribunal.gov.np/introduction.htm>.
[37] **FDIC Law, Regulations, Related Acts.**

- The adequacy of the allowance for loan and lease losses and other asset valuation reserves.
- The credit risk arising from or reduced by off-balance sheet transactions, such as unfunded commitments, credit derivatives, commercial and standby letters of credit, and lines of credit.
- The diversification and quality of the loan and investment portfolios.
- The extent of securities underwriting activities and exposure to counterparties in trading activities.
- The existence of asset concentrations.
- The adequacy of loan and investment policies, procedures, and practices.
- The ability of management to properly administer its assets, including the timely identification and collection of problem assets.
- The adequacy of internal controls and management information systems.
- The volume and nature of credit documentation exceptions.

NRB Directives Related to Assets Quality

NRB unified directive for Banks & Non-Bank FIs (Ashar 2062 BS) through directive number E. Pra. No. 02/061/62, requires the banks to classify outstanding loans and advances should be classified into the following four categories: all commercial banks have to maintain loan loss provision according to the size of over due loans.

Pass: Loans and Advances whose principle amount are not past due over for 3 months include in this category. These are classified and defined as performing loans.

Substandard: All loan and advances that are past due for a period of 3 months to 6 months included in this category.

Doubtful: All loans and advances, which are past due for a period of 6 months to 1 year, included in this category.

Loss: All loans and advances which are past due for more than 1 year and have least or thin possibility of recovery or considered unrecoverable shall included in this category. Besides this, any loan whether past due or not, in situations of inadequate security, borrower declared insolvent, no whereabouts of the borrower or misuse of borrowed fund, are to be classified as Loss category.

The directive further requires banks to provision for loan loss, on the basis of the outstanding loans and advances and bills purchased classified as above. Loan loss provision set aside for performing loans is defined as General Loan Loss Provision and that set aside for non-performing loan as Specific Loan Loss Provision.

Loan Class	Loan Loss Provision
Pass	1%
Substandard	25%
Doubtful	50%
Loss	100%

With the objectives of lowering the concentration risk of bank loans to a few big borrowers and to increase the access of small and middle size borrowers to the bank loans. NRB through directive number E. Pra. No. 03/061/62 limits commercial banks to extend credit to a single borrower or group of related borrower's upto 25% of its core capital for fund based credit facilities and not more than 50% of its core capital for Non fund based credit facilities like letters of credit, guarantees, acceptances, commitments.

2.1.7.3 Management Quality

The capability of the board of directors and management, in their respective roles, to identify, measure, monitors, and controls the risks of an institution's activities and to ensure a financial institution's safe, sound, and efficient operation in compliance with applicable laws and regulations is reflected in this rating. Generally, directors need not be actively involved in day-to-day operations; however, they must provide clear guidance regarding acceptable risk exposure levels and ensure that appropriate policies,

procedures, and practices have been established. Senior management is responsible for developing and implementing policies, procedures, and practices that translate the board's goals, objectives, and risk limits into prudent operating standards.

Depending on the nature and scope of an institution's activities, management practices may need to address some or all of the following risks: credit, market, operating or transaction, reputation, strategic, compliance, legal, liquidity, and other risks. Sound management practices are demonstrated by: active oversight by the board of directors and management; competent personnel; adequate policies, processes, and controls taking into consideration the size and sophistication of the institution; maintenance of an appropriate audits program and internal control environment; and effective risk monitoring and management information systems. This rating should reflect the board's and management's ability as it applies to all aspects of banking operations as well as other financial service activities in which the institution is involved.

The capability and performance of management and the board of directors is rated based upon, but not limited to, an assessment of the following evaluation factors: [38]

- The level and quality of oversight and support of all institution activities by the board of directors and management.
- The ability of the board of directors and management, in their respective roles, to plan for, and respond to, risks that may arise from changing business conditions or the initiation of new activities or products.
- The adequacy of, and conformance with, appropriate internal policies and controls addressing the operations and risks of significant activities.

[38] **FDIC Law, Regulations, Related Acts.**

- The accuracy, timeliness, and effectiveness of management information and risk monitoring systems appropriate for the institution's size, complexity, and risk profile.
- The adequacy of audits and internal controls to: promote effective operations and reliable financial and regulatory reporting; safeguard assets; and ensure compliance with laws, regulations, and internal policies.
- Compliance with laws and regulations.
- Responsiveness to recommendations from auditors and supervisory authorities.
- Management depth and succession.
- The extent that the board of directors and management is affected by, or susceptible to, dominant influence or concentration of authority.
- Reasonableness of compensation policies and avoidance of self-dealing.
- Demonstrated willingness to serve the legitimate banking needs of the community.
- The overall performance of the institution and its risk profile.

2.1.7.4 Earnings Quality

An analysis of earnings comprise of examiner reviewing each component of the Earning Analysis Trial and Ratio Analysis. Generally, the analysis of earnings begins with the examiner reviewing each component of the earnings analysis trail. The earnings analysis trail provides a means of isolating each major component of the income statement for individual analysis. The earnings analysis trail consists of the following income statement components: net interest income, non-interest income, non-interest expense, provision for loan and lease losses, and income taxes. Each component of the earnings analysis trail is initially reviewed in isolation. Typically, ratios are examined to determine a broad level view of the component’s performance. The level of progression along the analysis trail

will depend on a variety of factors including the level and trend of the ratio(s), changes since the pervious examination, and the institution's risk profile.

Earning Ratio Analysis: Several key ratios used in the earnings analysis are used as shown below:

- Net Income to Average Assets Ratio
- Net Interest Income to Average Assets Ratio
- Net Interest Income to Average Earnings Assets Ratio
- Non-interest Income to Average Assets Ratio
- Non-interest Expense to Average Assets Ratio
- Provision for Loan and Lease Losses (PLLL) to Average Assets Ratio
- Realized Gains / Losses on Securities to Average Assets Ratio(s)

This rating reflects not only the quantity and trend of earnings, but also factors that may affect the sustainability or quality of earnings. The quantity as well as the quality of earnings can be affected by excessive or inadequately managed credit risk that may result in loan losses and require additions to the allowance for loan and lease losses, or by high levels of market risk that may unduly expose an institution's earnings to volatility in interest rates. The quality of earnings may also be diminished by undue reliance on extraordinary gains, nonrecurring events, or favorable tax effects. Future earnings may be adversely affected by an inability to forecast or control funding and operating expenses, improperly executed or ill-advised business strategies, or poorly managed or uncontrolled exposure to other risks.

The rating of an institution's earnings is based upon, but not limited to, an assessment of the following evaluation factors: [39]

- The level of earnings, including trends and stability.
- The ability to provide for adequate capital through retained earnings.
- The quality and sources of earnings.
- The level of expenses in relation to operations.

[39] **FDIC Law, Regulations, Related Acts.**

- The adequacy of the budgeting systems, forecasting processes, and management information systems in general.
- The adequacy of provisions to maintain the allowances for loan and lease losses and other valuation allowance accounts.
- The earnings exposure to market risk such as interest rate, foreign exchange, and price risks.

2.1.7.5 Liquidity

Commercial banks purchase debt securities to help meet liquidity requirements. Liquidity needs are determined by unanticipated deposit outflows and unanticipated loan demand. When evaluating the potential liquidity in a bank's investment portfolio, most managers simply compare a security's current market value with its book value.[40]

The banks should be able to honour the demand for payment by its depositors and other stakeholders. In order to do so, banks maintain certain volume of liquid assets, the size and volume determined by the bank's size of operations and the past trends. In financial markets, liquidity is important, because it allows investors to manage their portfolios and risks more efficiently, which trends to reduce the cost of borrowing.

In evaluating the adequacy of a financial institution's liquidity position, consideration should be given to the current level and prospective sources of liquidity compared to funding needs, as well as to the adequacy of funds management practices relative to the institution's size, complexity, and risk profile. In general, funds management practices should ensure that an institution is able to maintain a level of liquidity sufficient to meet its financial obligations in a timely manner and to fulfill the legitimate banking needs of its community. Practices should reflect the ability of the institution to manage unplanned changes in funding sources, as well as react to changes in market conditions that affect the ability to quickly liquidate assets with minimal loss. In addition, funds management practices should ensure that liquidity is not maintained at a high cost, or through undue reliance on

[40] Koch and Macdonald, ***Bank Management,*** 701.

funding sources that may not be available in times of financial stress or adverse changes in market conditions.

Liquidity is rated based upon, but not limited to, an assessment of the following evaluation factors: [41]

- The adequacy of liquidity sources compared to present and future needs and the ability of the institution to meet liquidity needs without adversely affecting its operations or condition.
- The availability of assets readily convertible to cash without undue loss.
- Access to money markets and other sources of funding.
- The level of diversification of funding sources, both on- and off-balance sheet.
- The degree of reliance on short-term, volatile sources of funds, including borrowings and brokered deposits, to fund longer term assets.
- The trend and stability of deposits.
- The ability to securitize and sell certain pools of assets.
- The capability of management to properly identify, measure, monitor, and control the institution's liquidity position, including the effectiveness of funds management strategies, liquidity policies, management information systems, and contingency funding plans.

NRB Directives Related to Liquidity

NRB had given the instruction to the commercial banks since 2023 B.S. to deposit the amount ratio of 8 percent from their deposit liability. In the beginning of 2047 B.S. the increase in the quantity of internal credit was very high and began to show negative effect on economy. The deflation grew up to 21%. So, high liquidity appeared in economy, hence, control of the negative effect that may fall on economy to improve the growth of price rate and improvement of the position of loss of running account and control the

[41] **FDIC Law, Regulations, Related Acts.**

capacity of flowing the loan of the commercial banks, was necessary and the NRB second time prescribed liquidity ratio. It made compulsory to invest 24% the amount of the total deposit of the commercial bank in H.M.G. Bond, treasury bills, or NRB Bonds. Wirth some signs of improvement of economy, the investment ratio was revised accordingly, since Poush 2049 B.S. Since the beginning of 2050 B.S. the economy showed improvement and the rate of deflation fell down to 8.8%. With this, the provision of investing in the government securities was removed.

With effective from 2054, Chaitra 31st, commercial banks were required to maintain liquidity of 8% of the total Current & Saving deposits and 6% of the fixed deposits, in addition to 3% of total deposit in cash at vault. Since then the NRB reserve requirement has been changed.

NRB directives as per 2062:

Balance at NRB: 5% of total deposit liabilities.

NRB as a minimum CRR maintained by the banks will be 5% of total deposit.

The applicable rate of penalty is as follows:

First time shortfall = Equivalent to bank rate/highest refinance rate

Second time shortfall = Equivalent to 2 times of bank rate

Third time shortfall and all subsequent shortfalls = Equivalent to 3 times of bank rate.

A bank's liquidity risk can arise either from a drain on deposits or from new loan demands, and the subsequent need to meet these demands by liquidating assets or borrowing funds. The bank can obtain liquid funds in three ways. First, it can sell its liquid assets such as T-bills immediately with little price risk and low transaction costs. Second, it can borrow funds in the money/purchased funds market up to a maximum amount. Third, it can use any excess cash reserves over and above the amount held to meet regulatory imposed reserve requirements.[42]

[42] Saunders and Cornett, ***Financial Markets and Institutions,*** 599-600.

2.1.7.6 Sensitivity to Market Risk

The Bank for International Settlement (BIS) defines market risk as the "the risk of losses in on-and off-balance-sheet positions arising from movements in market prices." The main factors contributing to market risk are equity, interest rate, foreign exchange, and commodity risk. The total market risk is the aggregation of all risk factors. In addition to market risk, the price of financial instruments may be influenced by the following residual risks: spread risk, basis risk, specific risk, and volatility risk.[43]

The sensitivity to market risk component reflects the degree to which changes in interest rates, foreign exchange rates, commodity prices, or equity prices can adversely affect a financial institution's earnings or economic capital. When evaluating this component, consideration should be given to: management's ability to identify, measure, monitor, and control market risk; the institution's size; the nature and complexity of its activities; and the adequacy of its capital and earnings in relation to its level of market risk exposure.

For many institutions, the primary source of market risk arises from non-trading positions and their sensitivity to changes in interest rates. In some larger institutions, foreign operations can be a significant source of market risk. For some institutions, trading activities are a major source of market risk.

Market risk is rated based upon, but not limited to, an assessment of the following evaluation factors: [44]

- The sensitivity of the financial institution's earnings or the economic value of its capital to adverse changes in interest rates, foreign exchange rates, commodity prices, or equity prices.
- The ability of management to identify, measure, monitor, and control exposure to market risk given the institution's size, complexity, and risk profile.

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[43] Reto Gallati, ***Risk Management and Capital Adequacy*** 34, 10 May.2009 <http://books.google.com/books?id=DuWRmiB3QRMC&pg=PA258&ots=iPbSfrKWUV&dq=interest+rate+risk+measurement+system+approaches&sig=a-a9ACsis0kTBm49pefx0zJDhpg#PPA5,M1>.

[44] **FDIC Law, Regulations, Related Acts.**

- The nature and complexity of interest rate risk exposure arising from nontrading positions.
- Where appropriate, the nature and complexity of market risk exposure arising from trading and foreign operations.

2.2 Research Review

Different research works are prepared with the help of different scholars. In these days, there were a lot of sources to obtain information in related subject matter. This section deals with the review of articles by various authors in international scenario and review of dissertation by different unpublished master degree project report in Tribhuwan University.

2.2.1 Review of Articles

In the study period different books and articles have been consulted. The study has also used the mostly and easily accessible internet service. On-line databases provide a wealth of information. The review of relevant articles and journals help to develop and expand rapidly of this report.

In the early 1990's, Udegbunam conducted an empirical analysis the determinants of performance differences among commercial banks in Nigeria.[45] Using a simple model of bank performance and a pooled time-series cross section data, and OLS estimation method, two sets of regressions are run estimating two dependent variables that are common measures of bank performance – ROA and ROE. The evidence obtained from the two sets of regressions suggests that capital adequacy, management quality, and credit risk are the key determinants of bank performance, irrespective of the performance indicator used. The evidence also suggests notable differences. While there is an overwhelming evidence of strong negative effect of credit policy on ROE, this factor appears to exert a weak effect on ROA, they appear to play a less significant role in bank ROE.

[45] Ralph I. Udegbunam, "Financial Distress and Performance Differences among Commercial Banks in Nigeria: A Multivariate Ratio Analysis" **Finance India** Vol. XV, No.2 (June 2001) 551.

Hirtle and Lopez examined the usefulness of past CAMEL ratings in assessing banks' current conditions in 1998.[46] They find that, conditional on current public information, the private supervisory information contained in past CAMEL ratings provides further insight into bank current conditions, as summarized by current CAMEL ratings. They covered the period from 1989 to 1995; the private supervisory information gathered during the last on-site exam remains useful with respect to the current condition of a bank for up to 6 to 12 quarters (one and a half to three years). The overall conclusion drawn from academic studies is that private supervisory information, as summarized by CAMELS ratings, is clearly useful in the supervisory monitoring of bank conditions.

In 2005, Baral uses the data set published by joint venture banks in their annual reports, and NRB in its supervision annual reports, this paper examines the financial health of joint venture banks in the CAMEL framework.[47] The health check up conducted on the basis of publicly available financial data concludes that the health of joint venture banks is better than that of the other commercial banks. In addition, the perusal of indicators of different components of CAMEL indicates that the financial health of joint venture banks is not so strong to manage the possible large scale shocks to their balance sheet and their health is fair.

In 2007, Dick published the journal of money, credit and banking was that local banking markets depict enormous variation in population size.[48] Yet this paper finds that the nature of bank competition across markets is strikingly similar. First, markets remain similarly concentrated regardless of size. Second, the number of dominant banks is roughly constant across markets of different size; it is the number of fringe banks that increases with

[46] B. J. Hirtle and J. A. Lopez, "Supervisory Information and the Frequency of Bank Examinations" **Economic research and data, FRBSF Economic Letter**, 99-07 (february 26, 1999) May 10, 2009 <http://www.frbsf.org/econrsrch/wklyltr/wklyltr99/el99-07.html>.

[47] Keshar Jung Baral, "Health Check-up of Commercial Banks in the Framework of CAMEL: A Case Study of Joint Venture Banks in Nepal" **Journal of Nepalese Business Studies** 2, No 1 (2005), May 7, 2009 <http://journals.sfu.ca/nepal/index.php/JNBS/article/view/55>.

[48] Astrid A. Dick, "Market Size, Service Quality, and Competition in Banking" **Journal of Money, Credit and Banking**, 39, issue 1 (February 2007) 49, May 10, 2009 <http://www.blackwell-synergy.com/doi/abs/10.1111/j.0022-2879.2007.00003.x>.

market size. Third, service quality increases in larger markets and is higher for dominant banks. The findings suggest that banks use fixed-cost quality investments to capture the additional demand when market size grows, thereby raising barriers to entry.

Kunt and Detragiache have examined the cross country empirical studies of systematic bank distress that a rapidly growing empirical literature is studying the causes and consequences of bank fragility in contemporary economies.[49] The paper reviews the two basic methodologies adopted in cross-country empirical studies, the signals approach and the multivariate probability model, and their application to study the determinants of banking crises. The use of these models to provide early warnings for crises is also reviewed, as are studies of the economic effects of banking crises and of the policies to forestall them. The paper concludes by identifying directions for future research.

2.2.2 Review of Dissertations

Theses are unique and so for a major research project can be a good source of detailed information and further references. There was various thesis report works have been fulfilled by different researchers related with commercial banking industry. Some of these research works findings are presented below, which are relevant for this study:

Dinesh conducted a study on financial analysis of joint venture banks in Nepal was to carry out the comparative financial performance evaluation of Nepal Arab Bank Ltd. (Nabil) and Nepal Grindlays Bank Ltd. (NGBL).[50] The study has covered the time span of FYs 1988/89 through 1993/94. In the study, he has financial ratios viz. liquidity, leverage, activity, profitability, growth and valuation and statistical tools viz. Karl Pearson's correlation coefficient student t-test, simple average, and index. The researcher has found

[49] Asli Demirgüç-Kunt and Enrica Detragiache, **Sage Online Journals** "Development Research Group, The World Bank, and Research Department, International Monetary Fund" Cross-Country Empirical Studies of Systemic Bank Distress: A Survey May 9, 2009<http://ner.sagepub.com/cgi/content/abstract/192/1/68>.

[50] Dinesh Raj Shakya, "Financial Analysis of Joint Venture Bank in Nepal" (Master Diss., Tribhuwan University. 1995).

that in spite of the increase in loans and deposits of both banks. Further, the study showed that financial performance of Nabil is better than that of NGBL.

The study of Capital Structure of Selected Commercial Banks of Nepal in 2005, Sharma concludes following key points:[51]

a. Paid up Capital of Nepalese Commercial Banks are increasing indicating banks maintaining the capital standards set by NRB.
b. Total equity capital is growing as compared to total debt.
c. The fluctuating interest coverage ratio of the Nepalese Commercial Banks indicates the earnings stream and interest expenses are inconsistent over the period of past five years. The debt servicing capacity of the Nepalese Banks is not highly satisfactory but it is sufficient to meet the interest expenses in all years and is continuously improving.
d. The capital adequacy ratios of the banks are adequate against set norms of NRB indicating sound financial health and sufficient to meet on banking operation.
e. The total capital fund and capital adequate ratios are fluctuating which indicate fluctuating risk adjusted assets of the banks.
f. Core Capital and supplementary capital ratios are in line with the NRB norms.

Krishna has done the research work for evaluating financial performance of Himalayan Bank in the framework of CAMEL during 1999 to year 2004 A.D. in 2006.[52] The analysis revealed adequate capital of the bank. The trend of non-performing loan was in decreasing. The bank was still with better ROE however it is in decreasing trend. The decreasing trend of net interest margin shows management slack monitoring over the bank's earning assets. The liquid funds to total deposit ratio is above the industrial average

[51] Resham Raj Sharma, "Analysis of Capital Structure of Selected Commercial Banks in Nepal" (Master Diss., Tribhuwan University. 2005).

[52] Krishna Ram Bhandari, "Financial Performance Analysis of Himalayan Bank Limited in the framework of CAMEL" (Master Diss., Tribhuwan University.2006).

ratio. NRB balance and cash in vault to total deposit ratios are below the industrial average ratio during the study period.

Digendra conducted a research on Financial Performance Analysis of Nabil Bank Ltd. the in the framework of CAMELS.[53] The study was covered the time between FY 2000/01 to 2004/05. The capital adequacy ratio was above the NRB standard. The non-performing loans to loan ratios are well below the industrial average and the international standard. The loan loss provision of the bank is decreased. The management proxy ratios are favourable, which indicates effective management. The quality of earning is increasing. Overall the liquidity position of the bank is good. The cumulative GAP of risk sensitive assets and risk sensitive liabilities repriced over the one year maturity bucket was in continuous decreasing trend. The CGAP ratio to the earning assets over the long term horizon has been maintained at Zero in the last two years.

Santosh carried out the research study on Financial Performance Analysis of Nepal SBI Bank Ltd. in the framework of CAMEL.[54] The basic objective of this study was analyzing the financial performance of Nepal SBI Bank Ltd. (NSBL) in the CAMEL framework. The study was based on secondary data covering the period of six years from 2001 to 2006 A.D. He has used only the financial tools. The researcher concluded that NSBL was well capitalized and complying with the directives of NRB. The bank has maintained satisfactory level of past due loan on total loan except in 2001. Earnings per employees of the bank were found quite high. NIM of the bank was found satisfactory. Furthermore, the liquidity position of the bank was found sound.

Samjhana prepared a research report on Financial Performance Analysis of Annapurna Finance Company Limited in the framework of

[53] Digendra Chand, "Financial Performance Analysis of Nabil Bank Limited in the framework of CAMELS"(Master Diss., Tribhuwan University.2006).

[54] Santosh Raj Sharma, "Financial Performance Analysis of Nepal SBI Bank Ltd. in the framework of CAMEL"(Master Diss., Tribhuwan University.2007).

CAMEL.[55] The study period of this research was FY 2002 to 2006. The capital adequacy ratio of this finance co. was sound and strong. The NPL ratios are below the international standard, the loan loss ratios are increasing trend. The total expense to total income was up and down, but earning per employee was increased. The ROE result was decreasing trend and ROA also variable. The NIM ratio was increasing but EPS result was decreasing. The liquidity position was poor. NRB balance to total deposit ratios are below than industry average besides this it maintained the NRB standard.

Srijana has done a research on Diagnosis of Financial Health of Nepal Investment Bank Limited in the framework of CAMELS.[56] The covered period of this study was FY 2002-2006. The capital adequacy was sufficient. In asset composition, the major part of total assets was held in form of loans and advances. The NPL ratio and loan loss provision ratio both are continuous decreasing trend. All the ratios of management component are sound and effective. The ROE and ROA results are in upward movements which was higher than the benchmark. The NIM ratio was in negative or decreasing trend. The EPS result going upward in positively. The liquid assets to total deposit ratio was above the NRB standard but NRB balance to total deposit ratio was below the industrial average. The CGAP or the interest rate sensitivity ratio to the total earning assets over the short time horizon i.e. up to one FY in continuous increasing trend but over the long term horizon has decreased.

Dhananjay conducted a research on Financial Performance evaluation of Nepal Investment Bank in the framework of CAMELS.[57] The study was covered the time between FY 2004 to 2008. The capital adequacy ratio was as per the NRB standard. The non-performing loans to loan ratios are below the industrial average and the international standard. The loan loss ratio was

[55] Samjhana Gurung, "Financial Performance Analysis of Annapurna Finance Company Limited in the framework of CAMEL" (Master Diss., Tribhuwan University. 2007).

[56] Srijana Koirala, "Diagnosis of Financial Health of Nepal Investment Bank Limited in the framework of CAMELS" (Master Diss., Tribhuwan University. 2007).

[57] Dhananjay Wagle, "Financial Performance Evaluation of Nepal Investment Bank in the framework of CAMELS" (Master Diss., Tribhuwan University.2009).

decreased. The management ratios results are effective. The quality of earning is increasing trend. The liquidity position of the bank is good. The cumulative gap CGAP of the RSAs and RLAs repricing in the short term maturity bucket was positive but in the long term maturity bucket was found in negative. The CGAP or the interest rate sensitivity ratio to the total earning assets over the short time horizon i.e. up to one FY in continuous increasing trend but over the long term horizon has decreased.

In past time, different studies have been conducted as a topic of financial analysis of commercial banks in Nepal and foreign. They emphasized the research covering by limited or selected population of the bank. In the context of Nepalese banking environment, there are few academic researchers found conducted in the framework of CAMEL by Krishna and CAMELS by Digendra in 2006, CAMEL by Santosh and Samjhana in 2007, CAMELS by Srijana in 2007 and CAMELS by Dhananjay in 2009. This study attempts to evaluate financial performance of banking industry in Nepal with the view of CAMELS including cross-sectional analysis approach.

CHAPTER III

RESEARCH METHODOLOGY

This chapter deals with the methodology followed in the study. It comprises of the research design, population and sample size, nature and sources of data, data collection procedures, data processing and data analysis tools.

3.1 Research Design

The Research Design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data.[58] This research is an evaluation of performance of banking industry in Nepal in the framework of CAMELS. This study is based on cross sectional approach so that descriptive-cum analytical research methodology has been adopted, which is a means to achieve the desired end. Besides this, some financial tools are also used.

3.2 Population and Sample

The population of the study has been defined in terms of commercial banks in operation before 2007. The total number of commercial bank in operation in this year is 26. So, the population of the study is 26. Out of this number, 8 banks were sampled randomly for this study. Thus, the study covers 32% of the population.

[58] C.R. Kothari, ***Research Methodology, Methods and Techniques*** (New Age International Publishers, 2004) 31.

3.3 Nature and Sources of Data

The study has used mainly secondary data. The major source of secondary data is annual reports of the sampled commercial banks. The regulatory data and information were extracted from NRB directives and reports. The basic conceptual information was collected through BASEL, FDIC, IMF and NRB publications and working papers. In addition, supportive data and information have been extracted from:

NRB reports & bulletins and its official websites,

Basel Committee publications through its official website,

Various research papers and dissertations,

Various articles published in journals and financial magazines,

Nepal Stock Exchange reports,

Official websites of different commercial banks, and

Primary data and information have been collected by holding formal and informal discussions with the senior staff of the bank.

3.4 Data Collection Procedure

The needed data was collected from the branch office of sampled banks. The required information has been obtained from different library like Western Regional Library in Pokhara, Central Library PU, Public Library Pokhara, and NRB Library Pokhara. Data have also been drawn from NRB regulatory directives, operational statistics of the commercial banks in Nepal, their published annual reports, occasional documents contained in various professional journals, articles, reviews, newspaper, various periodical publications pertained through internet surfing to NRB's official website.

The literature review was collected from various research papers, books, and journals which are available in Western Regional Library (PNC), Pokhara. The review of research was fulfilled by various national as well as international scholars on the related topics were obtained by using internet surfing with different websites. The conceptual review was done through

assistance of related text books by various writers and publication available in the library of Pokhara.

3.5 Data Processing

The financial data were manually extracted from the annual reports of sampled banks into the computer files of Microsoft Excel application program was used to process the extracted data. The data was refined further into spreadsheets to carry out financial ratio calculation and graphical illustrations through mathematical functions and Chart program of the Excel program.

3.6 Data Analysis Tools

This study is based on the tools used in CAMELS analysis.

3.6.1 Financial Ratio Analysis Tools

The following financial ratios used to the performance evaluation of commercial banks in the framework of CAMELS are:

Capital Adequacy Ratio: Capital Adequacy Ratios take into account the most important financial risks-foreign exchange, credit and interest rate risks, by assigning risk weightings to the institution's assets. To be adequately capitalized, a bank must hold a minimum total capital (Tier I plus Tier II) to total risk-adjusted assets ratio. The capital adequacy ratio is calculated as: [59]

$$\text{Capital Adequacy Ratio} = \frac{\text{Total Capital (Tier I Γ Tier II)}}{\text{Risk adjuested assets}}$$

Tier I capital ratio: The Tier I core capital component of total capital ratio shows the relationship between internal or primary sources of capital and total risk-adjusted assets. It is calculated as follows:

$$\text{Tier I (core) capital ratio} = \frac{\text{Core capital (Tier I)}}{\text{Risk adjusted assets}}$$

[59] Anthony Saunders and Marcia Milllon Cornett, ***Financial Markets and Institutions*** – A Modern Perspective (New York: The McGraw-Hill Companies, Inc., 2001) 420-422.

Tier II capital ratio: Tier II capital is a broad array of secondary capital resources. This ratio shows the relationship between supplementary capital and total risk-adjusted assets. It is determined by using the following model:

$$\text{Tier II (Supplementary) capital ratio} = \frac{\text{Supplementary capital (Tier II)}}{\text{Risk adjusted assets}}$$

Non-Performing Loan Ratio: The non-performing loan ratio indicates the relationship between non-performing loan and total loan. It measures the proportion of non-performing loan in total loan and advances. The ratio is used to analyze the asset quality of the bank and determined by using the given model:

$$\text{Non Performing Loan Ratio} = \frac{\text{Non performing loan}}{\text{Total Loans and Advances}}$$

Where, Non-performing Loan = Those loans which have been past due either in the form of interest servicing or principal repayment and graded as possible default.

Loan Loss Provision to Total Loans Ratio: The provision for loan losses is a charge to current earnings to build the Allowance for Loan and Lease Losses (ALLL). The ALLL is a general reserve kept by banks to absorb loan losses. While it measures the possibility of loan default, it reflects adequacy of to absorb estimated credit losses associated with the loan and lease portfolio, of the bank. For the purpose of this study following model is used to determine the loan loss ratio:

$$\text{Loan Loss Provision Ratio} = \frac{\text{Loan Loss Provision}}{\text{Total Loans and Advances}}$$

Total Expense to Total Income Ratio: The total expenses to total incomes ratio is the expression of numerical relationship between total expenses and total incomes of the bank. It measures the proportion of total expenses in total revenues. A high or increasing ratio of expenses to total revenues can indicate that FIs may not be operating efficiently. This can be, but is not necessarily due to management deficiencies. In any case, it is likely to negatively affect

profitability. Following is the expression of total expenses to total revenues ratio.

$$\text{Total Expense to Income Ratio} = \frac{\text{Total Expenses}}{\text{Total Income}}$$

Earning per Employee: Earning per employee is the numerical relationship between net profit after taxes to total numbers of employee. Low or decreasing earnings per employee can reflect inefficiencies as a result of overstaffing, with similar repercussions in terms of profitability. It is calculated by using the following model:

$$\text{Earning Per Employee} = \frac{\text{Net Income After tax}}{\text{Total Number of Employees}}$$

Return on Equity (ROE): The ROE framework provides a convenient and systematic method to identify strengths and weaknesses in a bank's profitability. ROE analyzes the FI's performance and gives an excellent tool for bank managers for improve their profitability. It measures the amount of net income after taxes earned for each rupee of equity capital contributed by the bank's stockholders. For the purpose of the study, ROE framework shown below:[60]

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Total Equity Capital}}$$

Return on Assets (ROA): The ROA measures the ability of management to utilize the real and financial resources of the bank to generate returns. ROA is commonly used to evaluate bank management. It measures profit generated relative to the FI's assets. ROA can be calculated as follows:[61]

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}}$$

Net Interest Margin: Net interest margin measures the net return on the bank's earning assets. Generally, the higher this ratio is better for the bank but

[60] Saunder and Cornett, ***Financial Markets and Institutions,*** 384.

[61] Benton E. Gup and James W. Kolari, ***Commercial Banking*** (Asia: John Wiley and Sons Pvt. Ltd., 2005) 65.

this situation can increase risk for the bank. It highlights the fact that looking at returns without looking at risk can be misleading and potentially dangerous in terms of bank solvency and long-run profitability. It is defined as follows:[62]

$$\text{Net Interest Margin} = \frac{\text{Net Interest Margin}}{\text{Earning Assets}}$$

Where, Net interest income = Total interest income − Total interest expense

(Total interest income is on a pretax basis.)

Profit Margin: Profit margin measures a bank's ability to control expenses and thus its ability to produce net income from its operating income or revenue which are interest and non-interest income. It can express as follows:[63]

$$\text{Profit Marin} = \frac{\text{Net Income}}{\text{Total Operating Revenue}}$$

Earning per share (EPS): Earning per share provides a direct measure of the returns flowing to the bank's owners – its stockholders-measured relative to the numbers of shares to the public. It gives the strength of the share in the market. Following is the expression of earning per share:

$$\text{EPS} = \frac{\text{Net Income After Tax}}{\text{Numbers of Shares of Common Stock}}$$

Cash Reserve Ratio (CRR): It is the minimum amount of reserves a bank must hold in the form account balance with NRB. This ratio ensures minimum level of the bank's first line of defence in meeting depositor's obligations. Commercial banks are required to maintain cash reserve ratio with NRB balance specified as the percentage of total deposits as follows:

NRB balance to total deposits ratio: NRB balance to total deposits ratio shows the numerical relationship between NRB balance and total deposits of a bank. Following model is used to determine the NRB balance to total deposits ratio:

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[62] ***Ibid,*** 393.

[63] Saunder and Cornett, ***Financial Markets and Institutions,*** 391.

$$\text{NRB Balance to Total Deposit Ratio} = \frac{\text{NRB Balace}}{\text{Total Deposits}}$$

Liquid Assets to Total Deposits Ratio: Total liquid assets to total deposits ratio is a numerical relationship between total liquid assets and total deposits of a bank. The higher ratio implies better liquidity position. It is calculated by using the following model:

$$\text{Total Liquid Assets to Deposits Ratio} = \frac{\text{Total Liquid Assets}}{\text{Total Deposits}}$$

Where, Total liquid assets = Cash in hand + NRB balance + Domestic bank balance + Foreign currency bank balance + Placements + Investment in government securities.

Interest Rate Sensitivity: Interest rate risk is measured by calculating GAPs over different time intervals based on aggregate balance sheet data at a fixed point in time-hence, the term static GAP. Formally, GAP = RSAs − RSLs

Where, RSAs = Rate-Sensitive Assets

RSLs = Rate-Sensitive Liabilities

There is a periodic GAP and a cumulative GAP for each time bucket. The periodic GAP compares RSAs with RSLs across a single time bucket. The cumulative GAP compares RSAs with RSLs over all time buckets from the present through the last day in each successive time bucket.

The GAP measure compares the rupee value of a bank's assets that reprice within an interval to the dollar value of liabilities that reprice within the same time frame. The sign of a bank's GAP indicates whether interest income (or expense) will likely change more when interest rates change. A negative GAP indicates (RSA<RSL) and positive shows that a bank bas more RSAs than RSLs across some time interval. In this framework, whether net interest income rises or falls depends on the GAP is negative or positive and

how the level of interest rates changes. The following relationship summarizes this framework:[64]

$\zeta NII_1 = (\ RSA_i - \ RSL_i)\ \zeta R_i$

$= (GAP_i)\ \zeta R_i$

ζNII_1 = Change in net interest income in the i^{th} maturity bucket.

GAP_i = Rupee size of the gap between the book value of rate-sensitive assets and rate-sensitive liabilities in maturity bucket *i.*

ζR_i = Change in the level of interest rates impacting assets and liabilities in the i^{th} maturity bucket.

Similarly, Cumulative GAP (CGAP) of interest is the one-year repricing gap estimated as:

$\zeta NII = (CGAP)\ \zeta R_i$

$$CGAP = \underset{i=1\text{day}}{\overset{1\text{year}}{RSA_i}} - \underset{i=1\text{day}}{\overset{1\text{year}}{RSL_i}}$$

3.7 Limitations of the Methodology

This research is focused on the financial performance analysis of banking industry in Nepal with the framework of CAMELS system, which is based on cross-sectional analysis. The study covered only those commercial banks which are already listed in NEPSE. This analysis has been only for the period of fiscal year 2007/08 as the banks, so, it may not be able to preserve the data relating to their performances from the date of their establishment date. The study has used simple random sampling and analytical-cum descriptive research design, which are not free from the criticism. The main limitation of the present study is the non availability of adequate relevant data from related banks because of the far distances of the places. There was different financial and models are used to analyze the gathered data, which are depends upon certain assumptions and limited circumstances.

[64] Timothy W. Koch and S. Scott Macdonald, ***Bank Management*** (Singapore: Thomas Asia Pte Ltd., 2004) 293-297.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

This chapter analyzes the performance of commercial banks in the framework of CAMELS. So, it has carried out components of CAMELS based on cross-section data. At the end, it presents findings of the study.

4.1 Data Presentation and Analysis

The purpose of this chapter is to study, evaluate and analyze the financial performance of various commercial banks in the framework of CAMELS. It includes analysis of capital adequacy, asset quality, management, earning quality, liquidity and sensitivity to market risk.

4.1.1 Capital Adequacy

In capital adequacy, we analyze the regulations and standard set by NRB as to maintaining minimum risk-based core capital and total capital standard and maximum risk based supplementary capital standard.

4.1.1.1 Risk Based Capital Ratio

Risk based capital ratio above the NRB standard indicates adequacy of capital and signifies security to depositors, higher internal sources and higher ability to cushion operational and unanticipated losses. The lower value, on the contrary, indicates lower internal sources, comparatively weak financial position and lower security to depositors.

Table 4.1

Capital Adequacy Ratio of Different Commercial Banks

Name of The Bank	Total Capital (in million)	TRWA (in million)	Total Capital to TRWA (in %)	Min. NRB Standard* (in %)	Variance# (in %)
SBI	1,722	13,975	12.32	11	1.32
Nabil	2,998	27,010	11.10	11	0.10
Everest	2,406	21,039	11.44	11	0.44
Kumari	1,882	13,070	14.41	11	3.41
NepalInvt	3,891	34,484	11.28	11	0.28
NIC	1,615	12,321	13.11	11	2.11
Siddharha	1,147	10,299	11.14	11	0.14
Laxmi	1,201	10,750	11.17	11	0.17

Source: Various Commercial Banks Annual Reports, 2007-08.

**NRB, Banking Supervision Annual Report – 2007.*

#Variance = Total capital to TRWA – Min.NRB standard

Fig. 4.1: Total Capital Adequacy Ratio vs NRB Standard

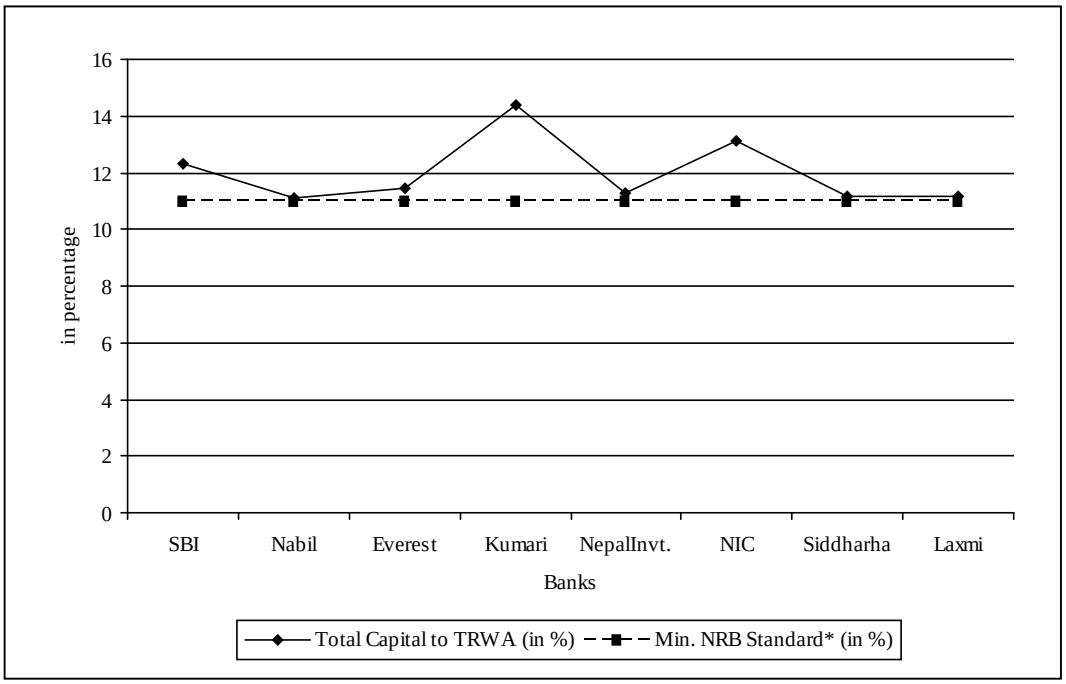


Table 4.1 shows the relationship between total capital to total risk weighted assets and compare it with minimum NRB standard of different commercial banks. About the total capital fund, the Nepal Investment has maximum capital fund and Siddhartha bank has the lowest capital fund in FY

2007/08. In this study period, all banks have fulfilled the total capital adequacy ratio as directed by NRB standard. The results of variance are also in positive; it shows that the banks are well capitalized. But the Nabil Bank has the minimum variance among them, which is 0.10%, and Kumari bank has the highest variance 3.41% respectively.

Fig. 4.1 explains the data tabulated in Table 4.1. Generally, all these banks are able to maintain the requirement of NRB standard in this FY 2007/08. Some banks have good variance result and some banks just balanced the requirement. Nabil bank has more risk weighted assets than others. Some private banks also have good variance result than the joint venture banks.

4.1.1.2 Core Capital Adequacy Ratio

Core capital is permanent nature, which is the combination of paid up capital, share premium, non-redeemable preference shares, general reserve fund, retained earning and profit/loss, capital redemption fund, proposed bonus share, other free reserves, bond redemption reserve.

Table 4.2

Core Capital Adequacy Ratio

Name of the Bank	Core Capital (in million)	TRWA (in million)	Core Capital to TRWA (in %)	Min. NRB Standard* (in %)	Variance# (in %)
SBI	1,394	13,975	9.97	5.50	4.47
Nabil	2,363	27,010	8.75	5.50	3.25
Everest	1,900	21,039	9.04	5.50	3.54
Kumari	1,359	13,070	10.40	5.50	4.90
Nepal Invt.	2,658	34,484	7.71	5.50	2.21
NIC	1,293	12,321	10.50	5.50	5.00
Siddharha	1,049	10,299	10.19	5.50	4.69
Laxmi	1,086	10,750	10.10	5.50	4.60

Source: Various Commercial Banks Annual Reports, 2007-08.

**NRB, Banking Supervision Annual Report – 2007.*

#Variance = Core capital to TRWA – Min.NRB standard

Table 4.2 shows the relationship between core capital to total risk weighted assets. The tier I ratio of 10.40% was maximum with Kumari bank

and minimum ratio of 7.71% with Nepal investment bank. However, the core capital adequacy ratios of these banks are greater than the NRB standard in the study period.

Fig. 4.2: Core Capital Ratio vs NRB Standard

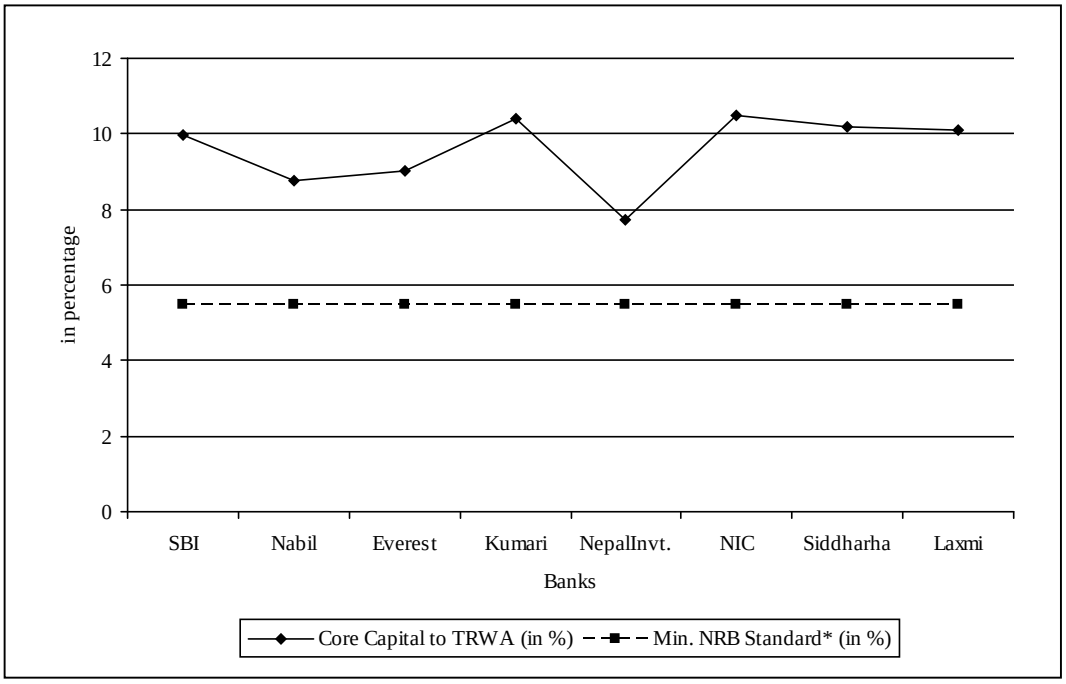


Fig. 4.2 shows that all the commercial banks have positive variance result in tier I capital ratio in this observed period. In general, all these banks has maintained tier I capital adequately above the NRB standard.

4.1.1.3 Supplementary Capital Adequacy Ratio

Supplementary capital are collected by way of hybrid capital instruments, general loan loss provision for pass loans, assets revaluation reserve, unsecured subordinated term debt, exchange equalization fund, additional loan loss provision, investment adjustment fund, provision for loss on investment and other reserves. The ratio reflects the proportion of supplementary capital components in total risk adjusted assets and relative contribution in the CAR. NRB regulates Supplementary Capital ratio by allowing Supplementary capital not exceeding 100% of the core capital for CAR calculation.

Table 4.3

Supplementary Capital Adequacy Ratio

Name of the Bank	Supplementary Capital (in million)	TRWA (in million)	Supp Capital to TRWA (in %)	Min. NRB Standard* (in %)	Variance (in %)
SBI	328	13,975	2.35	9.97	7.62
Nabil	635	27,010	2.35	8.75	6.4
Everest	505	21,039	2.40	9.04	6.64
Kumari	523	13,070	4.01	10.40	6.39
Nepal Invt.	1,232	34,484	3.57	7.71	4.14
NIC	321	12,321	2.61	10.50	7.89
Siddharha	98	10,299	0.95	10.19	9.24
Laxmi	114	10,750	1.07	10.10	9.03

Source: Various Commercial Banks Annual Reports, 2007-08.

** Min.NRB standard = Core capital to TRWA*

#Variance = Supp. capital to TRWA – MIN. NRB standard

Fig. 4.3: Supplementary Capital ratio vs NRB Standard

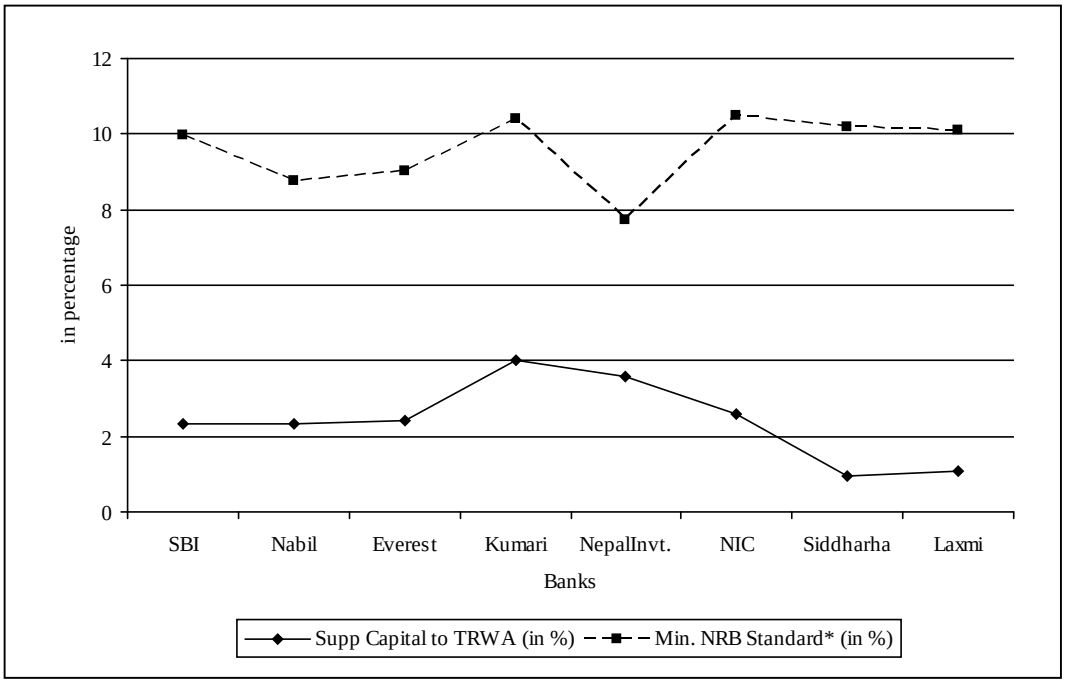


Table 4.3 shows the tier II capital ratios of the different commercial banks. In the observed period, Kumari bank has the maximum ratio of 4.01% and Siddhartha bank has minimum ratio of0.95%. It shows that, all the commercial banks have managed their fund mostly by core capital.

Siddhartha bank has the maximum variance was 9.24% and NIB has minimum variance of 4.14% in the study year.

As shown in Fig. 4.3, the Tier II capital ratios are in positive level allowed by NRB norms. So, these commercial banks i.e. SBI 7.62%, Nabil 6.4%, Everest 6.64%, Kumari 6.39%, NIB 4.14%, NIC 7.89%, Siddhartha 9.24% and Laxmi 9.03% have able to maintain positive variance in the study period.

4.1.2 Asset Quality Analysis

Asset quality is one of the most critical areas in determining the overall condition of the bank. In this analysis, non-performing loan ratio, loan loss provision to total loan ratio are used to examine the asset quality. Loans and advances, overdrafts and bills purchased include overdrafts, term loans, working capital loans, consumer loans, retail finance and loans given to priority and deprived sectors and other loans are the major sensitive exposure to bank's performance.

4.1.2.1 Non-Performing Loan Ratio

Non-Performing Loan forms an aggregate of Sub Standard, Doubtful and Loss Loans. The ratio of NPL to Total loan and advances shows the percentage of NPL in total loan. The lower ratio is better the proportion of performing loans and risk of default.

Table 4.4

Non-Performing Loan Ratio (Loan classification)

Name of the bank	SBI	Nabil	Everest	Kumari	Nepal Investment	NIC	Siddhartha	Laxmi
Pass (in m)	**12,257**	**21,598**	**18,555**	**11,369**	**27,219**	**11,367**	**9,415**	**9,781**
(in %)	**96.17**	**99.26**	**98.51**	**98.67**	**98.87**	**99.14**	**99.31**	**99.87**
Indust.aver.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NPL (in m)	**488**	**161**	**127**	**152**	**309**	**98**	**65**	**12**
(in %)	**3.83**	**0.74**	**0.68**	**1.32**	**1.12**	**0.86**	**0.69**	**0.13**
Indust.aver.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Substandard	3	66	6	58	61	9	23	1
(in %)	0.03	0.31	0.03	0.51	0.22	0.08	0.25	0.01
Indust.aver.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Doubtful	21	42	0.7	78	20	11	15	0.5
(in %)	0.17	0.20	0.004	0.68	0.07	0.10	0.17	0.006
Indust.aver.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bad (in m)	462	52	120	15	227	76	25	11
(in %)	3.63	0.24	064	0.13	0.83	0.67	0.27	0.11
Indust.aver.*	6.08	6.08	6.08	6.08	6.08	6.08	6.08	6.08
Total loan & advance	**12,746**	**21,759**	**18,836**	**11,522**	**27,529**	**11,465**	**9,480**	**9,794**

Source: Various Commercial Banks Annual Reports, 2007-08.

**NRB, Banking Supervision Annual Report – 2007.*

Fig. 4.4: Non-Performing Loan Ratio

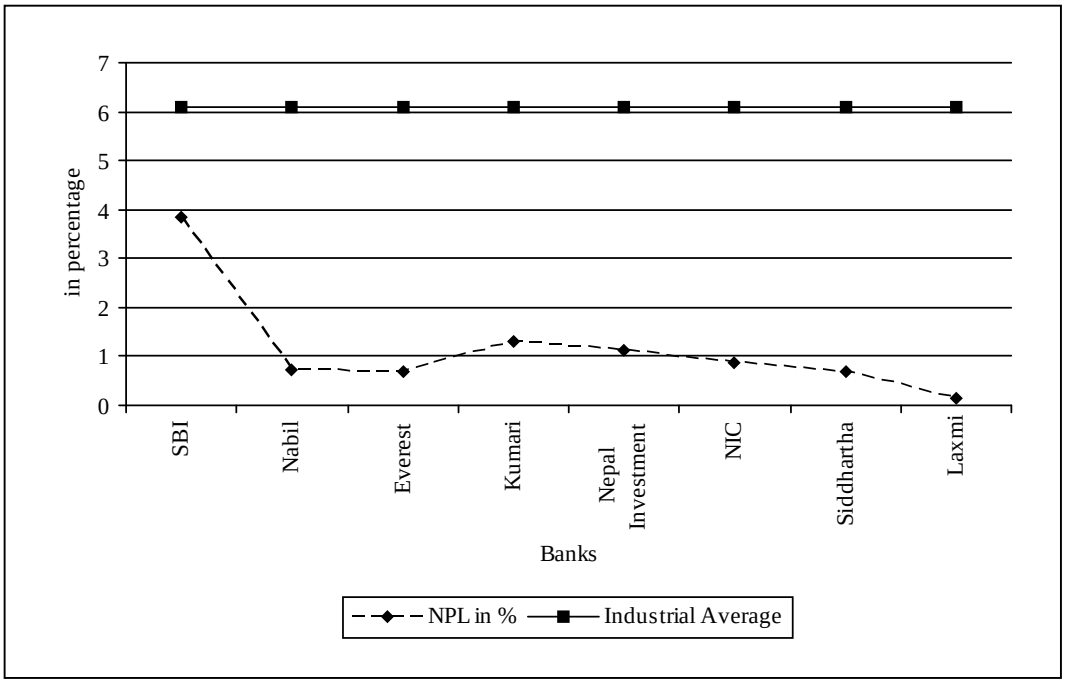


Table 4.4 presents the volume wise classification of loan portfolio in different commercial banks. It's the combination of pass and Non-performing loan (including substandard, doubtful and bad). Laxmi bank has the minimum

NPL ratio of 0.13% and SBI bank has 3.83%, which was the highest than others in this study year. Substandard loans and doubtful loans contributed highest proportion of Kumari bank which was 0.51% and 0.68%. Loss loans had highest proportion of SBI bank was 3.63%.

In Fig. 4.4, the non performing loan ratio curves of all the commercial banks are below the industry average in the fiscal year 2007/08. Generally, an internationally recognized non-performing loan ratio in a single digit or 5% also be acceptable.

4.1.2.2 Loan Loss Provisioning Ratio

The Loan Loss Provisioning Ratio indicates the adequacy of allowance for loans and trend in the collection of loan and the performance in loan portfolio. It is obtained by the ratio of loan loss provision to the total loan. This ratio describes the quality of assets that a bank holding. Provision for possible losses is made to cover the risks inherent in Bank's assets portfolio, non-performing loans and advances, overdraft, bills purchased. The level of loan loss provision is determined and ranged from 1% to 100% according to classification of such risk assets as per NRB Directives.

Table 4.5

Loan Loss Provisioning Ratio

Name of the Bank	Pass Loans	Substandard Loans	Doubtful Loans	Bad Loans	Total Loans & Advance	Loan Loss Ratio
SBI	1.35	14.61	45.63	98.59	12,746	4.96
Nabil	1.36	48.78	49.95	88.16	21,759	1.81
Everest	1.10	25	50	100	18,836	2.64
Kumari	1.04	25	50	100	11,522	1.63
Nepal Invt.	1.03	25	50.19	100	27,529	1.93
NIC	1.02	25	50	100	11,465	1.75
Siddharha	1.12	25	50	100	9,480	1.53
Laxmi	1.04	27.37	54.98	100	9,794	1.16
NRB Stand.*	**1%**	**25%**	**50%**	**100%**		

Source: Various Commercial Banks Annual Reports, 2007-08.

**NRB, Banking Supervision Annual Report – 2007.*

Table 4.5 exhibits that the loan loss provisioning ratio of different commercial banks for the period of 2007/08. The loan loss provision ratio of Laxmi bank has the minimum of 1.16% and SBI bank has the maximum of 4.96% respectively. The provisioning for pass loans is above the NRB standard with all the commercial banks but there is no much variance. Everest, Kumari, NIB, NIC, Siddhartha all these banks maintained their provisioning for substandard, doubtful and bad loans accordance with NRB standard. The provisioning for substandard loan is less than the NRB norm with SBI bank has 14.61% and higher than the NRB norm in Laxmi bank has 27.37% and Nabil bank has 48.78%. The provisioning for doubtful loans is slightly less than NRB norm with SBI and Nabil bank but distinctly higher than the norm with Laxmi bank. The provisioning for bad loans is less than the stipulated norms with SBI and Nabil banks.

Fig. 4.5: Loan Loss Provisioning Ratio

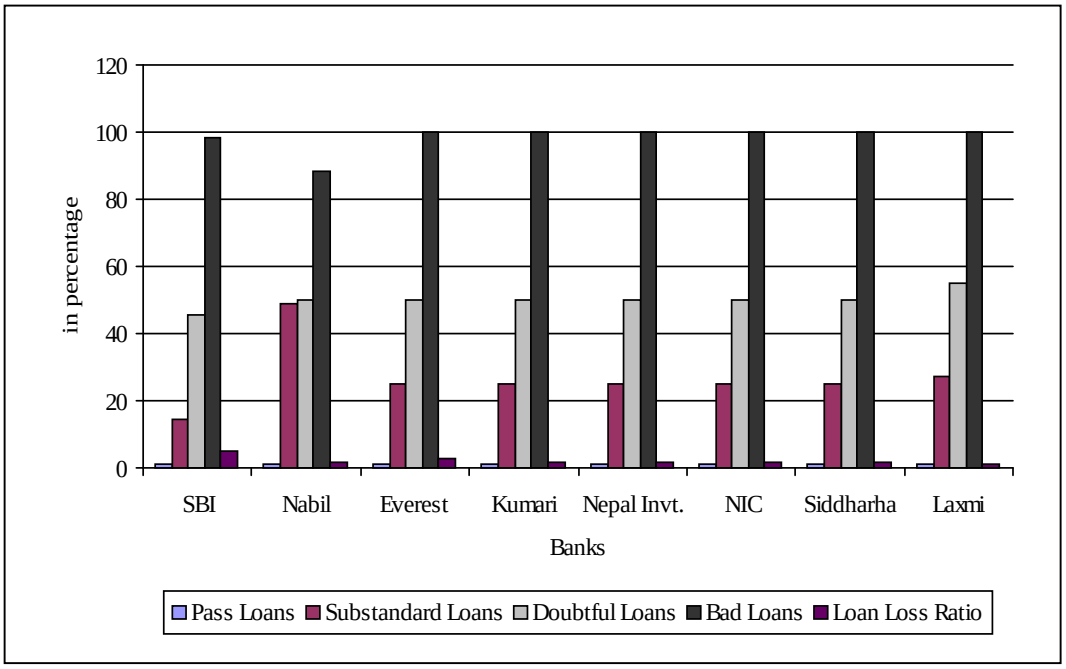


Fig. 4.5 shows the value of loan loss provisioning ratio. This Fig. indicates that there is similarity between these commercial banks loan loss ratio in this study period.

4.1.3 Management Component Analysis

In management analysis we can formulate ratio of total expenses to total revenue and earning per employee. The profitability of an institution is determined by the gap of total revenue and total expenses which are well in direct control and monitoring of the management, it is used to represent the management quality. The ratio of earnings per employee is used as a proxy of management quality.

4.1.3.1 Total Expense to Total Income Ratio

This ratio is calculated by dividing the total operating expenses by total operating revenues. A high ratio of expenses to total revenues may give indication of inefficient operation. In total operating expenses includes interest expenses, staff expenses, provident fund allowances and other operating expenses, foreign currency exchange loss, bad loan advance written off and loan loss provision.

Table 4.6

Total Operating Expenses to Total Revenues Ratio

Name of the Bank	Total Operating Expenses (in million)	Total Operating Revenues (in million)	TOE/TOI Ratio (in %)
SBI	739	1,092	67.67
Nabil	1,306	2,428	53.78
Everest	1,123	1,842	60.98
Kumari	800	1,065	75.14
Nepal Invt.	1,628	2,642	61.64
NIC	684	1,052	65.06
Siddharha	576	810	71.10
Laxmi	606	804	75.38

Source: Various Commercial Banks Annual Reports, 2007-08.

Table 4.6 shows the total operating expenses (TOE) to total operating revenues (TOI) ratio in different commercial banks. Laxmi bank has the maximum TOE/TOI ratio of all which is 75.38% and Nabil bank has the minimum ratio of this study period which was 53.78% respectively.

Fig. 4.6: Total Operating Expenses/Total Operating Revenues Ratio

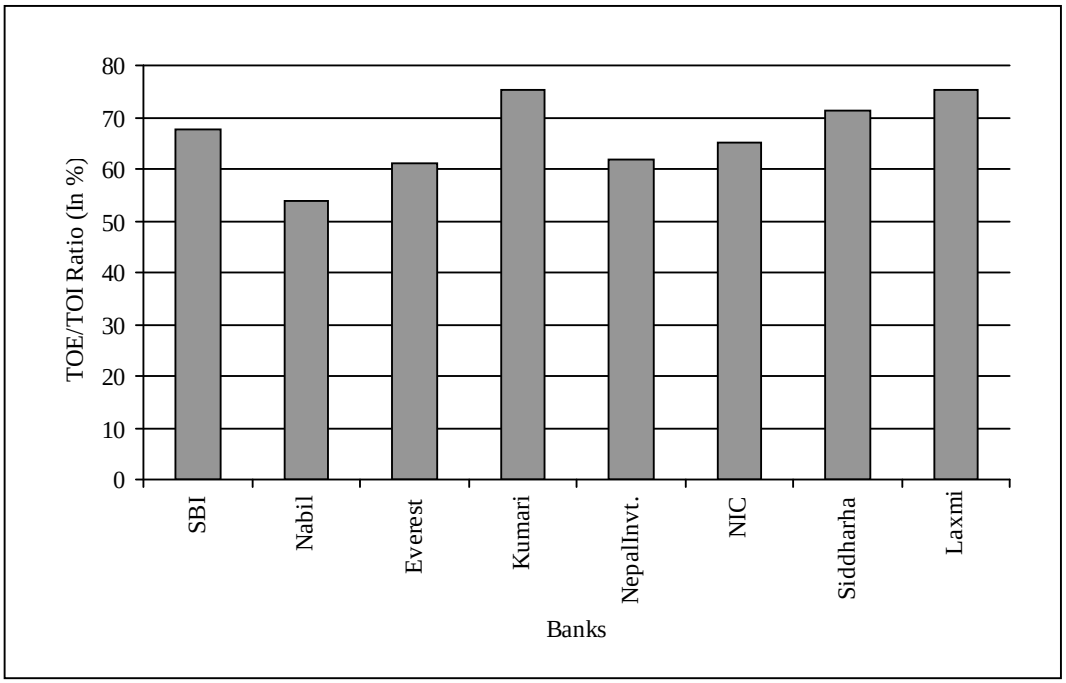


Fig. 4.6 exhibits the observed TOE to TOI ratio of different commercial banks in FY 2007/08. In this Fig., the TOE/TOI line shows there is not much more variance between these various banks.

4.1.3.2 Earnings per Employee

Earning per employee is calculated by dividing net operating income by total number of employees. Low or decreasing earnings per employee can reflect inefficiencies as a result of overstaffing.

Table 4.7

Earnings per Employee

Name of the bank	Net Operating Income (In million)	Number of Employees	Earnings per Employee (In million)
SBI	353	249	1.42
Nabil	1,122	416	2.70
Everest	719	449	1.60
Kumari	265	256	1.04
Nepal Invt.	1,014	622	1.63
NIC	368	232	1.59
Siddharha	234	116	2.02
Laxmi	198	252	0.78

Source: Various Commercial Banks Annual Reports, 2007-08.

Table 4.7 shows the earnings per employee of various commercial banks in FY 2007/08. Laxmi bank has the minimum earnings per employee which is Rs.0.78 and Nabil bank has the maximum of Rs.2.70 in this study period. The earnings per employee are depends upon the total number of employees. Nabil banks' Net operating income was high and number of employees was low so the result of earnings per employee also high, like NIB's Net operating income was high and number of employees was also high but the result was minimum than Nabil.

Fig. 4.7: Earning Per Employee

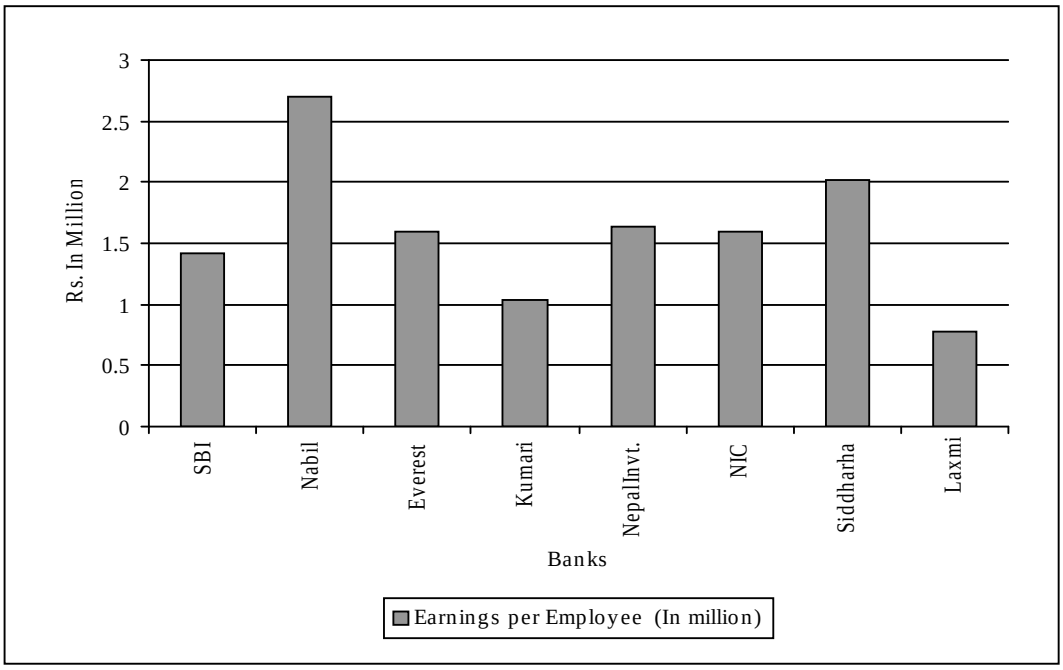


Fig. 4.7 exhibits the net operating income by total number of employee from Table 4.7. In this study period, most of all the commercial banks earnings per employee ratios were Rs. 1-2 million..

4.1.4 Earning Quality Analysis

Earnings performance allows the bank to remain competitive by providing the resources. The main objectives of the bank are to earn profit and increase their level of profitability is measured by profitability ratios.

Profitability ratio measures the efficiency of banks; higher profit ratio indicates higher efficiency and vice-versa.

4.1.4.1 Return on Equity (ROE)

ROE is the profit as a percentage return on the owner's stake in a firm. Return on equity reveals how well the bank uses the resources of owners. The higher ratio represents sound management and efficient mobilization of the owner's equity and vice-versa.

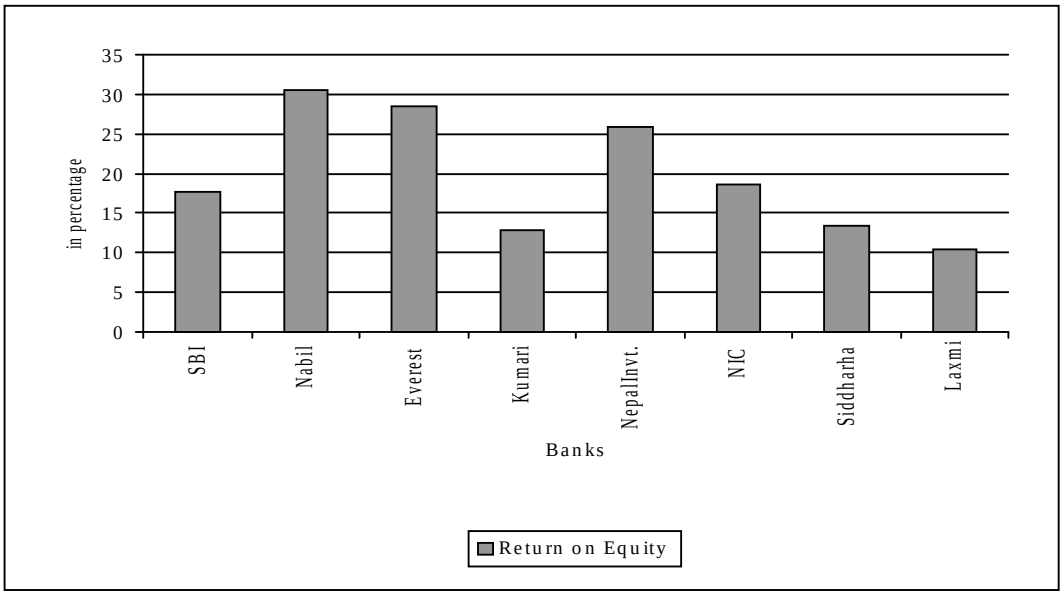
Table 4.8

Return on Equity

Name of the Bank	Net Income (in million)	Total Equity Capital (in million)	Return on Equity (in %)
SBI	247	1,404	17.64
Nabil	746	2,439	30.60
Everest	451	1,581	28.54
Kumari	174	1,369	12.77
Nepal Invt.	696	2,686	25.93
NIC	243	1,303	18.65
Siddharha	143	1,068	13.40
Laxmi	120	1,145	10.48

Source: Various Commercial Banks Annual Reports, 2007-08.

Fig. 4.8: Return on Equity



As shown in Table 4.8, the ROE of Laxmi bank has the minimum which is 10.48% and Nabil bank has the maximum which is 30.60% in this study period. In this calculation, we find that all the banks have above 10% ROE. In the comparison between local private banks, NIB has the maximum ROE of 25.93%.

Fig. 4.8 shows the ROE ratio of different commercial banks in the period of 2007/08. The values of ratio are fluctuating because of all the banks have different net income and equity capital in this study period.

4.1.4.2 Return on Assets (ROA)

Return on Assets measures the profit earning capacity by utilizing available resources i.e. total assets. If the banks resources are well managed and efficiently utilized then the return will be definitely high and its help to increase profit.

Table 4.9

Return on Assets

Name of the Bank	Net Income (in million)	Total Assets (in million)	Return on Assets (in %)
SBI	247	17,187	1.44
Nabil	746	37,132	2.01
Everest	451	27,149	1.66
Kumari	174	15,026	1.16
Nepal Invt.	696	38,873	1.80
NIC	243	15,328	1.58
Siddharha	143	11,668	1.23
Laxmi	120	12,695	0.95

Source: Various Commercial Banks Annual Reports, 2007-08.

As shown in Table 4.9, the return on asset ratio of Laxmi bank has minimum of 0.95% and Nabil bank has the maximum of 2.01% in this study period. The ROA of other remaining banks have above 1% which indicates that most of the banks have good return.

Fig. 4.9: Return on Assets

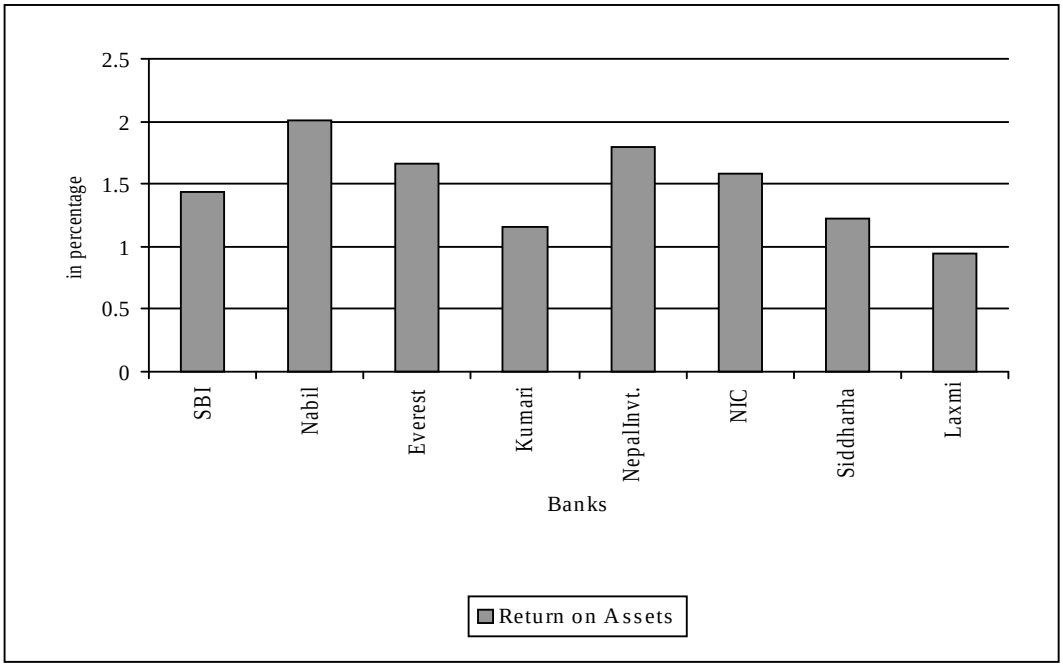


Fig. 4.9 shows the ROA ratio of different commercial banks in the period of 2007/08. The slop of this line was up and down on the basis of different ROA.

4.1.4.3 Net Interest Margin (NIM)

The net interest margin measures the net return on the bank's earning assets (investment securities and loans and leases). It is calculated by dividing the Net Interest Income with the earning assets. Normally, the higher the ratio is better for the bank. Generally, the net interest margin ratio should be 3% to 4% and higher is better for in banking industry.

In this study period, the net interest margin ratio of Nabil bank has a maximum ratio of 3.90% and Laxmi bank has a minimum ratio of 2.64%. All commercial banks net interest margin ratio were more than 3% except Laxmi bank. It indicates that these banks maintain higher interest margin of this study period.

Table 4.10

Net Interest Margin

Name of the Bank	Net Interest Income (in million)	Earning Assets (in million)	Net Interest Margin (in %)
SBI	515.59	15202.58	3.39
Nabil	1,220.26	31304.82	3.90
Everest	916.05	23398.64	3.91
Kumari	458.51	13473.88	3.40
Nepal Invt.	1,202.12	33870.67	3.54
NIC	425.40	13576.15	3.13
Siddharha	321.68	10485.69	3.06
Laxmi	289.13	10921.99	2.64

Source: Various Commercial Banks Annual Reports, 2007-08.

Fig. 4.10: Net Interest Margin Ratio

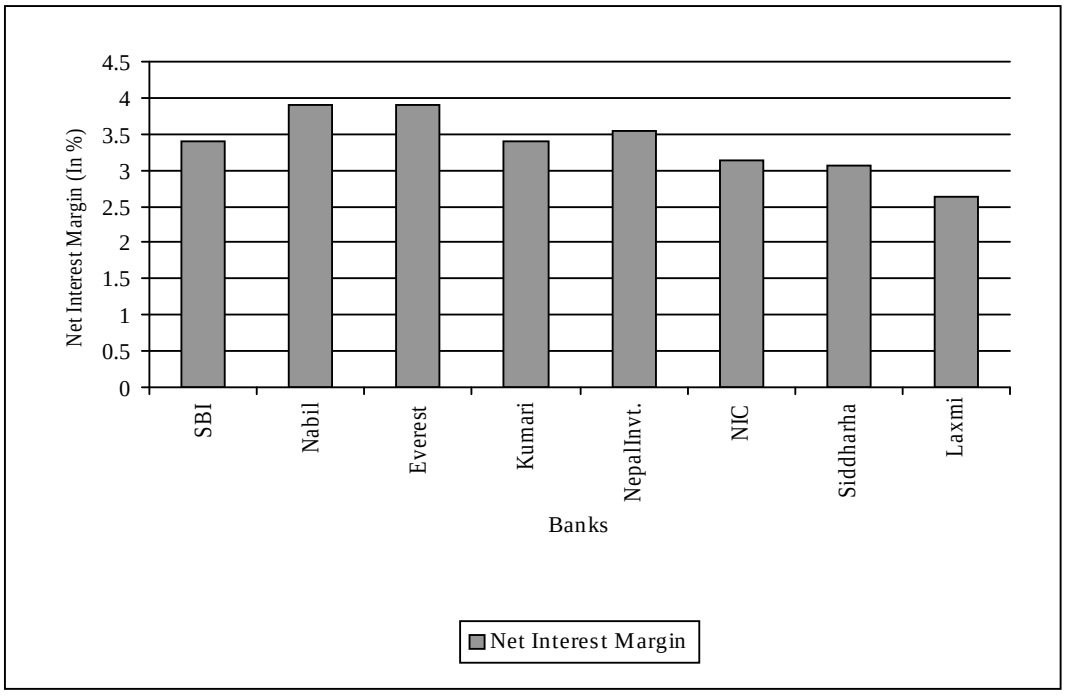


Fig. 4.10 shows the NIM ratio of different commercial banks in the study period of 2007/08. The slope of the trend line is fluctuating due to the various net interest incomes and earning assets.

4.1.4.4 Profit Margin

Profit Margin is calculated by Net Income divide by Total Operating Revenue. It measures a banks' ability to control expenses and to produce net income. Normally, the higher the profit margin ratio is better for the bank.

Table 4.11

Profit Margin

Name of the Bank	Net Income (in million)	Total Operating Revenue (in million)	Profit Margin (in %)
SBI	247	1,092	22.62
Nabil	746	2,428	30.73
Everest	451	1,842	24.48
Kumari	174	1,065	16.34
Nepal Invt.	696	2,642	26.34
NIC	243	1,052	23.10
Siddharha	143	810	17.65
Laxmi	120	804	14.93

Source: Various Commercial Banks Annual Reports, 2007-08.

In this study period, Laxmi bank has minimum profit margin ratio of 14.93% and Nabil bank has the maximum ratio of 30.73%. Local commercial banks have minimum ratio than the joint venture banks in the study period.

Fig. 4.11: Profit Margin

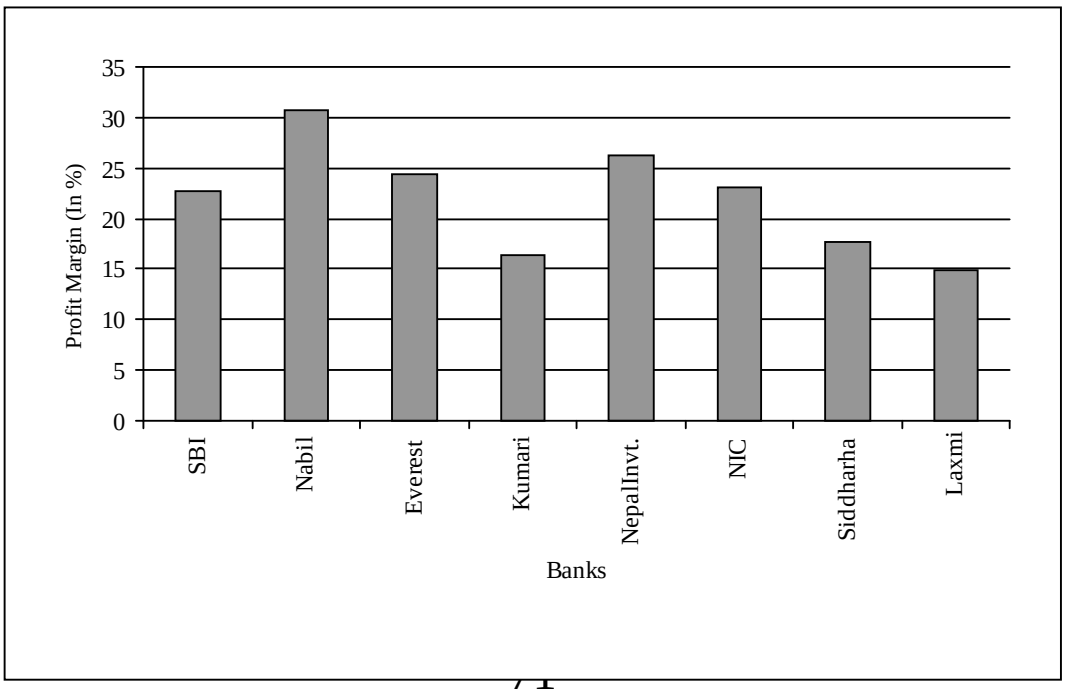


Fig. 4.11 shows that the profit margin ratios of all the commercial banks for the FY 2007/08.

4.1.4.5 Earning Per Share (EPS)

The earning per share of an organization gives the strength of the share in the market. The higher the EPS is good for the investors because they want more return.

Table 4.12

Earning Per Share

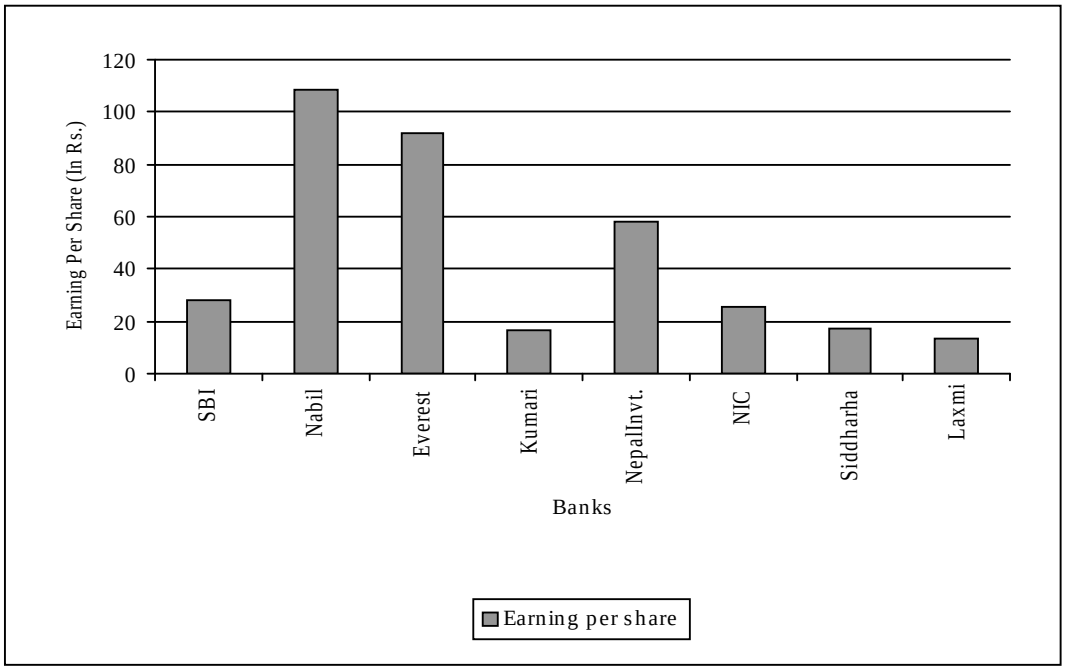
Name of the Bank	Net Income (in million)	No. of shares (in million)	Earning per share (in Rs)
SBI	247	8.745	28.33
Nabil	746	6.892	108.31
Everest	451	4.914	91.82
Kumari	174	10.70	16.35
Nepal Invt.	696	12.04	57.87
NIC	243	9.44	25.75
Siddharha	143	8.28	17.29
Laxmi	120	9.13	13.15

Source: Various Commercial Banks Annual Reports, 2007-08.

Table 4.12 reveals that EPS of different commercial banks of the period of 2007/08. In the observed period, among the joint venture banks SBI bank has the minimum EPS of Rs.28.33 and between locally private banks NIB has the maximum EPS of Rs.57.87 but in overall comparison Nabil bank has the maximum EPS of Rs.108.31 and Laxmi bank has the minimum EPS of Rs.13.15.

Fig. 4.12 shows the observed values of earning per share of different sampled banks in the study period 2007/08. The trend of EPS starts with Laxmi bank of Rs13.15 and reached in Rs108.31 with Nabil bank.

Fig. 4.12: Earning Per Share



4.1.5 Liquidity Component Analysis

The level of liquidity influences the ability of a banking system to withstand shocks. Liquidity risk arises when an FI's liability holders like depositors demand immediate cash for the financial claims they hold with an FI. The most liquid asset is cash, which FIs can use directly to meet liability holders demands to withdraw funds. Any FI's liquidity problem is one of the main cause of solvency problem.

4.1.5.1 NRB Balance to Total Deposit Ratio

The ratio of NRB balance to total deposit shows whether bank is holding the balance as required to NRB. To ensure adequate liquidity in the commercial banks, to meet the depositor's demand for cash at any time, to inject the confidence in depositors regarding the safety of their deposited funds NRB has put the directives to maintain certain percent of total deposit in NRB by the commercial banks. Total deposit means Current deposits, Saving deposits, Fixed deposit, Call deposits and Certificate of Deposit. For the purpose, deposit held in convertible foreign currency, employees guarantee amount and margin account will not be included.

Table 4.13

NRB Balance to Total Deposit Ratio

Name of the Bank	NRB Balance (in million)	Total Deposit less Margin&FCYDep	NRB Balance to Total Deposit	Industrial Average*	Diff. from Industrial aver
SBI	404	13,460	3.00	7.23	-4.23
Nabil	1,829	24,530	7.46	7.23	0.23
Everest	1,081	23,329	4.63	7.23	-2.6
Kumari	244	12,079	2.02	7.23	-5.21
Nepal Invt.	1,820	30,113	6.04	7.23	-1.19
NIC	634	12,297	5.15	7.23	-2.08
Siddharha	270	9,871	2.74	7.23	-4.49
Laxmi	720	10,181	7.07	7.23	-0.16

Source: Various Commercial Banks Annual Reports, 2007-08.

**Banking and Financial Statistics, Mid July-2008.*

Table 4.13 shows that the NRB balance to total deposit ratio of different commercial banks with compare to industrial average ratio in the FY 2007/08. In this study period only Nabil bank has maintaining balance with NRB standard but other commercial banks can't meet the NRB standard. So the ratio showed maximum with Nabil bank was 7.46% and minimum with Kumari bank was 2.02%. The ratios are less than the industrial average ratio so the difference results are in negative.

Fig. 4.13: NRB Balance to Total Deposit vs Industrial Average

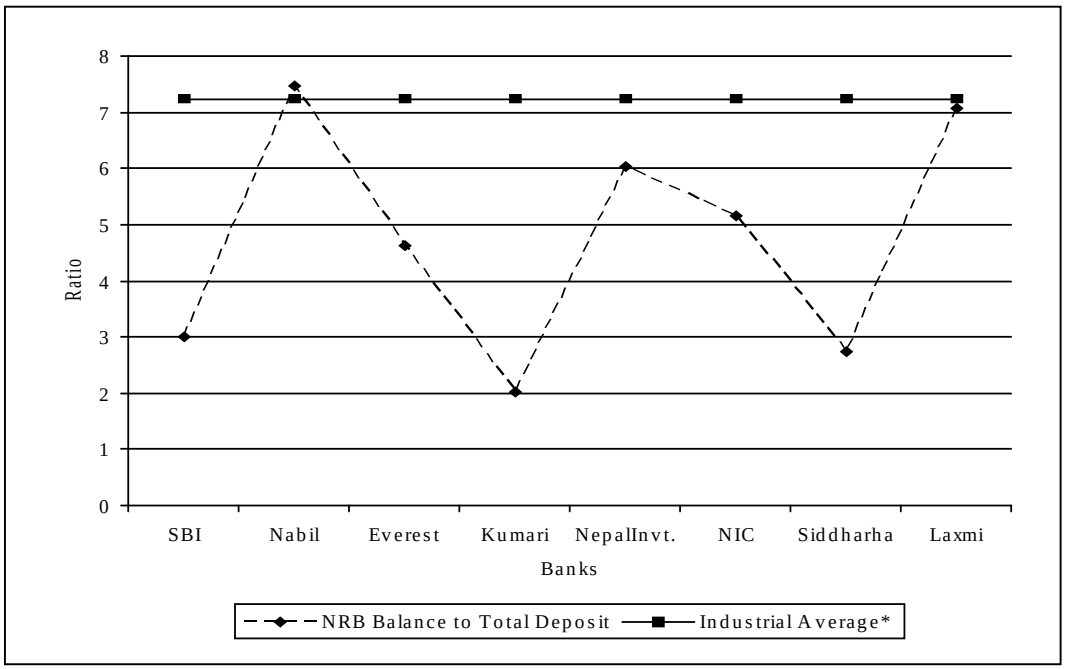


Fig. 4.13 shows the NRB balance to total deposit ratio of different commercial banks compare with the industrial average ratio within the study period. In this figure, the lines of the different commercial banks are below than the industrial average except Nabil bank in the FY 2007/08. The curve of the NRB balance to total deposit ratio is fluctuating up and down in this period.

4.1.5.2 Cash in Vault to Total Deposit Ratio

This ratio shows the percentage of total deposits held as cash in hand at vault. This ratio is computed by dividing cash in vault by total deposits. Cash in vault includes cash and foreign currencies in hand.

Table 4.14

Cash in Vault to Total Deposit Ratio

Name of the Bank	Cash in Vault (in million)	Total Deposit less Margin&FCYDep	Cash in vault to Total Deposit	Industrial Average*	Differen. from Indust.aver.
SBI	308	13,460	2.29	2.97	-0.68
Nabil	511	24,530	2.08	2.97	-0.89
Everest	823	23,329	3.53	2.97	0.56
Kumari	565	12,079	4.67	2.97	1.7
Nepal Invt.	1,464	30,113	4.86	2.97	1.89
NIC	135	12,297	1.09	2.97	-1.88
Siddharha	149	9,871	1.51	2.97	-1.46
Laxmi	267	10,181	2.62	2.97	-0.35

Source: Various Commercial Banks Annual Reports, 2007-08.

**Banking and Financial Statistics, Mid July-2008.*

Table 4.14 shows that volume of cash in vault to total deposit ratio of different commercial banks in the period of 2007/08. The ratio was maximum with NIB of 4.86% and minimum with NIC bank of 1.09% in the FY 2007/08. Everest, Kumari and NIB should maintain the NRB standard but other remaining banks results are in negative.

Fig. 4.14: Cash in Vault to Total Deposit vs Industrial Average

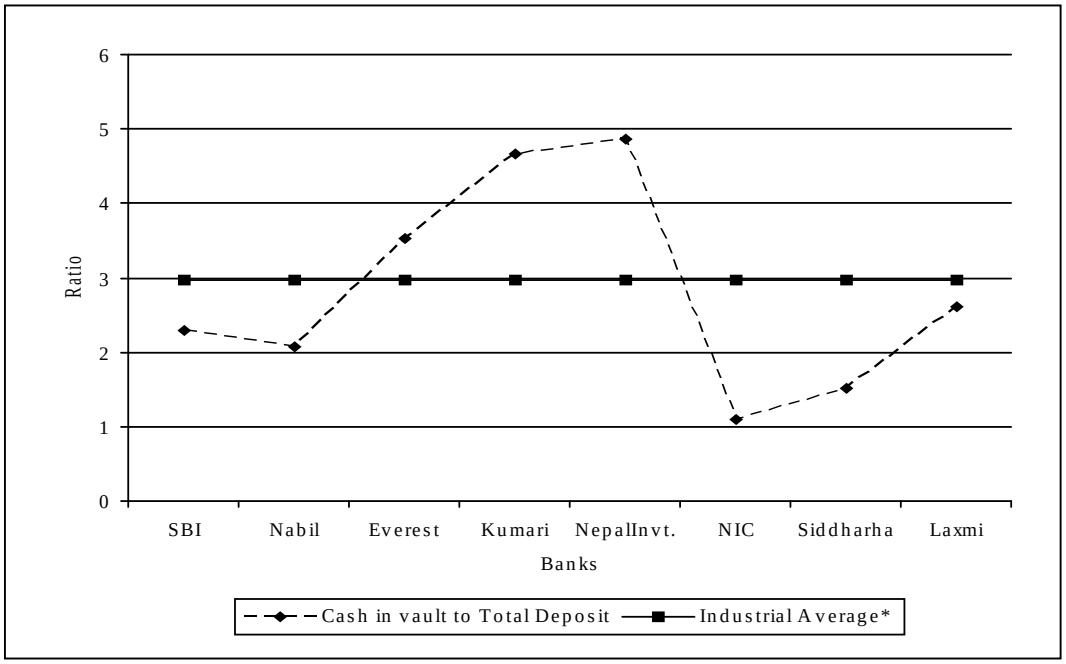


Fig. 4.14 exhibits the observed cash in vault ratio of the different commercial banks compare with industrial average ratio within the study period. This trend line shows that most of the commercial banks ratios are below than the industry average.

4.1.5.3 Liquid Assets to Total Deposit Ratio

Liquid assets to total deposit ratio measures the levels of liquid assets available with the bank to meet short term obligations. It measures overall liquidity position. This ratio is computed by dividing liquid assets by total deposits. The higher ratio implies the better liquidity position and lower ratio shows the inefficient liquidity position of the bank.

Table 4.15 shows that the liquid assets to total deposit ratio of the various commercial banks for the period of 2007/08. The ratios were greater than the industrial average ratios with all commercial banks except Siddhartha bank. So, the differences are in positive but Siddhartha banks' result was in negative of 0.13%. In this table, Nabil bank shows the highest ratio which is 39.51% and Siddhartha bank has the lowest ratio is 15.57%.

Table 4.15

Liquid Assets to Total Deposit Ratio

Name of the Bank	Liquid Assets (in million)	Total Deposit (in million)	Liquid Assets to Total Deposit	Industrial Average*	Variance from Indust.aver.
SBI	4,432	13,715	32.31	15.70	16.61
Nabil	12,611	31,915	39.51	15.70	23.81
Everest	7,727	23,976	32.23	15.70	16.53
Kumari	3,072	12,774	24.05	15.70	8.35
Nepal Invt.	10,629	34,452	30.85	15.70	15.15
NIC	3,504	13,084	26.78	15.70	11.08
Siddharha	1,587	10,191	15.57	15.70	-0.13
Laxmi	2,479	10,917	22.71	15.70	7.01

Source: Various Commercial Banks annual reports, 2007-08.

**Banking and Financial Statistics, Mid July-2008.*

Fig. 4.15: Liquid Assets to Total Deposit Ratio Vs Industry Average

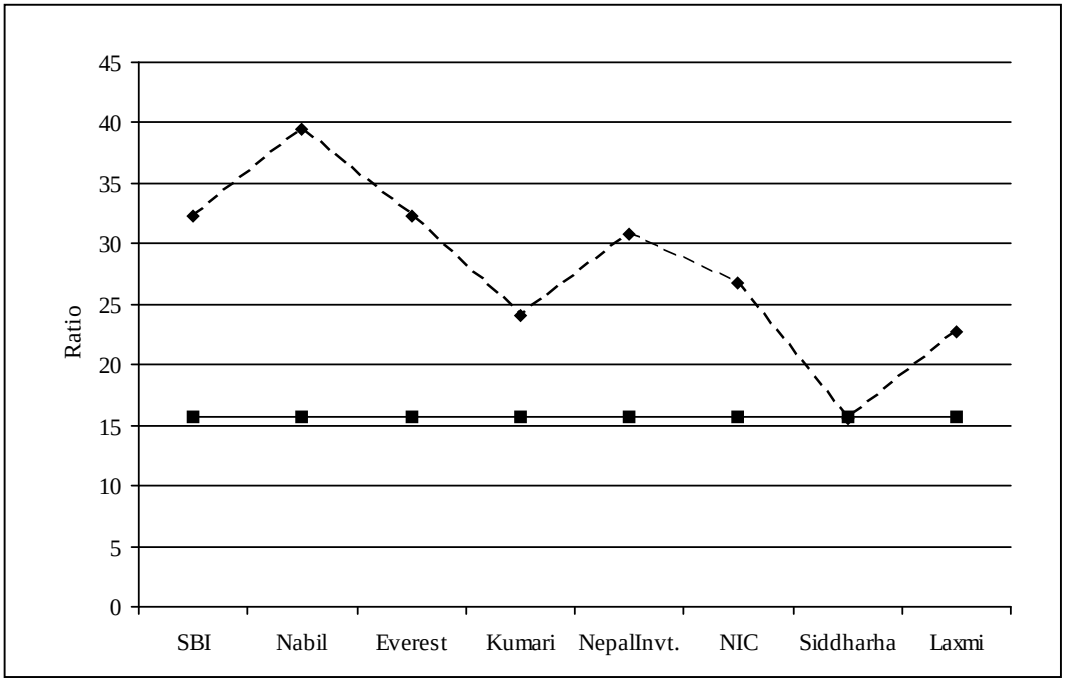


Fig. 4.15 exhibits the liquid fund to total deposits ratio of different commercial bank in comparison to the industrial average ratio within the study period. In this Fig., the total liquid fund to total deposit curve of these banks are above the industry average except Siddhartha bank. Overall all the

banks liquidity position is better but more liquidity impacts profitability negatively.

4.1.6 Sensitivity to Market Risk

Sensitivity to market risk refers to the risk that changes in market conditions could adversely affect earnings and or capital. Market risk encompasses exposures associated with changes in interest rates, exchange rates, commodity prices, equity prices etc. While all of these items are important, the primary risk in most banks is interest rate risk (IRR), which is the focus of this study.

When a bank has more liabilities re-pricing in a rising rate environment than assets re-pricing, the net interest margin (NIM) shrinks. Conversely, if the bank is asset sensitive in a rising interest rate environment, NIM will improve because the bank has more assets re-pricing at higher rates. There are many ways to monitor or exposure to IRR. Measurement systems vary in complexity from very simple methods such as a gap model, to very sophisticated models such as a simulation or duration analysis. This study is worked with gap model, which simply measures the net quantity that changes in interest rates will have on earnings. With a view to minimize the IRR, NRB requires the banks to adopt Gap Analysis adopted for minimization of liquidity risk shall also be applied in respect of minimizations of IRR. Banks shall classify the time interval of the assets and liabilities on the basis of maturity period of 0-90 days, 91-180 days, 181-270 days, 271-365 days, over 1 FY. The effect on the profitability is measured by multiplying the change in interest rate, ζRi in the i^{th} maturity bucket annualized with Cumulative Gap.

If the interest rates rise on RSAs and RSLs, the positive CGAP (RSA>RSL) would project the increase in the expected annual net interest income (NII). However, if interest rate falls when CGAP is positive, NII will fall. As rates, fall interest revenue falls by more than interest expense. Thus NII falls by approximately by (CGAP) × (-ζR). In general when CGAP is positive the change in NII is positively related to the change in interest rates.

Thus, banks would want to keep CGAP positive when interest rates expected to rise.

Conversely, when the CGAP or the Gap Ratio is negative (RSA<RSL), if interest rates rise by equal amounts for RSAs and RSLs, NII will fall. Similarly, if interest rates fall equally for RSAs and RSLs, NII will increase when CGAP is negative. As rates, fall interest expense decreases by more than the revenues. In general, when CGAP is negative, the change in NII is negatively related to the change in interest rates. Thus, banks are expected to keep CGAP negative when interest rates are expected fall.

Expressing the re-pricing gap as a percentage of assets, gives: (1) the direction of the interest rate exposure (+or-CGAP) (2) the scale of the CGAP against the assets size of the bank.

Gap analysis of RSAs and RSLs of various commercial banks are made as shown in Table 16 (a, b, c, d, e, f, g, h) for the period of FY 2007/08.

Table 4.16

GAP Analysis

	1-90	91-180	181-270	271-365	>365	Total
a. SBI bank						
RSA (Million)	92453	11136	3056	17122	50723	174491
RSL (Million)	57374	16072	9968	13097	58918	155429
GAPi (RSA – RSL) (Million)	35079	(4936)	(6911)	4025	(8195)	19062
CGAP (RSA-RSL) (Million)	35079	30143	23232	27257	19062	-
RSA/RSL	1.61	0.69	0.31	1.31	0.86	1.12
CGAPi Ratio [CGAP/Total RSA] (%)	37.94	270.68	760.21	1.59	37.58	37.58
ζ R%				1%	1%	
ζ NII (Million) = CGAP×ζR				272..57	190.62	
% Change in NII				0.016%	0.37%	
b. Nabil bank						
RSA (Million)	119961	15817	23137	42306	174319	375540
RSL (Million)	81434	28341	18928	20533	226304	375540
GAPi (RSA – RSL) (Million)	38527	(12524)	4208	21773	(51985)	-
CGAP (RSA-RSL) (Million)	38527	26003	30211	51984	-	-
RSA/RSL	1.47	0.56	1.22	2.06	0.77	1.00
CGAPi Ratio [CGAP/Total RSA] (%)	32.12	164.40	130.57	122.87	0.00	0.00
ζ R%				1%	1%	
ζ NII (Million) = CGAP×ζR				519.84	-	
% Change in NII				1.23%	0.00%	
c. Everest bank						
RSA (Million)	15323.10	3288.30	2963.30	3186.90	2133.70	26895.30
RSL (Million)	5402.50	2911.50	1688.80	1352.00	12921.50	24276.30
GAPi (RSA – RSL) (Million)	9920.60	376.80	1274.50	1834.90	(10787.80)	2619.00
CGAP (RSA-RSL) (Million)	9920.60	10294.70	11571.90	13406.80	2619.00	-
RSA/RSL	2.84	1.13	1.75	2.36	0.16	1.11
CGAPi Ratio [CGAP/Total RSA] (%)	64.74	313.15	390.51	420.68	122.74	122.74
ζ R%				1%	1%	
ζ NII (Million) = CGAP×ζR				134.07	26.19	
% Change in NII				4.21	1.25	
d. Kumari bank						
RSA (Million)	8049	1071	206	1465	3768	14559
RSL (Million)	4854	0	2	226	7099	12182
GAPi (RSA – RSL) (Million)	3195	1071	203	1238	(3331)	2377

CGAP (RSA-RSL) (Million)	3195	4266	4470	5708	2377	2377
RSA/RSL	1.66	0	103	6.48	0.53	1.19
CGAPi Ratio [CGAP/Total RSA] (%)	39.70	398.32	2169.90	389.62	63.08	16.33
ζ R%				1%	1%	
ζ NII (Million) = CGAP×ζR				57.08	23.77	
% Change in NII				3.90	0.63	

	1-90	91-180	181-270	271-365	>365	Total
e. Nepal Investment bank						
RSA (Million)	18244.93	5506.66	3868.25	4249.80	6234.10	38103.73
RSL (Million)	28419.41	1267.66	561.68	1181.93	3463.97	34894.66
GAPi (RSA – RSL) (Million)	(10174.48)	4239.00	3306.56	3067.86	2770.12	3209.06
CGAP (RSA-RSL) (Million)	(10174.48)	(5935.48)	2628.92	438.94	3209.06	-
RSA/RSL	0.64	4.34	3.43	6.88	1.79	1.09
CGAPi Ratio [CGAP/Total RSA] (%)	55.76	107.78	67.96	10.32	51.47	51.47
ζ R%				1%	1%	
ζ NII (Million) = CGAP×ζR				4.38	32.09	
% Change in NII				0.10%	0.51%	
f. NIC bank						
RSA (Million)	3404	1346	1913	4813	3763	15239
RSL (Million)	2568	2249	1330	1165	7928	15239
GAPi (RSA – RSL) (Million)	836	(903)	583	3648	(4165)	-
CGAP (RSA-RSL) (Million)	836	(67)	516	4165	-	-
RSA/RSL	1.32	0.60	1.44	4.13	0.47	1.00
CGAPi Ratio [CGAP/Total RSA] (%)	24.56	(4.98)	26.97	86.54	0.00	0.00
ζ R%				1%	1%	
ζ NII (Million) = CGAP×ζR				41.65	-	
% Change in NII				0.86%	-	
g. Siddhartha bank						
RSA (Million)	2551.48	276.67	379.37	1810.56	6795.48	11813.56
RSL (Million)	3610.52	205.45	242.70	869.06	6885.83	11813.56
GAPi (RSA – RSL) (Million)	(1059.04)	71.22	136.67	941.5	(90.35)	-
CGAP (RSA-RSL) (Million)	(1059.04)	(987.82)	(851.15)	90.35	-	-
RSA/RSL	0.71	1.35	1.56	2.08	0.98	1.00
CGAPi Ratio [CGAP/Total RSA] (%)	(41.51)	(357.04)	(224.36)	5.00	0	0
ζ R%				1%	1%	
ζ NII (Million) = CGAP×ζR				0.90	-	
% Change in NII				0.05%	-	
h. Laxmi bank						
RSA (Million)	60363	12716	3726	6025	40773	123604
RSL (Million)	65764	17238	11360	10312	7480	112154
GAPi (RSA – RSL) (Million)	(5401)	(4522)	(7634)	(4287)	33294	11450
CGAP (RSA-RSL) (Million)	(5401)	(9923)	(17557)	(21844)	11450	-

RSA/RSL	0.92	0.74	0.33	0.58	5.45	1.10
CGAPi Ratio [CGAP/Total RSA] (%)	(8.94)	(78.03)	(471.20)	(362.55)	28.08	28.08
ζ R%				1%	1%	
ζ NII (Million) = CGAP×ζR				(218.44)	114.50	
% Change in NII				(3.62%)	0.28%	

Source: Various Commercial Banks annual reports, 2007-08.

Different commercial banks are taken in table 4.16 for the study of sensitivity to market risk. The Net Financial Assets (RSA-RSL) repricing in short term and long term maturity bucket ranging for the FY 2007/08 of various commercial banks are:

The short term maturity bucket ranging from 1-90 days of SBI, Nabil, Everest, Kumari, NIC banks were found in positive by Rs.35073, Rs.38527, Rs.99206, Rs.3195 and Rs.836 but Nepal Investment, Siddhartha and Laxmi banks result found in negative by Rs.10174.48, Rs.1059.04 and Rs.5401 respectively. The range from 91-180 days of Everest, Kumari, Nepal Investment, Siddhartha banks were found in positive by Rs.376.80, Rs.1071, Rs.4239, Rs.71.22 but SBI, Nabil, NIC, Laxmi was shortfall by Rs.4936, Rs.12524, Rs.903, and Rs.4522. The range from 181-270 days with Nabil, Everest, Kumari, Nepal Investment. NIC, Siddhartha banks were in positive by Rs. 4208, Rs.1274.50, Rs.203, Rs.3306.56, Rs.583, Rs.136.67 but SBI and Laxmi banks gap were negative by Rs.6911, Rs.136.67. The range from 271-365 days the SBI, Nabil, Everest, Kumari, Nepal Investment, NIC, Siddhartha banks result found in positive by Rs.4025, Rs.21773, Rs.1834.90, Rs.1238, Rs.3067.86, Rs.3648 and Rs.941.5 but only Laxmi bank was in negative by Rs.218.44 respectively. In the long term maturity bucket (>365 days) only two banks Nepal Investment and Laxmi have positive result by Rs.2770.12, Rs.32294 but other remaining commercial banks like SBI, Nabil, Everest, Kumari, NIC, Siddhartha have the gap was negative by Rs.8195, Rs.51985, Rs.10787.80, Rs.3331, Rs.4165 and Rs.90.35 (all Fig.s are in millions) respectively.

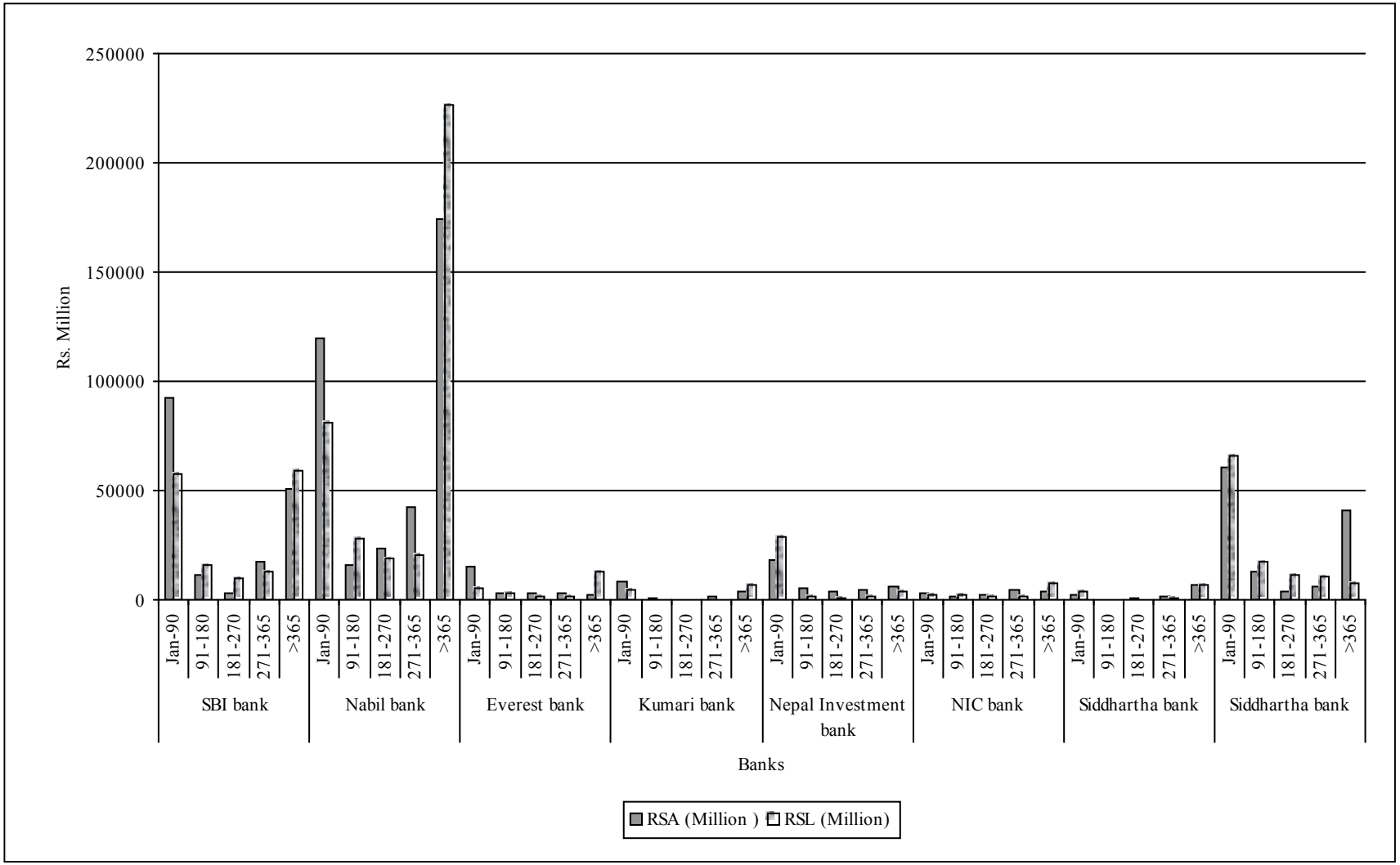

250000
200000
150000
100000
50000
0
Rs. Million
Jan-90
91-180
181-270
271-365
>365
SBI bank
Nabil bank
Everest bank
Kumari bank
Nepal Investment bank
NIC bank
Siddhartha bank
Siddhartha bank
Banks
RSA (Million)
RSL (Million)

Fig. 4.16 shows a comparison of RSAs and RSLs of the different commercial banks in a time bucket ranging from 1-90 days to 365 days time horizon. The CGAP or the Interest rate sensitivity ratio of the total earning assets over the short term horizon i.e. up to one year was highest with Everest bank was 420.68% and lowest with Laxmi bank was in negative (362.55%). The CGAP ratio to the earning assets over the long term horizon was highest 122.74% with Everest bank but Nabil, NIC and Siddhartha bank's ratio was 0% which was the lowest ratio.

Fig. 4.17: Level of CGAP Ratio % Change in NII

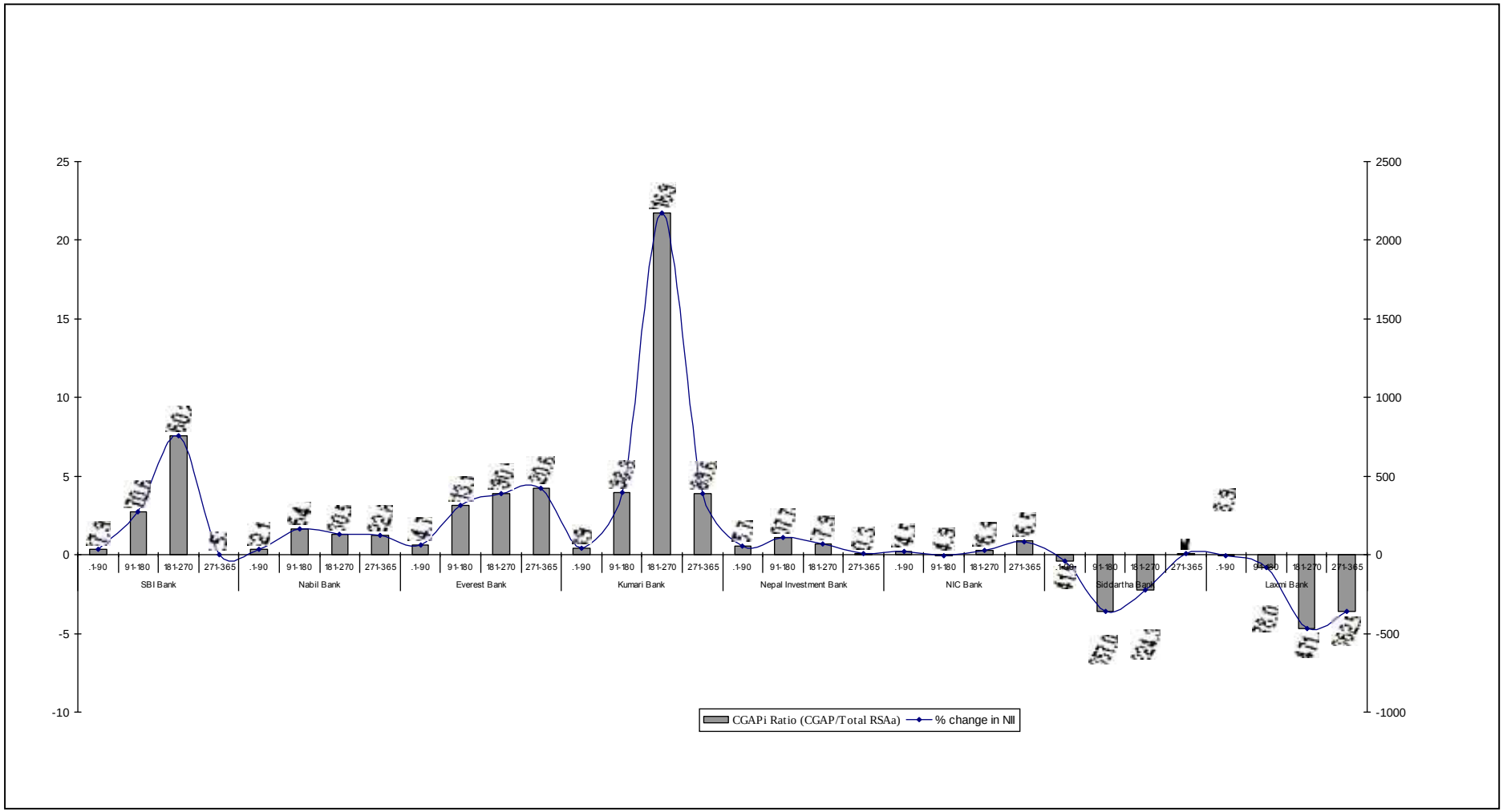


Fig. 4.17 shows estimated impact on annual NII when interest rate changes by 1%. In a rising interest environment the bank would profit over the 1-year time horizon of the all commercial banks have maintained CGAP>0 (positive), but the CGAP of Nabil, NIC and Siddhartha banks results in the long term horizon are zero and Laxmi bank result in short term horizon is in negative, it means the RSAs and RSLs remain unaffected by the fall or rise of the interest rates. Hence, these banks are high sensitive to interest rate in long time horizon which results are in positive but those banks are low sensitive to interest rate which results is zero.

4.2 Major Findings

The findings of the study are as follows:

4.2.1 The total capital adequacy ratio difference of all these commercial banks was positive with NRB standard. The CAR if the bank was maximum with Kumari bank is 14.41% and minimum with Nabil bank is 11.10% in the study period 2007/08. Kumari bank has the highest variance 3.41% and Nabil bank has the minimum variance 0.10% in the comparison with NRB standard.

4.2.2 In this review period, Core capital ratio was above the NRB standard with all commercial banks. The tier I ratio of Kumari bank was maximum of 10.40% and Nepal Investment bank was minimum of 7.71%. In general it is found that the Core capital adequacy of these banks is adequate and sufficient.

4.2.3 The ratio of Supplementary capital was maximum with Kumari bank 4.01% and minimum with Siddhartha bank 0.95% in the FY 2007/08. Most of the commercial banks used their capital in permanent nature. But Nepal Investment bank was able to maintain the NRB standard than others in this study period.

4.2.4 The performing loans of 99.87% with Laxmi bank which was the maximum and 96.17% with SBI bank was the minimum ratio in FY 2007/08. In comparison to the industry average, the NPL ratio of SBI bank has the highest ratio was 3.83% and Laxmi bank has the minimum was 0.13%. Substandard loans and Doubtful loans were formed highest of 0.51% and 0.68% with Kumari bank. Bad loans contributed highest proportion of NPL by 3.63% with SBI bank. All these commercial banks NPL ratios were below the industrial average. It shows efficient credit management and recovery efforts.

4.2.5 The loan loss provisioning ratio of SBI bank has the maximum ratio was 4.96% and Laxmi bank has the minimum ratio was 1.16%. The ratio of SBI and Nabil bank was above 2% but other remaining commercial banks ratios were below 2% which indicates all the banks quality of loan assets is getting better.

4.2.6 The total operating expenses to total operating revenue ratio of Laxmi bank has the highest ratio was 75.38% and Nabil bank has the minimum ratio was 53.78% of this review period. There was not more variance in this ratio between these commercial banks.

4.2.7 The earnings per employee of Nabil bank has the highest which was Rs.2.70 and Laxmi bank has the minimum which was Rs.0.78. The earnings per employee fluctuate due to the total number of employees of the bank. The net operating income of Nabil and Nepal Investment bank were higher than other remaining banks i.e. Rs.1122, Rs.1014 but the number of employees are maximum with Nepal Investment bank i.e.416, 622 and the result of earnings per employee was maximum with Nabil bank.

4.2.8 The Return on Equity ratio of Nabil bank has maximum of 30.60% and Laxmi bank has minimum of 10.48% in this study period. The ratio of ROE arranging in descending order like 30.60% (Nabil), 28.54% (Everest), 25.93% (Nepal Investment),18.65% (NIC), 17.64% (SBI),

13.40% (Siddhartha), 12.77% (Kumari) and 10.48% (Laxmi). The ratios are different because of their net income and equity capital basis.

4.2.9 The return on assets ratio of Laxmi bank has 0.95% which is minimum and Nabil bank has 2.01% is maximum ratio in FY 2007/08. The ROA ratios of these commercial banks are maintained in 1% - 2%. It shows that these banks quality of assets and their efficiency is good and the result of return also sound.

4.2.10 The Net Interest Margin ratios of the different commercial banks are maintained in 2% to 4%. The ratio of Nabil bank has the highest of 3.90% and Laxmi bank has a minimum ratio of 2.64%. This indicates that banks' capacity to maintain higher interest margin in this study period.

4.2.11 The Profit Margin ratios of the commercial banks are in descending order 30.73% of Nabil, 26.34% Nepal Investment, 24.48% of Everest, 23.10% of NIC, 22.62% of SBI, 17.65% of Siddhartha, 16.34% of Kumari and 14.93% of Laxmi. It shows that Nabil bank has the maximum ratio of 30.73% and Laxmi bank has the minimum of 14.93%.

4.2.12 In the Earning per share calculation, Nabil bank has the maximum EPS of Rs. 108.31 and Laxmi bank has the minimum EPS of Rs. 13.15. There is huge variance between these two banks result in this period.

4.2.13 The NRB balance to total deposit ratio of the Nabil bank has maximum was 7.46% and Kumari bank has minimum was 2.02%. All the commercial banks ratios were less than the industrial average except Nabil bank i.e. the difference is in negative. So, only Nabil bank follows the directives issued by NRB standard in respect to balance.

4.2.14 The Cash in Vault to Total Deposit ratio was maximum with Nepal Investment bank by 4.86% and minimum with NIC bank by 1.09%. Comparing with industrial average, Everest, Kumari and Nepal

Investment banks can maintain the NRB standard but other remaining banks ratio are below than the industrial average.

4.2.15 The liquid assets to total deposit ratio of Nabil bank has the maximum is 39.51% and Siddhartha bank has the minimum is 15.57%. The ratio of Siddhartha bank was variated negatively with industrial average but other remaining banks were variated positively with the industrial average in FY 2007/08. This implies that all these banks liquidity position are better but this impact in profitability negatively.

4.2.16 The net financial assets (RSA – RSL) repricing in the short term maturity bucket ranging from 1-90 days, Nepal Investment, Siddhartha banks result was found in negative but other banks was positive. The range from 181-270 days, all the commercial banks result was found in positive but SBI and Laxmi banks results was in negative. The range from 271-365 days all banks result was in positive except Laxmi bank. In the long term maturity bucket (>365 days) the gap of the all banks was negative but Nepal Investment and Laxmi banks result was positive. The CGAP or the Interest rate sensitivity ratio of the total earning assets over the short term horizon i.e. up to one year was highest with Everest bank was 420.68% and lowest with Laxmi bank was in negative (362.55%). The CGAP ratio to the earning assets over the long term horizon was highest 122.74% with Everest bank but Nabil, NIC and Siddhartha bank's ratio was 0% which was the lowest ratio.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the whole study, draws the conclusions and forwards the recommendations. So, this chapter is divided into three sections- summary, conclusions and recommendations.

5.1 Summary

The research study is focused an assessing the financial performance of banking industry in Nepal in the framework of CAMELS by using descriptive-cum analytical research design with a cross sectional approach. The study focuses the financial performance of various commercial banks as regard to its capital adequacy, level and trend of risk weighted assets, quality of loan assets, management of revenues and expenses, level and trend of earnings, liquidity positions of the banks and sensitivity to interest rate risk. This research mostly based on secondary data of different audited annual reports of the sampled banks for the FY 2007/08.

The banking and non-banking financial institutions followed a key product of supervision is a rating of the bank's overall condition commonly related to as a CAMELS rating which is formulated by the (BIS). CAMELS rating system is used by three federal banking supervisors - Federal Reserve Bank, FDIC and OCC and other financial supervisory agencies to provide a convenient summary of the past on financial analysis of commercial banks in the US and other regions. In context of Nepalese banking environment, there are few researchers conducted in the framework of CAMEL/S (Baral 2005, Bhandari 2006, Chand 2006, Sharma 2007, Gurung 2007, Koirala 2007, Wagle 2009). This study analyzes the level, trend and cross sectional analysis of capital adequacy, non performing loans, loan loss provision, management

quality ratios, earning capacity, liquidity position and sensitivity to market risk components of the different commercial banks for the FY 2007/08. Besides this, the areas that formed in this research review were concept, history & functions of commercial bank, financial performance analysis methods, CAMELS rating system etc. In this research NRB guidelines & reports, review of research paper, articles, dissertations and related reports were reviewed.

This study is based on cross sectional approach so that descriptive-cum analytical research methodology has been adopted. Among the total number of banks 26, only 8 commercial banks were drawn as a sample for the study purpose. The study is composed of primary and secondary sources of data but most of all the research is based on secondary data. The basic conceptual information was collected through BASEL, FDIC, IMF and NRB publications and work-papers. In addition with this primary data also are used which was collected by formal and informal discussions with the senior staff of the bank, financial ratios, simple mathematical and statistical tolls have been applied to get the meaningful result of the collected data in this research work.

The analysis has compared the banks ratios with NRB standard, industrial average and analyzes the commercial banks ratios with each other. The capital adequacy ratios of all the commercial banks are maintained the NRB standard, it indicates these banks are operating with adequate capital. The CAR above the NRB standard of all the banks show additional protection and security to stockholders and financial soundness of the banks. The non-performing loans to loan ratios are below the industrial average and the international standard. The provisioning for pass loans is above the NRB standard with all the commercial banks but there is no much variance. The total expenses to revenue ratios of the banks are balanced in 60% - 75% and earning per employee also maintained between Rs.1 – Rs.3 millions. The returns on equity of some banks are good and some banks results are not so good. The returns on assets of the commercial banks are above 1% which indicates that most of the banks have good return. The net interest margin,

profit margin ratios are generally above the benchmark prescribed by World Bank. Earnings per share results are different due to their net income and number of shares. The NRB balance to total deposit ratio and cash vault to total deposits ratios are below than the industrial average but liquid assets to total deposit ratios are above the industrial average during the study period. This shows that the liquidity positions of the banks are good but the banks are not able to follow the NRB directives and guidelines strictly. The cumulative gap of risk sensitive assets and risk sensitive liabilities re-pricing in the short term maturity bucket of SBI, Nabil, Everest, Kumari, Nepal Investment, NIC and Siddhartha banks are found in positive but Laxmi bank was found in negative. The CGAP of RSAs and RSLs re-pricing in the long term maturity bucket of Nepal Investment and Laxmi banks was found in positive but SBI, Nabil, Everest, Kumari, NIC and Siddhartha banks was in negative. The interest rate sensitivity ratio to the total earning assets over the short-term horizon of all the commercial banks results are in positive except Laxmi bank. The CGAP ratio to the earning assets over the long-term horizon of SBI, Everest, Kumari, Nepal Investment and Laxmi banks results are in positive it means these banks are high sensitive to interest rate in the long term horizon but Nabil, NIC and Siddhartha banks results are 0% in this study period. So these three banks are low sensitive to interest rate in the long term horizon.

5.2 Conclusions

On the basis of analysis, the following conclusions have been drawn:

5.2.1 The total capital adequacy ratios of all the commercial banks are above the standard set by NRB, it reveals that the banks performed well and improved the overall capital position with adequate capital and the capital fund of the banks are sound and sufficient to meet the banking operation.

5.2.2 Core capital adequacy ratios measured in terms of core capital to total risk adjusted assets are as per NRB standard. All commercial banks are

using adequate amount of internal sources or core capital in the study period. It implies that sampled banks are financially sound and strong.

5.2.3 Supplementary capital ratios of the banks are with in the boundary of NRB standard in this study period, which supports to draw the conclusion of the supplementary capital of the bank is sufficient or adequate.

5.2.4 The non-performing loans to total loans and advances ratios of the sampled commercial banks are below the industrial average. It shows favorable proportion of NPL ratios i.e. efficient credit management and recovery efforts.

5.2.5 The loan loss provisioning ratios of SBI and Nabil banks are higher than others but remaining banks loan loss ratios are below 2%, which indicates all sampled banks quality of loan assets are getting better.

5.2.6 The lower result of total expenses to total revenues ratio is good for bank. The ratios of SBI, Nabil, Everest, Nepal Investment and NIC banks are 50% - 70% but Kumari, Siddhartha and Laxmi banks ratios are above 70%. If the ratio is high it means the bank don’t move to minimize the cost.

5.2.7 The earnings per employee of the sampled commercial banks are Rs.1-Rs.3 millions, it depends upon the net operating income and number of employees.

5.2.8 The return on equity ratios of the sampled banks are above 10%. The ratio of ROE of some banks i.e. Nabil, Everest and Nepal Investment banks have 20%-30% but SBI, Kumari, NIC, Siddhartha and Laxmi banks have 10%-20%. If ROE is high, it means the bank management is aware about stockholder’s wealth maximization.

5.2.9 The return on assets ratios of the sampled banks are above 1% except Laxmi bank. The ROA measures that the capability of the management to converting the bank's assets into net earning.

5.2.10 All commercial banks net interest margin ratio were more than 3% except Laxmi bank. It indicates that these banks maintain higher interest margin of this study period.

5.2.11 In this profit margin ratio, Kumari, Siddhartha and Laxmi banks maintained 10%-20%, SBI, Nabil, Everest, Nepal Investment and NIC banks maintained 20%-30%.

5.2.12 The earning per share shows the strength of the share in the market. There is so much variance between these commercial banks earnings per share.

5.2.13 The NRB balance to total deposits ratios of these banks are below the industrial average except Nabil bank. So, only Nabil bank follows the directives issued by NRB standard in respect to balance. The negative difference shows that the banks are not maintaining sufficient amount of balance, which must be held in NRB.

5.2.14 The cash in vault to total deposit ratios of the commercial banks are different. Comparing with industrial average, Everest, Kumari and Nepal Investment banks can maintain the NRB standard but SBI, Nabil, NIC, Siddhartha and Laxmi banks ratios are below the industrial average and NRB standard.

5.2.15 The liquid assets to total deposit ratio of Siddhartha bank was variated negatively with industrial average but remaining banks ratios are above the industrial average ratio. It shows that there are very high proportions of investment in income.

5.2.16 The cumulative gap of risk sensitive assets and risk sensitive liabilities re-pricing in the short term maturity bucket of SBI, Nabil, Everest, Kumari, Nepal Investment, NIC and Siddhartha banks are found in positive but Laxmi bank was found in negative. The CGAP of RSAs and RSLs re-pricing in the long term maturity bucket of Nepal Investment and Laxmi banks was found in positive but SBI, Nabil, Everest, Kumari, NIC and Siddhartha banks was in negative.

5.3 Recommendations

Based on the conclusions, the following recommendations have been forwarded:

5.3.1 The capital adequacy ratios of the banks are not sufficient as per the NRB standard, because the one catch is that Tier 2 capital is limited to a maximum of 100% of the total of Tier 1 Capital. So of the minimum 8% capital required, Tier 2 capital can meet up to 4%. In this calculation, only Nepal Investment bank can maintain the NRB standard. So, it is suggested that to maintain stable capital adequacy ratios in the remaining banks and strictly follow the NRB directives.

5.3.2 The lower ratio is better the proportion of performing loans and risk of default. The NPL ratios of Nabil, Everest, NIC, Siddhartha and Laxmi banks are below 1% but SBI, Kumari and Nepal Investment banks have above 1%. So, it is recommended to formulate effective rules & loan recovery committee, timely follow-up to recover and try to decrease the level of ratios as they can.

5.3.3 The provisioning for pass loans is above the NRB standard with all the commercial banks. Everest, Kumari, Nepal Investment, NIC, Siddhartha all these banks maintained their provisioning for substandard, doubtful and bad loans accordance with NRB standard. The loan loss provision to total loans and advances of SBI and Everest banks are high but other remaining banks ratios were below 2%. But all these banks need to give attention to lower the proportion of loan loss provision by increasing the quality of assets by strengthening the credit appraisal and follow up measures.

5.3.4 The total operating expenses to total operating revenue of Kumari, Siddhartha and Laxmi banks have above 70%. So, these banks need to decrease the unnecessary expenditures in un-productive activities and use effective management operation. Other banks like SBI, Nabil, Everest, Nepal Investment and NIC have the ratio average 60%. So, all

the banks try to generate additional operating revenues and utilize it in effective way.

5.3.5 The earning per employee of Laxmi bank has below Rs.1 million and other remaining banks earnings per employee are above Rs.1 million. Generally, it means efficient management and well staffing system in these banks. But in comparison, Laxmi bank's net operating income was low but number of employees was high than others. So, it is recommend maximizing the profitability or minimizing the overstaffing and trying to achieve good result in future.

5.3.6 In this study period, the earning quality ratios i.e. return on equity, return on assets, net interest margin and profit margin ratios of the Laxmi bank was the lowest than others, remaining banks ratios are sound and all these banks need to increase the revenue, efficient mobilization of the equity and control the operating expenses.

5.3.7 The earning per share of Nabil, Everest and Nepal Investment banks are sound so these banks always try to maintain this level and maximize it if possible. Other remaining banks EPS were around Rs.10-Rs.30. So, these commercial banks need to increase the income and minimize the operating cost, which would cushion for every bank to survive and compete in this competitive environment. To increase yield as its net profit to gain the trust of equityholders and other stakeholders.

5.3.8 The NRB balance to total deposit ratio of SBI, Everest, Kumari, Nepal Investment, NIC, Siddhartha and Laxmi banks are in negative that means they couldn't maintain NRB standard. So, they need to monitored frequently and complied in accordance with the NRB requirements. But Nabil bank maintained the ratio as per NRB standard, so this bank tries to balance it for future.

5.3.9 Cash in vault to total deposit ratios of Everest, Kumari and Nepal Investment banks are in positive it means they maintained the NRB

standard. But other remaining banks ratios are in negative. So, these banks need to keep excess cash position.

5.3.10 The liquid assets to total deposits ratios of Siddhartha bank was below than industrial average or in (-)ve, so this bank tries to maximize the liquidity position as per NRB directives. Other remaining banks ratios are above the industry average or in (+)ve. Hence, it is recommended to look upon new, secured area of lending and investment opportunities for proper utilization of the idle liquid assets.

5.3.11 The CGAP ratios to earnings assets of the banks like SBI, Everest, Kumari, Nepal Investment and Laxmi banks results are in positive it means these banks are high sensitive to interest rate in the long term horizon. So, these banks should minimize the mismatch of long term risk sensitive assets in order to minimize sensitivity to prevailing falling interest rate. But Nabil, NIC and Siddhartha banks results are zero in long term horizon, hence the banks are low sensitive to interest rate in long time horizon.

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Appendix 1: List of Commercial Banks, Sample

S.No.	Name of the Banks	Operation Date (A.D.)
1	Nepal Bank Limited	1937/11/15
2	Rastriya Banijya Bank	1966/01/23
3	Agriculture Development Bank Ltd.	1968/01/02
4	NABIL Bank Limited*	1984/07/16
5	Nepal Investment Bank Limited*	1986/02/27
6	Standard Chartered Bank Nepal Limited.	1987/01/30
7	Himalayan Bank Limited	1993/01/18
8	Nepal SBI Bank Limited*	1993/07/07
9	Nepal Bangladesh Bank Limited	1994/06/05
10	Everest Bank Limited*	1994/10/18
11	Bank of Kathmandu Limited	1995/03/12
12	Nepal Credit and Commerce Bank Limited	1996/10/14
13	Lumbini Bank Limited	1998/07/17
14	Nepal Industrial & Commercial Bank Limited*	1998/07/21
15	Machhapuchhre Bank Limited	2000/10/03
16	Kumari Bank Limited*	2001/04/03
17	Laxmi Bank Limited*	2002/04/03
18	Siddhartha Bank Limited*	2002/12/24
19	Global Bank Ltd.	2007/01/02
20	Citizens Bank International Ltd.	2007/6/21
21	Prime Commercial Bank Ltd	2007/9/24
22	Sunrise Bank Ltd.	2007/10/12
23	Bank of Asia Nepal Ltd.	2007/10/12
24	Development Credit Bank Ltd.	2001/01/23
25	NMB Bank Ltd.	1996/11/26
26	Kist Bank Ltd.	2003/02/21

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*Sample of the study