IMPACT OF LIQUIDITY MANAGEMENT ON PROFITABILITY OF BANKS IN NEPAL

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RECOMMENDATION

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

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VIVA-VOCE SHEET

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And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for the degree of

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DECLARATION

I hereby declare that the work reorted in this thisis entitled "**IMPACT OF LIQUIDITY MANAGEMENT ON PROFITABILITY OF BANKS IN NEPAL**" submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the degree of Master of Business Studies (MBS) under the supervision of Asso. Prof. Pitamber Lamichhane of Shanker Dev Campus, T.U.

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This study has been completed as per requirement of the degree in Master of Business Management under the Faculty of Management. The main objective of this study is to examine and analyze the liquidity position and its impact on profitability of Nepalese commercial banks. This study has come in this structure not only by my alone exertion but by the contribution of legion personalities who are contributing on various institutions.

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LIST OF ABBREVIATIONS

ADF	Augmented Dickey Fuller
AGM	Annual General Meeting
BCBS	Basel Committee for Banking Supervision
BOD	Board of Directors
CV	Coefficient of Variance
CAR	Capital Adequacy Ratio
CR	Current Ratio
CRR	Cash Reserve Ratio
DR	Deposit Ratio
EB	Everest Bank
GDP	Gross Domestic Product
HB	Himalayan Bank
IR	Investment Ratio
NEPSE	Nepal Stock Exchange
NIMB	Nepal Investment Mega Bank
NRB	Nepal Rasta Bank
OVA	Overall Average
QR	Quick Ratio
ROA	Return On Assets
ROD	Return on Deposit
ROE	Return on Equity

ROI	Return on Investment
SD	Standard Deviation
SBI	State Bank of India
SCB	Standard Chartered Bank
SEBON	Security Board of Nepal

CHAPTER-I
INTRODUCTION

1.1 Background of the Study

Liquidity and profitability both are highly controversial contents in the financial field due to their contradictory nature. Higher liquidity generates lower return and, vice versa. Lower liquidity also erodes goodwill and confidence of the people. Efficient handling of company's liquidity provides goodwill about the company as well as success of the company. Therefore, some people advocate for higher liquidity position and some for the lower position of liquidity in the banking and non-banking institutions. Both the liquidity deficit and more liquidity surplus indicate the problem in the financial health of a commercial bank (Sthapit & Maharjan, 2016). However, no any measurement unit has been developed to measure the exact level of liquidity to gain required return in the institution yet.

The level of liquidity to be maintained in the institution depends on the consciousness of a manager. This issue may raise a number of serious questions such as is there same level of liquidity in all institutions maintained by every manager? Can different levels of liquidity maintained by different managers produce the same level of profit or different? Which optimum level of liquidity can generate the trade-off between liquidity and profitability? What relation exists between liquidity and profitability? Hence, liquidity and profitability is strongly debatable maters in the financial area.

There is reciprocal relationship between liquidity and profitability. It means higher liquidity performance of the firm returns lower profit with low risk in the firm but lower liquidity performance of the firm produces higher profit with high risk.

Liquidity and profitability are closely related to each other because one increases the other decreases (Rehman, 2016). Inverse nature can be found between liquidity and profitability in any types of banking and non-banking institutions. Therefore, efficient liquidity management cannot only produce the trade-off between liquidity and profitability but also balances the goodwill and public confidence towards firm. Firm should maintain a moderate level of liquidity that does not threaten the ongoing concern status, and allows making adequate profits on the investment.

Profitability is that position in which institutions have excess revenue over its expenditure especially during a fiscal year. In another words, it is the difference between income and expenditure. Profit is the major concern of the management that would make higher value of the organizations. It also fulfills the demand of both management and shareholders. Management can increase its facilities along with maximization of shareholder's activities. However, growing competition among the financial institution and recent increase in transaction of security and capital markets as well as the taxation laid on higher deposits in banks is adversely affecting the bank's profitability (Sthapit & Maharjan, 2016). Excess liquidity surplus also hurts the profitability of the bank.

Each and every decision is taken within the organization only after considering the impact of liquidity on the firm's profitability. Moreover, profitability is the ability of making profit of the firm through efficient utilization of all organizational resources. It also measures the management ability of utilization of its existing financial and non-financial resources. Profit is the ultimate goal of each and every institution by which expectations of shareholders can be fulfilled. The issue of profitability is a litigious or disputable content that a bank or firm has to face consistently. Profit is the reward of assumable risk of investor.

Liquidity is that asset quality by which it can be quickly converted into cash without violating its values. It measures the current financial position of the company. The term liquidity assets are used to describe money and assets that are readily convertible into money. Different assets may be said to exhibit different degrees of liquidity. Money itself is, by definition the most liquidity assets. Other assets have varying degree of liquidity, depending on the situation which can be turned into cash.

Cash, marketable securities, short term loans, bills receivables and bank account etc. are example of the liquid assets. Out of them cash balance is the most liquid assets but it is not good to keep higher balance in the organization because it has higher opportunities cost than other liquid assets such as treasury securities, tradable securities, receivable and other saleable assets. Different assets have varying degree of liquidity. Higher ratio of liquid assets indicates that firm has strong capacity to meet its short term liabilities. In

another words, liquidity is the availability of cash in the amount and at the time needed with the reasonable cost. One of the most important tasks faced by the management of any bank is ensuring adequate liquidity. Liquidity is the most crucial element to the banking and other non-banking institutions which has both positive and negative impact on their profitability (Sthapit & Maharjan, 2016).

Liquidity management is the process of maintaining trade-off between liquidity and profitability, but managing trade-off between liquidity and profitability is a crucial issue in today's cut throat competition in every industry (Reddy, 2015). In the same way, managing the optimum level of liquidity means to run the institution smoothly with sound health at present as well as future is known as liquidity management. It is also a process of strategic supply and withdrawal from the market or circulation of the amount of liquidity consistent with a desired level of short term reserve money without distorting the existing trade-off between liquidity and profitability. Effective liquidity management will enable the bank to derive maximum benefits at minimal cost..

Liquidity management is a process of maintaining proper levels of liquid assets. Higher liquidity poses threats to its profitability by confining the investable amount to invest in the higher earning areas. But lower liquidity creates economic crises for the payment of day to day undertakings. Therefore, it clears that there is reciprocal relationship between liquidity and profitability.

Moreover, higher liquidity position of the institutions loses the opportunities of the investment and profit but lower liquidity may bring serious problem to meet short term obligations and compulsions. If the firm has lower position liquidity, it will severely damage the public confidence and believe from the market. Inadequate liquidity or excess liquidity may be injurious for the smooth operations of the firm and higher liquidity in the bank may create problem in the uses of it current assets. Therefore, firm should manage its liquidity position properly, effectively and efficiently way which can produce the trade-off between liquidity and profitability.

Liquidity management is also the process of managing working capital. Working capital is the sum of the all current assets under the gross concept but net concept defines working capital as the difference between current assets and current liability. Current

assets are those assets which can be easily converted into cash without violating their value within a year such as cash and cash equivalent assets, bank balance, NRB balance marketable assets etc. Similarly, current liabilities are those liabilities which must be paid within a year such as bills payables, certificate of deposit, unpaid dividend, current deposit, income tax payable etc. Higher working capital reveals higher liquidity and lower profit with lower risk and, vice versa. Effective working capital management implies a trade-off between liquidity and profitability of the company and thereby affects the financing and investment decision (Podilchuk, 2018).

Hence, the level of liquidity to be managed in a firm depends on various factors such as: nature & size of the firm, rule and regulation of the state, attitude of manager, growth rate of firm and industry, seasonal and cyclical factors, credit policy and cash flow cycle etc. There is no any specific and hard and fast rule on determining the optimal level of liquidity that a firm or institution can maintain in order to ensure positive impact on it profitability.

There are so many internal and external factors that positively or negatively affect the liquidity position of the banking institutions and ultimately also influence their profitability positions. Internal factor includes lending policy of the bank, management capacity, strategic planning, fund flow situations, unhealthy competition between banks, liquidity policy, quality of assets, and other risk situations etc. Similarly, national security, political instability, income level of depositor, foreign depositor, fear of possibility of loan default, inflation rate of county, domestic productivity, remittance inflow and outflow pattern of the nation are the external factors. Before making the policy related to liquidity management, all these internal and external factors must be considered to know in which manner they influence the liquidity management practices.

Insufficient liquidity is one of the major reasons for bank failures, holding higher liquid asset has an opportunity cost of higher returns. In other words, liquidity and profitability are inversely related to each other. It means higher liquidity decreases the profit and lower liquidity increase the profit of the banks. Serious liquidity problems strongly affect the banks' operational environment and confidence of people towards banking services.

Therefore, liquidity and profitability trade-off have become a crucial issues among all banking and non-banking institutions.

Liquidity management deals with managing the short term assets and short term liability from the perspective of working capital. In another words, it is the function of the varying component of working capital. Cash, vault cash, NRB balance, balance in other bank etc. are main sources of the short term assets that are also called highly quality liquid assets. Nepalese managers are mechanizing the various liquidity managing strategies and schemes to enhance their chances of making profit and meeting existing shareholder expectations.

Decision of implementing the strategy is compelled by the existing business situations. Generally, each and every bank has established a liquidity management team to manage the firm liquidity position. Liquidity ratio, capital ratio, deposit ratio, quick ratio, investment ratio, current ratio etc. are the liquidity indicators which are generally used by Nepalese commercial banks to measure the liquidity position of their banks. Having higher value of these indicators indicates that firm is able to meet its shot term obligations and compulsions and vice versa.

1.2 Problem Statement

Liquidity and profitability both are highly debatable topics in the financial field due to their contradictory nature. Tide liquidity position generates more return than sloppy liquidity position but this situation may create difficulties to meet its short term obligations and compulsions. Creditors also compel to the management to reduce their tide liquidity positions.

Generally, untied liquidity position cannot fulfill the expectation of shareholders. Neither a lofty level nor too low level of liquidity is beneficial for institutions due to their Inverse relations between liquidity and profitability. Therefore, some people advocate for higher liquidity position and some for the lower position of liquidity in the firm.

Trade-off between liquidity and profitability to some extent can solve this problem but it is a difficult task to bring the trade-off between the liquidity and profitability. Before deciding an appropriate level of liquidity, bank management has to evaluate the trade-off

between expected profitability and the risk that it may be unable to meet its financial obligations.

The betterment liquidity position contributes to the maximization of the profitability of the bank. It depends on composition of banks assets, market position of saleable assets and government liquidity policy, working capital management policy, cyclical factors, size and nature of business, etc. The bank's assets composition and manager's attitudes toward liquidity also strongly affect its degree of liquidity position.

The bank should maintain the level of liquid assets that will satisfy their liquidity needs and use their remaining funds to satisfy their other objectives. It means the banking institutions should utilize their funds somewhere else for the purpose of earning profit by maintaining the optimum level of liquidity position. Because the funds are cost bearing and keeping them idle will affect the profitability of the institutions. The main engrossment of management is to gain maximum profit with lower risk by maintaining trade-off between the liquidity and profitability.

Hence, understanding liquidity position and profitability position of Nepalese commercial banking institutions is essential. Examining the effect of liquidity indicators in the profit of Nepalese banking institutions is the another crucial aspect. Many empirical research and theories have found out that different liquidity indicators such as CR, LR, QR, LR, IR etc. affect the profitability indicators such as ROA, ROE, and ROD etc.

Murerwa (2015) examined that several factors affect profitability of bank. The profitability performance and changes in profitability of a bank, regardless of itsown ership are determined by internal variables and external variables. The internal variables are related to the bank itself and they are influenced by the working and performance of the management. The external variables are the result of themacroeco nomic environment in which the bank is operating

The banking sector in Nepal plays a very crucial role in the country's economic development, serving as an intermediary between lenders and borrowers. Within this context, the effective management of liquidity is vital for ensuring the stability and sustainability of financial institutions. However, despite its implication, there exists a

notable gap in understanding the relationship between liquidity management practices and the profitability of banks operating in Nepal.

Commercial banks in Nepal are confronted with various challenges, including regulatory constraints, limited access to funding sources, and fluctuations in market conditions. In such a dynamic environment, the ability of banks to maintain adequate levels of liquidity while optimizing profitability remains a critical concern for stakeholders. Yet, empirical proof on how liquidity influences profitability in the Nepalese banking sector is sparse, hindering informed decision-making by bank management and policymakers.

The lack of comprehensive research addressing this gap not only impedes the development of effective liquidity management strategies but also undermines the financial stability and competitiveness of Nepalese banks. Moreover, the unique characteristics of the Nepalese banking sector, including its reliance on traditional banking practices and susceptibility to external shocks, necessitate context-specific insights into the liquidity-profitability relationship.

The main purpose of the commercial bank is to collect deposits from the customer and to mobilize into the most profitable and preferable sector. Due to the profit driven objective of the business, establishment of these of the banks have concentrated only in urban area, like Kathmandu, Pokhara, Birgunj,Hetau da, Biratnagar, etc. which has raised certain questions. This application is notable to contribute the socio- economic development of the country where around 80 percent people live in rural and majority of the population depends upon agriculture. Thes e banks should expand their operation in rural areas. NRB, as the central bank has ruled that joint venture banks should invest 10% of their total investment in the rural areas

Similarly, identifying of what factors affect liquidity and what is the attitude of managers of Nepalese banking institutions toward liquidity and profitability as well as what is the situation of liquidity management in Nepalese banking institutions is the another problem of the study. Specially, this study strived to get answer the following questions.

- What is the profitability position of Nepalese commercial banks?

- What is the liquidity position of Nepalese commercial banks?
- Does liquidity affect the profitability of commercial banks in Nepal?

1.3 Objectives of the Study

The main objective of this study is to examine and analyze the liquidity position and its impact on profitability of Nepalese commercial banks. To fulfill this main objective the following specific objectives have been formulated:

a) To assess the profitability position of commercial banks of Nepal.
b) To analyze the liquidity position of commercial banks of Nepal.
c) To examine the impact of liquidity management on profitability of commercial bank in Nepal.

1.4 Rationale

Liquidity refers to the ability of the firm to meet its short term liabilities and obligations by converting its existing assets into cash or cash equivalent assets. Profitability and liquidity are the most salient issues that liquidity manager should take studying and thinking about them considering as their most of the important duties. Experienced, qualified and competent management team can give the great contribution within the organization to constitute the trade-off between profitability and liquidity.

The banking profession has become interesting and attracting for all job seekers, non- job seekers as well as others who are in search of knowledge, skills, developmental progress and innovations in the area of banking sectors. New innovations and developments of banking areas are being sought by employers and employees to cope with changing organizational dimensions. So, that, this study may be useful for the following parties.

The study might be helpful for employers and management. Employee can understand about banks existing profitability and liquidity position to take decision whether stay or leave the organization. Employees also compare the banks to know which banks have higher profitability. Highly profitable bank can provide better benefits to its employees than the banks having low profit.

This study is equally important for management to make further plan and to understand the existing situation of liquidity and profitability of banks. The management can also

know what strategy is required to improve in their bank to make better plan and policy by defeating other competitors. They will also get the information about how liquidity indicators affect profit of the bank and in which way. The study might also be helpful to go thoroughly regarding why the liquidity management of their banks is better than their outsiders.

This study will help them to understand about the liquidity and profitability position of the commercial banking industry of the country. It also informs them about how proxies of the liquidity indicators such as IR, CR, LR, DR and QR influence the proxies of profitability such as ROA,ROE and ROD, which factor mostly influence the liquidity and profitability of the banking areas. Such understanding supports them to make appropriate policy, rules, regulations and system as well as implement them to move the national economy towards positive and improved direction.

It will also be helpful for the creditor, customer and new investor to set their further plan whether to deal or not with the Nepalese commercial banking industry. This study also supports them to understand lending policy, deposit management, safety of their property, return of their investment, as well as further possibility of development of banking industry etc.

Shareholders' ultimate goal is to maximize the wealth of firm. This study will support them to make further decisions such as whether to reinvest the form's earning or take as dividend form to invest in another area? Is management team competent or not? Is there any necessity to raise capital to make trade-off between the liquidity and profitability position of banks? What new services are essential to add or remove? etc.

Likewise, this study is also beneficial for further researchers, students, professors and others who are willing to harness and broaden their understanding and knowledge of banking and financing sectors.

1.5 Limitation of the Study

Every study has its own limitations and weaknesses that limit the study area. As the study is being carried out in partial fulfillment of the requirements for the degree of Master of Business Management, it possesses a number of limitations of its own

kinds. Especially shortage of time, reliability of statistical tools used, limited knowledge of statistical tools, techniques and models that are used on study to make the study more reliable. Following limitations are pointed out in this study:

1) Study is only focused on 10 banks which are taken as samples. The result would have been different if the data sample was taken for different financial institutions rather than A class commercial bank only. Hence the result shown is limited.
2) As the data of only 10 years period has been analyzed the result solely depend on the outcome of the limited time frame which may lapse the changing macroeconomic criterion. The result would have been different if the time frame for more than the sample period were considered
3) The study focuses only on the financial aspects of the entity and not he operational aspects of the sample banks. So, the conclusion derived from this study will solely depend upon financial aspects and macroeconomic aspects but will be completely free from operational aspects.
4) The study is mainly conducted on the basis of secondary data. The validity of a secondary sources data depends on the reliability of the annual reports of the commercial banks.

CHAPTER-II
REVIEW OF LITERATURE

2.1 Introduction

Literature review includes the previous studies that are related to this research that plays a significant role in conducting any type of research. This chapter highlights up on the existing literature for this several books, dissertation reports, handout and articles published journal and newspaper are reviewed because the researchers by taking guidelines from such studies can make research more valuable.

This chapter is divided into two parts. The first section includes theoretical Framework whereas second part is confined to review of the various studies conducted by the various researchers' previous studies, articles, journals etc. In this chapter, the overall concept and view of "impact of liquidity management on profitability of bank" has been streamlined through the review of relevant literature related to this study.

Review of literature is the study of the related topic in related field of research to know what other scholars' or researchers have found on that topic. It supports the researcher to save time and money by availing existing information. It also avoids duplication of data. It is very essential and important subject matter for all researchers to enhance their new research matter. This chapter includes the conceptual framework and review of previous Study.

2.2 Review of Theoretical Studies

Theoretical Framework is a conceptual model which describes how a theory is related with other various variables. In another words, it logically describes the relationship between dependent and independent variables that are concerned with research. It also supports to formulate the research hypothesis.

2.2.1 Concept of the Liquidity

Bank liquidity simply means the ability of the bank to maintain sufficient funds to pay for its maturing obligations or meeting financial commitment and obligation at reasonable price at all times. In another words, it is the ability of the bank to meet immediate shot term obligation, and other withdrawal obligations. Well liquidity

management may support to develop strong image of the institutions in the market and also fulfill the legal requirement of liquidity.

Liquidity is the availability of cash in the amount and at the time needed at a reasonable cost (Hudgins & Rose, 2018). An institution having a proper set of liquidity management policies and procedure will improve profits, reduce the risk of bank failure and significantly improve its chances of survival (Sunday & Small, 2017)**.**

All type of institutions requires liquid assets that support to operate day to day financial undertakings. Each firm should maintain a particular level of liquidity to support day to day operations (Podilchuk, 2018). In the absence of liquid assets, the institutions can't meet their short term obligations and liabilities and may also create serious problems in the regulations of enterprises undertakings. Therefore, liquid assets work as blood of the firm in any types of banking and non-banking institutions.

Liquidity is a complex concept as the rate of liquidity among different liquid assets differs. Liquidity is a relative concept because there is no specific level of any balance sheet ratio that indicates that the firm is no longer liquid (Olagunju et. al, 2019). It is essential and important for all types of business. It involves three characteristics that are Marketability, Stability and Conservatism.

Liquid assets should be more marketable or transferable. That means, they are expected to be converted to cash easily and quickly, and are redeemed prior to maturity. All assets that cannot be redeemed at maturity are said to be illiquid.

Next quality of liquid asset is price stability. Based on this characteristic, bank deposits and short term securities are more liquid than equity investments such as common stocks and real estate due to the fact that the prices of the former are fixed and have lesser variability than the prices and value of the later that experience considerable fluctuation.

Conservatism quality of liquidity refers to the ability of the holders of liquid assets to recover the cost of the asset on the time of resale. On the basis of above mentioned characteristics, common stocks are not considered highly liquid asset despite of its ready marketability. This can be attributed to the fact that in certain periods, the current prices are lower than their initial or original prices. By considering these qualities, people and firms decide to hold cash which is the only perfectly liquid asset.

Components of Liquidity are Vault cash, Balances held with NRB ,Balances held with other banking institutions, Money at call ,Inter-bank placement, Placement with discount houses, Treasury bills, Treasury certificates, Investment in stabilization securities, Bills discounted payable etc.

2.2.2 Concept of Profitability

Profitability is the ability to make profit from all the business activities of an organization, company, firm or enterprises and it also measures management efficiency in the use of organizational resources in adding value to the business (Sunday & Small, 2017). It is a major factor in the field of any kinds of business. Manager should strive to achieve a reasonable level of profitability in order to maximize the wealth of shareholders. Therefore, profit is the main motive of all financial institutions.

Entire organizational undertakings are performed by target profit. However, this profit may be expected in present or in future. It is major goal for all banking and non-banking financial institutions. Various financial performance parameters such as financial ratio financial statement that are used to evaluate and measure the profitability position of banks.

2.2.3 Relationship between Liquidity and Profitability

There is inverse relationship between liquidity management and profitability position of institutions. Liquidity and profitability are two contradictory term, though one can't be effective without other but excess of one may slowdown the others. In one hand, higher liquidity position pose threats to possible expected profit. However, it provides easy access of cash and cash equivalent assets to pay short-term obligations and commitments. The profitability in commercial bank is significantly influenced by liquidity and vice versa.

On other hand, lower liquidity position may drive the organization in the door of liquidation by losing public confidence about the firm. Banks also may fail to meet short-term obligation and commitments. Therefore, various scholars, researchers and professionals have been conducting research for a long time to seek optimum point between liquidity and profit positions. For the success of operations and survival, commercial bank should not compromise efficient and effective liquidity management

and that both illiquidity and excess liquidity are “financial disease” that can easily erode the profit base of a bank as they affect bank’s attempt to attain high profitability level (Olagunju et. al, 2019).

2.2.4 Theories of Liquidity Management

Theories are analytical tools for understanding, explaining, and making predictions about a given subject matter. There are various theories with regard to liquidity management and profitability:

Anticipatory Income Theory

This theory was developed by H.V. Prochanow in 1944 on the basis of the practice of extending term loans by the US commercial banks. According to this theory, bankers began to look at their loan portfolio as a source of liquidity. It encourages bankers to treat long term loans as potential source of liquidity. The banks’ loan portfolio provides the bank with continuous flow of funds that adds to the bank’s liquidity.

Moreover, this theory assumes that liquidity of bank or firm can be managed through the proper phasing and structuring of the loan commitments made by a bank to the customers. Here the liquidity can be planned if the scheduled loan payments by a customer are based on the future of the borrower. This theory emphasizes the earning potential and the credit worthiness of a borrower as the ultimate guarantee for ensuring adequate liquidity. Theory points out to the movement towards self-liquidating commitments by banks. This theory has encouraged many commercial banks to adopt a ladder effects in investment portfolio.

Shift-Ability Theory

This theory was developed by HG Moulton .It is an approach to keep banks liquid by supporting the shifting of assets. When a bank has short of ready money, it is able to sell its assets to a more liquidity bank. This theory situates that a bank’s liquidity is maintained if it holds assets that could be shifted or sold to other lenders or investors for cash. This point of view maintains that a bank’s liquidity could be enhanced if it always has assets to sell and provided the Central Bank and the discount Market stands ready to purchase the asset offered for discount.

Thus this theory recognizes and contains that shift ability, marketability or transferability of a bank's assets is a basis for ensuring liquidity. This theory further contends that highly marketable security held by a bank is an excellent source of liquidity. It ensures convertibility without delay and appreciable loss. The shiftability theory will be important to this study because it has some positive elements of truth. Now banks obtain sound assets which can be shifted on to other banks. Shares and debentures of large enterprises are welcomed as liquid assets accompanied by treasury bills and bills of exchange. This has motivated term lending by banks.

Commercial Loan Theory

This theory was developed by S.E Haries. This theory states that the liquidity of the commercial bank achieved automatically through self-liquidation of the loan, which being granted for short periods and to finance the working capital, where borrowers refund the borrowed funds after completion of their trade cycles successfully.

This theory assumes that repayment from the self-liquidating assets of the bank would be sufficient to provide for liquidity. This ignores the fact that seasonal deposit withdrawals and meeting credit request could affect the liquidity position adversely. Moreover, the theory fails to reflect in the normal stability of demand deposits in the liquidity consideration.

This obvious view may eventually have impact on the liquidity position of the bank. Theory also assumes that repayment from the self-liquidating assets of a bank would be sufficient to provide for liquidity. This ignores the fact that seasonal deposit withdrawals and meeting credit request could affect the liquidity position adversely.

The major limitation is that the theory is inconsistent with the demands of economic development especially for developing countries since it excludes long term loans which are the engine of growth. The theory also emphasizes the maturity structure of bank assets and not necessarily the marketability or the shiftability of the assets. These short-term self-liquidating productive loans acquire three major advantages. First, they acquire liquidity so they automatically liquidate themselves. Second, as they mature in the short run and are for productive ambitions, there is no risk of their running to bad debts. Third, such loans are high on productivity and earn income for the banks

Clark Theory of Profitability

JB Clark begins his theory with an analysis of a profit-less economy and considering its key futures in year 1900. To him profit is the difference between the rice and cost of production of the commodity. He believed that profit arrives in the dynamic economy and not in the static economy. The static economy is one in which the things do not change significantly or remain unchanged. Such as population and capital remain stationary, goods continue to be homogeneous, production process remains unchanged, and the factors of production enjoy freedom but do not move because the marginal production in each industry remains the same.

On the contrary the dynamic economy is characterized by generic changes in the population such as increase in population improvement in production techniques, increase in capital etc. Clark believe that those entrepreneurs who successfully takes the advantage of these changes in dynamic economy makes profit.

Schumpeter Theory of Profitability

An Austrian American economist and political scientist Joseph Alois Schumpeter developed the profitability theory as "Circular Flow Model" in which a profitless economy is described where perfect competition eliminates surpluses of monopoly in the year 1934. So departures between an ideally competitive environment and actual economies yield the causes of profit.

Schumpeter defines the single notion of innovation as paramount, so that changes based upon innovation are the causes of profit. Gradual changes in population and capital would easily be anticipated by the market and hence present no opportunity for the entrepreneur. Schumpeter described five areas in which innovation leads to profit generation:(i) Innovations in commodities, either by introducing new products or improving old ones; (ii) Innovations in production techniques; (iii) Finding new and fertile markets; (iv)Locating new resources and raw materials; (v) Changes in industrial organization. Schumpeter identifies the single notion of innovation as paramount, so that changes based upon innovation are the cause of profit. Gradual changes in population and capital would easily be anticipated by the market and hence present no opportunity for the entrepreneur. This theory will be significant to this study because the five conditions that

result to profit making as suggested by Schumpeter are observed by deposit money banks as profit making is the main reason for setting up any bank.

The entrepreneur is for Schumpeter an innovator, who by virtue of his innovation is able to break from the competition, acquire a transitory monopoly in which he can increase profits until his competitors catch up, but, before they do so, he is able to move on to further innovation in new fields. Schumpeter did not see the entrepreneur's reward as a surplus value but rather as a functional reward linked to his innovative ability.

The impact of innovation was huge, leading to gales of creative destruction as innovations caused old inventories, ideas, technologies, skills, and equipment to become obsolete. Schumpeter saw the model of perfect competition in which different companies sold similar goods at similar prices produced through similar techniques as immaterial to progress.

2.2.5 Strategies for Liquidity Management

Strategy means the weapon by which desired goal can be achieved. Therefore, strategies for liquidity management refer to those strategies by which required liquidity can be easily and efficiently managed within the institutions. Generally, the following strategies are applied by the banking institutions.

Assets Liquidity Management Strategy

All available liquid assets are converted into cash without a significant decline in price while needed cash to meet obligations is called Assets Liquidity Management Strategies. It is oldest approach to meeting liquidity needs which is also called assets conversion strategies. This strategy holds that storing the liquidity in the liquid assets such as marketable securities, treasury securities, federal funds loan, municipal bonds and notes, negotiable certificate of deposit etc. is essential to maintain liquidity in the institutions. But this strategy is not costless approach for liquidity.

There is exist the opportunity and transaction cost. Opportunity cost must bear while storing liquidity in assets. Transaction cost will pay as a broker commission while selling these assets. Management must take-care of those assets which are least profit potential are sold first in order to minimize the opportunity cost of future earning forgone. Investing in liquidity assets means forgoing higher returns on other assets that might be

acquired. Storing the higher amount of liquidity in liquid assets form may threat to the corporate profitability.

Borrowed Liquidity Management Strategy

The strategy, by which borrowed funds from money market are taken to meet its short term obligations and commitment, is called borrowed liquidity management strategy. The largest financial institutions around the world have chosen to raise more of their liquid funds through borrowings in the money market. This strategy also called purchased liquidity or liability management. Many banking and non-banking financial institutions have applied this strategy to manage their liquidity position.

Balanced Liquidity Management Strategy

It is the combination of both borrowed liquidity strategy and assets conversion strategy. Many banking institutions are applying this strategy due to the risks inherent in relying on borrowed liquidity and the cost of storing liquidity in assets.

Under a balance liquidity management strategy, some of the expected demands for liquidity are stored in assets (Principally holding of marketable securities), while other anticipated liquidity needs are backstopped by advanced management for line of credit from potential suppliers of funds.“Unexpected cash needs are typically met from near-term borrowings. Longer term liquidity needs can be planned for and the funds to meet these needs can be parked in short term and medium term assets that will provide cash as those liquidity needs arise (Hudgins & Rose, 2018).

Estimating Liquidity Needs

Liquidity is an essential element for each and every business institution to operate day to day operations smoothly. Liquidity position for each and every institution is different that depends on their nature and size of business, business phase, changeable business environment, seasonal effect etc. It is difficult task to estimate exactly which amount of liquidity will be required for the coming fiscal year. There are several methods that are applied in recent years for estimating a financial institution’s liquidity requirements. These methods are described as follows.

The Sources and Uses of Funds Approach

Under this method the possible sources and uses of funds are estimated at present to manage future liquidity position. It also helps to identify liquidity gap. Liquidity GAP is the difference between sources and uses of funds.

Higher liquidity GAP will reduce the firm's profitability position and, Vice versa. Hence, liquidity manager always tries to make zero liquidity positions that would produce the trade-off between liquidity and profitability.

The Structure Funds Approach

Next approach to estimating a financial firm's liquidity requirements is the structure funds approach. Under this approach, deposit and other funds sources are divided into categories based upon their estimated probability of being withdrawn. Such as bank deposit and non-deposit liabilities divided into different categories. The first one is Hot Money Liabilities. They are those liabilities in which interest rate is highly sensitive and management is strongly sure will be withdrawn during the current period. Therefore, management separates higher, perhaps more than 95 percent, liquidity reserve for these liabilities. Secondly the vulnerable funds are those funds of which a substantial portion, Perhaps 25 to 30 percent, will probability be withdrawn sometimes during the current time period. Thirdly, Stable funds are also called capital that funds are unlikely to be removed. It means there is too small portion; perhaps less than 15 percent should be separated in the liquidity reserve for those funds during the year.

The Market Signal Approach

It is also method of liquidity need estimating in banking and non-banking institutions. This method centers on the discipline of the financial marketplace. Any financial service provider can't tell for sure it has sufficient liquidity until it has passed the market's test. Generally, liquidity managers should closely monitor the market signals such as public confidence, Stock Market behavior, Risk premiums on CDs and other borrowing, Loss sales of assets, meeting commitments to credit customer, borrowings from the central bank etc.

2.3 Review of Empirical Studies

Adebayo (2011) examined liquidity management and commercial banks' profitability in Nigeria and he concluded that profitability in commercial banks is significantly influenced by liquidity and vice versa. Descriptive and explanatory research design had been applied in this study with four sample banks out of all commercial banks in Nigeria. During his study he finds that the profitability and liquidity are inversely related to each other

Arif (2012) tested liquidity risk factors and assessed their impact on (22) of Pakistani banks during the period (2004-2009). Findings of the study indicate that there is a significant impact of liquidity risk factors on the banks profitability, where an increase in deposits lead to increasing in the bank's profitability in terms of reducing dependence on the central bank in meeting the customers' obligations, and profitability is negatively affected by the allocation of non-performing loans and liquidity gap

Agbada and Osuji (2013) examined empirically the effect of efficient liquidity management on banking performance in Nigeria. Findings from the empirical analysis were quite robust and clearly indicate that there is significant relationship between efficient liquidity management and banking performance and that efficient liquidity management enhances the soundness of bank.

Al-Tamimi and Obeidat (2013) identified the most important variables which affect the Capital Adequacy of Commercial Banks of Jordan in Amman Stock Exchange for the period from 2000 –2008. The study shows that there is a statistically significant positive correlation between the degree of capital adequacy in commercial banks and the IJSER International Journal of Scientific & Engineering Research Volume 8, Issue 7, July-2017 1466 ISSN 2229-5518 IJSER © 2017 http://www.ijser.org factors of liquidity risk, and the return on assets, and there is an inverse relationship not statistically significant between the degree of capital adequacy in commercial banks and factors of the capital risk, credit risk, and the rate of force- revenue.

Lartey et al. (2013) analyzed the relationship between the liquidity and the profitability of banks listed on the Ghana Stock Exchange. It was found that for the period 2005-2010, both the liquidity and the profitability of the listed banks were declining. Again, it was

also found that there was a very weak positive relationship between the liquidity and the profitability of the listed banks in Ghana. Descriptive research design were used.

Hoseininassab et al. (2013) examined effects of risk parameters (credit, operational, liquidity and market risk) on banking system efficiency (studying 15 top banks in Iran) recognizing the importance of efficiency and risk as two fundamental important categories in banking industry, seeks to review the effectiveness of two popular models: parametric (SFA) method with economic basis and nonparametric (MEA) method with mathematical optimization basis to evaluate bank efficiency and rank and select an optimal model and also to identify the impact of credit, operational, market and liquidity risks on banking system efficiency. The 15 banks were selected as statistical research community over the last six years (2005-2011). Using average performance provided by the above two methods, banks were ranked with Deap and Frontier software, and then to examine the presence or absence of significant correlation between the rankings provided by these two methods, the Pearson correlation coefficient was used. The results suggest differences in the two methods with regard to performance evaluation and ranking of banks, and show a relative superiority of SFA method, compared to MEA method. In addition, to examine the impact of efficiency on risk, for the four studied risks based on selected indicators, four models were estimated using econometric methods and the ordinary least squares 16 (OLS). The results showed that each of the studied risks and their related indicator and their specific coefficient, significantly affect on efficiency. Kumar & Yadav (2013) assessed on liquidity risk management in bank that Liquidity is a bank's capacity to fund increase in assets and meet both expected and unexpected cash and collateral obligations at reasonable cost and without incurring unacceptable losses. In the context of banking, liquidity, or the ability to fund increases in assets and meet obligations as they come due, is critical to the ongoing viability of the banking institution. Since there is a close association between liquidity and solvency of banks, sound liquidity management reduces the probability of banks becoming insolvent, thus reducing the possibilities of bankruptcies and bank runs. Ultimately, prudent liquidity management as part of the overall risk management of the banking institutions ensures a healthy and stable banking sector. Effective liquidity risk management helps ensure a bank's ability to meet its obligations as they fall due and reduces the probability of an adverse situation

developing. They examined the sound practices for the liquidity risk management in banks. They went along with the suggestions of the Basel Committee and Reserve Bank of India on management of liquidity risk. They explained the meaning of liquidity, liquidity risk and liquidity risk management. It also discussed the process of building up of a liquidity risk management system.

Koirala (2013) examine on Liquidity Management of Commercial Banks in Nepal. The main objective of this study was to examine and analyze liquidity position and its management in Nepalese commercial Banks. Descriptive and explanatory research design had been applied in this study with four sample banks out of all commercial bank in Nepal. Various financial and statistical tools were also employed to analyze only secondary collected data.

The findings of this study reveal that Nepalese banks have strong and sufficient liquidity position. This result contradicts with (Joshi, 2019); this may be due to low investment opportunities and eminent flow of remittance, increasing number of loan defaulters, poor liquidity policy, lack of proper intervention and inspection of monitory authority of state, confined financial instrument as well as other various reasons. This result is also consistent with the study of (Acharya, 2010)based on descriptive and analytical research design on the topic "Liquidity Management of Commercial banks in Nepal" by employing secondary dada; various financial and statistical tools.

Similarly, another statistical tool the correlation coefficient disclosed that liquidity and profitability is correlated each other positively but insignificantly and inconclusively. But this result was found positive and highly significant on the study of (Joshi, 2019). This study also found that various internal factors such as lending policy, management capacity, strategic planning, and fund flow situations etc. and external factors such as national security, political instability, and income of depositors, foreign remittance and fear of possibility of loan defaulters are affecting the liquidity position of the commercial banks. This finding is also consistent with the study of (Joshi, 2019).

Almazari (2014) investigated the internal factors that have an effect on profitability in Saudi and Jordanian banks. He found that there is a positive correlation between profitability measured by ROA of Saudi and Jordanian banks with some liquidity

indicators, as well as there is a negative correlation with other liquidity indicators between profitability measured by ROA of Saudi and Jordanian banks .

Ally (2015) analyzed the financial performance of commercial banking sector in Tanzania for the period of 7 years from 2006 to 2012. Financial ratios were employed to measure the profitability and liquidity of banks; in addition Analysis of Variance (ANOVA) was used to test the significance differences of profitability means among peer banks groups. The study found that overall bank financial performance increased considerably in the first two years of the analysis. A significant change in trend is noticed at the onset of the global financial crisis from 2008 to 2009. However, Tanzania banking sector remained stable; banks are adequately capitalized and profitable and remained in a sound position. The study found that, there is no significant means difference of profitability among of peer banks groups in term of ROA, however, a significance differences among banks group is existed in term of ROE and NIM.

Bhandari (2015) examined the determinants of performance exposed by the financial ratios and determines the financial performance of commercial banks in Nepal through Analytical Hierarchy Process based on their financial characteristics. The financial parameters were derived by segregating 5 major criteria which were Liquidity, Efficiency, Profitability, Capital Adequacy and Assets Quality. The criteria were further classified into 21 hierarchical sub-criteria. The performance evaluation was done for 13 commercial banks for financial data from year 2008/09 to 2011/12. The paper emphasizes financial decision problems to have strong multi criteria character and establishes priorities for performance parameters of commercial banks among financial indicators identified and ranks banks according to those indicators. This study has added one more literature to demonstrate the utility of AHP based bank evaluation to Nepalese banking community in particular, which not only evaluates the performance of banks but also gives insights to focus in the area of improvement to a particular bank in comparison to others.

Bassey and Moss (2016) analyzed the bank profitability and liquidity management (a case study selected Nigerian deposit money bank) to examine the liquidity-profitability trade-off of deposit money banks in Nigerian which fifteen banks were taken as sample

and covered a panel data of 2010 to 2015. Two models i.e. ROA & ROE were specified and estimated using Ordinary Least Square technique. The study revealed that there is statistically significant relationship between bank liquidity measures CR, LR, Cash ratio, IR, Loan to assets ratio and ROE but ROA became statically insignificance with liquidity when it was used proxy of profitability. The study also examined that there is negative and significant relationship between current ratio, Liquid ratio, cash Ratio and ROE, but loan to deposit ratio and loan to assets ratio are positively and significantly correlated.

Maharjan (2016) concludes in his research that capital adequacy and liquidity position are the major determinants of profitability of Nepalese commercial banks. He has conducted the research to examine the impact of bank specific and macroeconomic variables on profitability of Nepalese commercial banks. The bank's profitability performance was measured by return on assets return on equity and net interest margin. Capital adequacy, credit risk, liquidity position and bank size are used as bank specific variables and macroeconomic variables include inflation and gross domestic product growth rate. The study was based on secondary data of 19 banks with 114 observations for the period of 2009 to 2014. The result shows that return on assets, return on equity and net interest margin are positively related with capital adequacy, credit risk, and bank size. Likewise, inflation and gross domestic product have positive relationship with bank profitability measure return on assets and return on equity but negative relationship with net interest margin

Uyar (2017) explained that the corporate liquidity can be examined along two basic dimensions: static and dynamic. Static analysis is focused on traditional ratios (current and quick ratios) based on the data from the balance sheet. These ratios assess to what extent current liabilities are covered by current assets. Dynamic analysis is based on cash outflows and inflows and uses cash conversion cycle (CCC) to measure effectiveness of a company's ability to generate cash. It comprises both balance sheet and income statement data to create a measure with a time dimension (cash flow within the operating cycle of the firm). To conduct a comprehensive liquidity analysis both types of ratios are used. 5 There are different approaches to evaluation of liquidity profitability trade-off. Most authors use panel data regressions with profitability measure as a dependent variable and liquidity indicators as explanatory variables. They also analyzes association between

liquidity management and profitability of 230 Indian private sector steel companies, uses return on assets as the dependent variable and current ratio, quick ratio , absolute ratio, debt to equity ratio, interest coverage ratio, inventory turnover ratio, debtors turnover ratio, and creditors turnover ratio as explanatory variables. Traditional current ratio is positively associated with profitability. But liquid ratio and absolute ratio influence profitability negatively. Still the relationship is weak. Therefore, traditional liquidity ratios are quite poor in measuring the efficiency of the firm's liquidity management.

Pandy (2017) analyzed on the liquidity requirement of firms differs depending on the circumstances of the company. The main factors that influence liquidity requirements are the nature and the size of business (trading and financial firms require large investments in working capital, construction firms also have to invest substantially in working capital); manufacturing cycle; business fluctuations; credit policy of the firm; growth and expansion activities (growing industries require more working capital than those that are static), operating efficiency (optimum utilization of resources), production policy and price level changes.

Bagh et al. (2017) profitability or monetary performance embodies quantifying the outcome of a business's entire polices and operations in terms of money. In order to gauge firms profitability diverse alternatives key financial ratios can be employed e.g. earnings per share, net profit ratio, gross profit ratio, return on equity, assets, and capital employed etc. Liquidity difficulties may deleteriously affect a certain bank's earnings and capital. Under risky situations, it may become reason of failure otherwise solvent bank. Another hurdle may be meeting the depositor's demands. The highest priority of a bank's management is to pay the necessary consideration to the liquidity difficulties. These difficulties should be taken into consideration in timely manners and immediate affirmative and corrective actions should be taken in order to avoid the significances of illiquidity. The study is around the impact of liquidity on the profitability of commercial banking sector of Pakistan. When the banks have sufficient money to meet day to operation is called liquidity. Bank liquidity implies having enough money to meet the commitment

Munithi and Waweru (2017) studied on liquidity of commercial banks in Kenya . They measured liquidity by liquidity coverage ratio (LCR) and net stable funding ratio (NSFR) while profitability is measured by ROE (return on equity) . Panel data techniques of random effect estimation and generalized method of moments were used to purge time invariant observed specific effect and to mitigate potential problems. Findings indicate that NSFR is negatively associated with bank profitability both in long run and short run while LCR does not significantly influence the profitability of commercial banks in long run and short run .

A research study conducted by (Chukwunweike, 2017) on impact of liquidity on profitability of some selected companies; recommends that corporate entities should not pursue extreme liquidity policies at the expense of their profitability, i.e. management should strike a balance between the two performance indicators (Liquidity and profitability). This study also revealed that CR is a significant positively correlated with profitability proxy ROA and this study is consistency with the study of (Ismail, Impact of liquidity management on Profitability of Palistan Firms, 2021)and Acid-quick Ratio is no definitely correlated with profitability as measure by ROA, and is contrary with the study of (Podilchuk, 2018)which revealed that there is significant positive diminishing effect of QR on profitability.

Hakimi and Zaghdoudi(2018) studied impact of liquidity on profitability of 10 Tunisian banks over the period (2005 to 2015) . They found that liquidity (measured by total credits / total deposits) has a negative effect on bank profitability (NIM) .

Charmler and al (2018) studied a sample of 21 banks in Ghana over the period (2007 to 2016). They found that liquidity is positively associated with bank profitability. They found that liquidity has positive and significant effect on bank profitability. The findings were also that this study that only DAR (deposit to assets ratio) significantly impact on profitability (Return on equity) .

Moreover Mohanty and Mehrota (2018) studied 27 public sector banks and 20 private sector banks in India for the period (2011-2012) and (2015-2016) . Experimental and Survey research design were used.They found that there is a negative effect of cash

deposit ratio and investment deposit ratio on ROA. But there is no significant effect of liquidity on ROE.

Awlo et al. (2019) studied the impact of liquidity on bank profitability in Ethiopia over the period (1986 to 2017) . Autoregressive distributed lag model (ARDL) is used to investigate the short run and long run effect of liquidity on profitability .Current ratio and loan to deposit ratio of the bank were used to measure liquidity while ROA is dependent variable (measure of profitability) . They found that loan to deposit ratio negatively affect return on assets in the long run, while current ratio significantly and positively affects ROA in the long run .They further investigates the effect of liquidity creation on bank performance, controlling for set a bank level, industry level, and macroeconomic variables .The findings show that bank liquidity creation improved during the prewar period and showed positive figure, but started to decline sharply during wartime.

Malik et al. (2019) analyzed the trade-off between liquidity and profitability in private sector banks of Pakistan. The study was carried on twenty two private sector banks registered under State bank of Pakistan during the time period of 2009-2013. Three models were specified and estimated using Ordinary Least Squares (OLS) technique. The empirical results revealed that there is a statistically significant relationship between bank liquidity measures and return on assets. However, when return on equity and return on investment was used as proxy for profitability, the relationship became statistically insignificant.

Abdullah and Jahan (2019) investigated the impact of liquidity and profitability of the private commercial banks of CSE-30 in Bangladesh by focusing on certain ratios over a period of five years. Five private commercial banks have been selected to undertake the research. Profitability measures - ROA and ROE are dependent variables and liquidity measures - Loan Deposit Ratio, Deposit Asset Ratio and Cash Deposit Ratio are selected as independent variables. The research carried out simple regression analysis to test the hypotheses. However, the null hypothesis is accepted in this study indicating that there is no significant relationship between liquidity and profitability.

Joshi (2019) examined the liquidity management by applying descriptive and analytical research design. The objective of was to know the impact of liquidity on profitability and

the factors affecting the liquidity. The major findings were this study are NABIL has maintained highest cash and bank balance total deposit ratio among the entire sampled bank under study, all sampled banks have maintained moderate level of investment to total deposit ratio. With the analysis and evaluation of various financial and statistical tools, he recommended that all sampled banks under study should collect more amounts of deposit through variety of deposit schemes and facilities. Moreover, he also suggested SCB to keep wide vision in investment. Data were collected from secondary sources.

Karki (2019) examined the impact of liquidity on loans and advances and dentified liquidity ratio was relatively fluctuating over the period, return on the equity is found satisfactory and there is positive relationship between deposits and loan advances. Semi experimental and co-relational research designs were used. Semi Experimental and descriptive research design were used during the research. The recommendations made that are the existing condition of the liquidity of the banking and financial institutions needs to be reduced through an appropriate investment policy.

Alshatti (2020) investigated the effect of the liquidity management on profitability in the Jordanian commercial banks during the time period (2009–2019). Thirteen banks have been chosen to express on the whole Jordanian commercial banks. The liquidity indicators are investment ratio, quick ratio, capital ratio, net credit facilities/ total assets and liquid assets ratio, while return on equity (ROE) and return on assets (ROA) were the proxies for profitability. Augmented Dickey Fuller (ADF) stationary test model was used to test for a unit root in a time series of the research variables and then testing hypothesis by using regression analysis. The empirical results show that a positive effect of the increase in the quick ratio and the investment ratio of the available funds on the profitability, while there is a negative effect of the capital ratio and the liquid assets ratio on the profitability of the Jordanian commercial banks.

Karani (2020) reviewed on Impact of Liquidity Management on Profitability of Commercial Bank in Kenya based on descriptive research design during 2013 to 2023. In this study the secondary data were employed with other tools; descriptive statistics, regression analysis, ANOVA and financial tools to examine the relationship between

liquidity and profitability. 27 banks were selected as sample out of 44 commercial banks in Kenya. Cash and cash equivalent assets, capital ratio and Deposit Ratio were the proxy of liquidity and profitability proxy was ROA. The study found out that there is a positive relationship between profitability and liquidity position of commercial banks in Kenya. The study also recommends that the finance managers of commercial banks maintain a balance between the level of liquid assets and long term assets to reinforce each of the conflicting objectives of maintaining adequate liquidity and sustainable profitability. Additionally, the liquidity requirements that have been set by national monitory authority need to be maintained and strengthened since liquidity is found to have a positive effect on profitability of commercial banks stability and growth of the entire financial and economic.

Reddy (2020) investigated the trade of between liquidity and profitability by applying the statistical tools with secondary data of company. It found that there is a negative relationship between liquidity and profitability and this finding is also consistent with (Niresh, 2014). The study also concluded that the company can earn good profit with moderate liquidity position. Therefore, every firm should maintain equilibrium between profitability and liquidity in order to get optimum returns. The research variables such as CR, QR and LR of the study of (Niresh, 2014) are also negatively correlated with profitability proxy ROCE.

Sthapit and Maharjan (2020) examined the liquidity management and profitability position of NABIL and SCBN using the various financial tools and indicators by taking seven years' secondary data during 2008/009 to 2015/016. It was found that trend of average liquidity ratios and profitability of both banks are not seems to be highly fluctuating but average variation in liquidity ratios as well as profitability of SCBN is lower than that of NABIL. Liquidity ratios (total liquid fund to current liability ratio, total liquid fund to total deposit ratio, NRB balance to total deposit ratio, cash in hand and total deposit ratio, and cash and bank balance to total deposit ratio) have not significant effects on profitability of NABIL whereas significant effect between them of that SCBN. Therefore, the liquidity performance of SCBN is better than that of NABIL.

The study conducted by (Pradhan & Shrestha)with the listed 16 commercial banks of NEPSE as sample for eight years period revealed that, the liquidity ratio and quick ratio have a negative significant with the profitability proxy ROA and ROE but investment ratio and capital ratio are positively significant with ROA & ROE. This study is consistent with the study of (Alshatti, 2018) except association between capital ratio & ROE which can be found contrary. Descriptive and statistical tools were used to test hypothesis and association between various variables. Descriptive statistics analysis found that ROE has higher fluctuation trends than ROA i.e. SD of ROE is greater than SD of ROA. This result is consistent with the study of (Adam, 2014). Liquidity ratio has higher fluctuation trends than other liquidity indicators such as Investment Ratio, Capital Ratio, and Quick Ratio respectively i.e. S.D. of LR is greater than SD of IR, SD of CR, & SD of QR.

Marozva (2020), observed at the relationship between liquidity and bank performance over the period 2010 to 2021 for banks of South Africa and found adverse relationship between net interest margin and funding liquidity risk. Experimental research design were used. The findings of the research was that the relationship between liquidity ratios and profitability ratios are inversely related to each other as the decline in one variable results in increase of another variables

Lakhera (2020) analyzed the Financial Performance of Himalayan bank and Everest bank. Objective of his study was to examine the financial performance of Himalayan bank and Everest bank. This study used descriptive and analytical research design with secondary data of perspective annual report and publications of two sample banks; Everest bank and Himalayan bank, out of all commercial banks in Nepal. Various Financial- statistical tools such as Liquidity ratios, leverage ratios, activity ratios, market ratios, coefficient correlation, and probable error etc. were applied in this study to analyze their research objectives.

This study concluded that both banks have poor liquidity position but quick ratios also found not consistent with general standard 1:1. In aggregate, better liquidity position of Everest bank was comparatively found than Himalayan bank. Profitability position of

Himalayan bank also not discovered satisfactory as compared with Everest bank. However, both banks were found able to meet their short term obligations.

Shrestha (2021) investigated the relationship between liquidity management and profitability and its impact on profitability of commercial banks in Nepal. The relation between the liquidity management PRAVAHA, 26 ~ 41 ~ and profitability is examined using Pearson correlation analyses. The effect of liquidity on profitability is analyzed using the regression analyses. The data has found to be covering period 2015-2020 of commercial banks in Nepal. The liquidity management represents the variables of the current reserve ratio (CRR), credit deposit ratio (CDR) and the profitability including return on equity (ROA). The result reveals that liquidity does not have its significant impact on profitability in Nepalese commercial banks.

Saleem and Rehman (2021) revealed the relationship between liquidity and profitability. The main results of the study demonstrate that variables such as Liquid Ratio, Quick Ratio, and Current Ratio have a significant effect on the financial positions of enterprises with differing amounts and that along with the liquidity ratios in the first place. Profitability ratios also play an important role in the financial positions of enterprises. In detail, only liquid ratio significantly affects the ROA but ROE is not affected by the all these three ratios such as QR, LR, and CR but ROI are greatly affected by all three liquid ratios. Linear Regression Model was applied to test the hypothesized statements and collected data from the secondary sources.

Ibe (2021) examined the impact of liquidity management on the profitability of banks in Nigeria. Banks were randomly selected to represent the entire banking industry in Nigeria. The proxies for liquidity management include cash and short term funds, bank balance and treasury bills and certificates, while profit after tax was the proxy for profitability. Elliot Rosenberg Stock Stationary test model was used to test the association of the variables under the study, while regression analysis was used to test the hypothesis. The result showed that there is a statistically significant relationship between the variable of liquidity management and profitability of the selected banks.

Bordeleau and Graham (2021) explored that profitability is generally increased for banks that holds some liquid assets; however, there is a point at which holding further liquid

assets decreased profitability of banks, Ceteris Paribas. Moreover the findings suggested that this relationship fluctuates as per bank's business model and the state of the economy.

Nimer, Warrad, and Omari (2022), Has investigate the financial statement of 15 Jordanian banks listed at Amman Stock Exchange (ASE) for the period from 2010 to 2021. They concluded that liquidity has a significant negative influence on the profitability because of banks having excessive liquidity instead of investing the money to generate profit.

Smail (2022) referred the mounting importance of liquidity and profitability as a key concern in today's competitive business environment to generate funds internally. 18 This study has examined the impact of the liquidity management on the performance of the 64 Pakistani non-financial companies constituting Karachi Stock Exchange (KSE) 100 Index for the period of 2009-2021. To derive the results of the study; descriptive statistical analysis, correlation analysis and multivariate regression tools of analysis were applied. According to the results of analyses, it is found that liquidity variables current ratio and the cash conversion cycle have significant positive impact on profitability (ROA). Further, results indicate that high current ratio and longer cash conversion cycle lead firms towards better performance. This study suggested firms to relax their credit sales policies, and devise inventory & collection turnover system in a wise manner to be more accessible to a large number of customers.

Begum (2022) investigated the relationship between banks' liquidity and profitability and the impact of liquidity on bank's profitability. The paper applies the ordinary least square (OLS) method for the sample period from 2012 to 2021 to examine the impact of liquidity on banks' profitability. The paper finds that the advance deposit ratio positively impacts banks' profitability while profitability is defined as return on asset (ROA). Call money rates, non performing loans (NPLs), and excess liquidity impact banks' profitability in a negative fashion. The negative relationship between NPLs and ROA has been a major concern for the policymakers in the banking industry.

2.4 Research Gap

The impact of liquidity on bank profitability of commercial bank in Nepal has been conducted by few researchers. However, the researcher conducts study according to some randomly selected commercial bank which is not specified the category of bank. They are only concerned with selected sector like private, and joint venture. Nobody has taken into consideration for these sartorial or cluster wise, i.e. government ownership bank, private ownership bank and Joint venture bank categorization to identify the impact of liquidity on profitability of commercial bank of Nepal. Previous researchers have not taken the latest updated data from annual report of concerned bank from Nepalese context. In international context, various related research between banks of different nations has been taken into consideration.

Banking sectors in Nepal operates within a distinct regulatory environment characterized by factors such as limited financial infrastructure, political instability etc. These unique circumstances likely influence the relative factors between liquidity and profitability in ways that deviate from established patterns observed in other economies. The availability and access to reliable data regarding the liquidity positions and profitability metrics of Nepalese banks remains limited. The lack of comprehensive datasets impedes exact empirical analysis and hampers the capability to draw healthy conclusions regarding the relationship between liquidity management strategies and bank profitability in Nepal.

On hand studies often employ methodologies and analytical frameworks modified to the contexts of developing economies, potentially overlooking the details of the Nepalese banking landscape. The applicability of such methodologies to the Nepalese context warrants vigilant examination, as methodological limitations may obscure or misrepresent the true nature of the connection between liquidity and profitability in Nepalese banks. The nonexistence of empirical research exploring the implications of liquidity management practices on the profitability and steadiness of Nepalese banks hinders the formulation of evidence-based policy interventions aimed at encouragement of financial flexibility and promoting sustainable growth within the banking sector. Addressing these research gaps is imperative for advancing our understanding of the nexus between liquidity and profitability in Nepalese banks.

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Research Design

Research design is the plan, structure, and strategy of investigation conceived to obtain answers of the research questions. It is an overall plan for the activities to be undertaken during the course of a research study. Various research designs have been developed in the today's scientific research field that is applied to conduct different research in different field. Research design is a master plan specifying the methods and procedures for collecting and analyzing the needed information (Pant, 2019)**.**

Descriptive and causality research design have been employed to analyze various components that shows the profitability position and liquidity state of Nepalese commercial banks. It also presents how liquidity indicators or components affect the components of profitability of banks. This study is particularly quantitative in nature. Since quantitative data have extensively employed. Interpretation of liquidity position, state of profitability of commercial banking, indicator of liquidity and their impact on profitability, impact of liquidity management on profitability of banks, and the factors that mostly influence the liquidity management of commercial bank of Nepal etc. are the major issues to be dealt throughout the research.

The collected data using different methods have been tabulated and analyzed using various financial, statistical and analytical tools to find out real liquidity and profitability position as well as their relations between them.

3.2 Population and Sample

Population is the sum of all elements or items toward which study is targeted but sample is the small portion of the population upon which study is going to be conducted. In this study all registered commercial banks in Nepal are the population of this study and out of them ten “A” class banks are taken as sample which are chosen on the basis of convenience sampling techniques. All the A class commercial Banks of Nepal were

taken as population for the research of which 10 commercial Banks were taken as sample for research purpose.

3.3 Nature and Sources of Data Collection

The study has employed secondary data for the research. Secondary data are second hand data that was earlier collected by someone else for different purpose. As secondary data already exist it is cost effective and can be access through various sources like database, libraries etc. For this research purpose secondary data were collected from published sources such as annual reports of commercial banks which are taken as population and sample. All the commercial banks in Nepal are taken as population and ten specific banks were taken as sample.

3.4 Research Framework and Variables

Variables are the characters of person, things, groups, objectives, ideas, feelings or any other type of categories that are trying to measure. A variable is a symbol to which numerals or values are assigned (Pant, 2019)**.**So, the variables can take their own values. Variables are essential elements of the study which reveals how dependent variables are influenced by independent variables. The dependent and independent variables for this study are as follows.

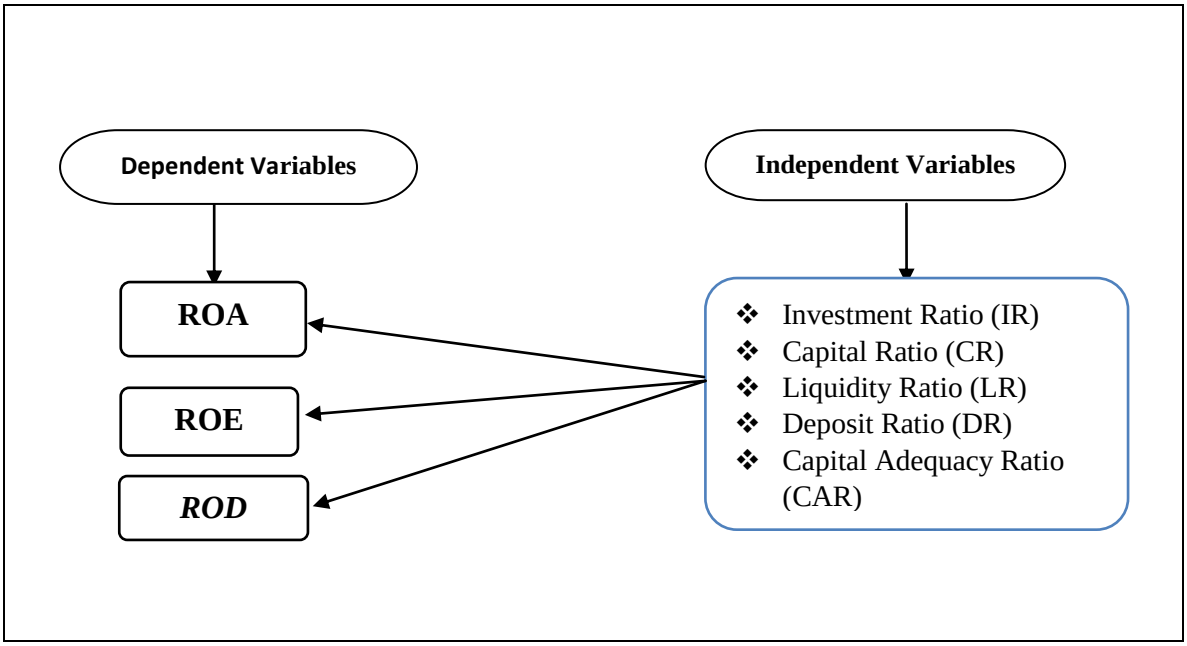

Figure 3.1 Research Variable

A research framework is a structured plan or outline that provides guidance for conducting a research study. It outlines the key components of the research process, including the research problem, objectives, literature review, methodology, data analysis, and conclusions. The purpose of a research framework is to ensure that the study is conducted systematically and coherently, with each component contributing to the overall research aims and objectives. A research framework serves as a roadmap for researchers, helping them organize their opinion, identify pertinent literature, select suitable methodologies, analyze data effectively, and draw meaningful conclusions. It provides a clear structure for the research study, guiding the researcher through the different stages of the research process from conception to completion. Following well-developed research framework has been used in the research.

1. Introduction: Provides background information on the research topic, states the research problem, and outlines the objectives of the study.
2. Literature Review: Reviews existing literature relevant to the research topic, identifies gaps in knowledge, and establishes the theoretical foundation for the study.
3. Conceptual Framework: Develops a theoretical framework or conceptual model that guides the research process and informs the formulation of hypotheses or research questions.
4. Methodology: Describes the research design, data collection methods, sampling techniques, and data analysis procedures to be employed in the study.
5. Data Analysis: Presents the results of data analysis, interprets findings in relation to the research objectives, and discusses their implications.
6. Discussion: Reflects on the findings of the study, compares them with existing literature, and discusses their significance for theory, practice, and future research.
7. Conclusion and Recommendations: Summarizes the key findings of the study, draws conclusions, and provides recommendations for future research or practical applications.

3.5 Method of Analysis

Methods of analysis describe the way by which collected data can be concluded. Without analysis of data, gathered data becomes unable to produce a logical conclusion and information. In another words, collected data become meaningless and vague in the absence of proper analysis of collected data by applying proper methods, tools and techniques. Various financial and statistical tools might be applied to analyze the collected data in order to expose the problem of the study. Which tools can apply in the study depends on the nature and size of the collected data and objectives of study. The statistical and financial tools that are applied in this study are described as bellows:

3.7.1 Statistical Tools

Statistical tools are the measures or the instruments which are used to analyze the collected data from different sources. It includes both descriptive and inferential statistical tools that are as follows:

i. **Diagrammatic Presentation**

   Presentation of statistical data through the use of diagram is known as diagrammatic presentation. It may include geometric figures like bar diagrams, charts etc. that supports to make information attractive and clear for understanding.

ii. **Average (mean)**

   An average is a single value that represents characteristics of entire populations. It helps to calculate the average value of presented data which describes the aggregate characteristics of entire populations. It can be calculated by using the excel software.

iii. **Standard Deviation**

   The standard deviation (σ) measures the absolute dispersion. The greater the standard deviation, the greater will be the magnitude of the deviation of the values from their mean. It can be calculated by using the excel software.

iv. Coefficient of Variation

The standard derivation is absolute measures of dispersion; whereas the coefficient of variation (CV) is a relative measure. It measures the scattered elements in the data related to the mean. It is specially used to compare the liquidity and profitability position of banks. It can be calculated by using the excel software.

v. Hypothesis Testing

Testing of hypothesis is one of the most important aspects of the theory of decision making. Various types of hypotheses such as descriptive & relational hypothesis, explanatory hypothesis, directional & non-directional hypothesis and null & alternative are commonly applied in the business in decision making. Out of these hypotheses, null and alternative hypothesis iscommonly used in the analytical research design which is also calculated in this study by using SPSS software.

vi. Regression Analysis

Regression analysis shows how the variables are related to each other. Regression analysis statistically helps to estimate relationship among independent and dependent variables (Ismail, Impact of liquidity management on Profitability of Palistan Firms, 2016). It also indicates the nature and strength of relationship between two variables. Regression is the estimation of unknown values. The following Regression model will be applied in this study.

Model 1 $$Y_1 = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + a_4x_4 + a_5x_5$$

Model 2 $$Y_2 = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5$$

Model 3 $$Y_3 = c_0 + c_1x_1 + c_2x_2 + c_3x_3 + c_4x_4 + c_5x_5$$

Where,

Y_1, Y_2, Y_3: Represents the bank's profitability measured by ROA, ROD and ROE respectively.

a_1, a_2, a_3, $a_4$and a_5: Represent the value of the variables coefficient of the first model.

b_1,b_2, b_3, $b_4$and b_5: Represent the value of the variables coefficient of the second model.

c_1, c_2, c_3, c_4 and c_5: Represent the value of the variables coefficient of the third model.

a_0, b_0, and c_0: Represent the values of the vertical section.

x_1 represents capital adequacy ratio

x_2 represents liquidity ratio

x_3 represents deposit ratio

x_4 represents investment ratio

x_5 represents capital ratio

vii. Co-efficient of Determination (R^2)

Co-efficient of determination explains the ability of interdependent variable to predict the change in dependents variables. Co-efficient of determination is the most important and use full method of interpreting coefficient of correlations. It is calculated by using SPSS software.

viii. Adjusted R^2

Adjusted R-square is also most important statistical tool that is used to reflect both the number of independent variables in the model and sample size. Specially, adjusted R-square is extremely essential to compare two or more than two regression model that predict the same dependent variable but have a different numbers of independent variables. Adjusted R-square is calculated by using SPSS.

3.7.2 Financial Tool

Financial tools also are the instruments to analyze the collected data from different sources. In this study, the following financial tools are used to analyze the data.

3.7.3 Profitability Indicators

In order to determine the extent of the ability of bank to make profits from its invested money, there are various types ratios used to evaluate the profitability of banks or

institutions. The ROE, ROD and ROA will be taken as proxies of profitability in this research.

i. Return on Equity

Return on equity (ROE) measures the efficiency of a firm at generating profit from each unit of shareholder equity. It shows how well a company uses its investments to generate earnings growth. In another words, ROE measures a corporation's profitability by indicating how much income a company generates with the money shareholders have invested. Various authors found that ROE is positively affected with the efficient liquidity management. It can be calculated as follows:

$$\text{Return on Equity (ROE)} = \frac{\text{Net Profit}}{\text{Shareholders Equity}}$$

ii. Return on Deposit

Return on Deposit (ROD) measures the efficiency of a firm at generating profit by mobilizing it's all types of deposit liabilities. In detail, it reflects the bank management ability to utilize the customer's deposit in order to generate profits. It is one of the best measures of bank profitability performance. Adam (2017) found that ROD negatively and significantly affects the liquidity. It can be calculated by using following formula:

$$Return\ on\ Deposit(ROD) = \frac{\text{Net Profit}}{\text{Total Deposit}}$$

iii. Return on Assets

Return on Assets (ROA) is financial ratio that reveals the percentage of profit that a company earns in relation to its overall resources. It is a key profitability ratio which measures the amount of profit made by a company per rupee of its assets. It can be calculated as net profit after tax divided by the total assets. It also indicates how effectively and efficiently financial assets and other resources are being utilized. ROA shows how efficiently management using assets to generate earnings (Pradhan & Shrestha).

(Siraj and Pillai, 2018) as sited in (Pradhan and Shretha); (Posnikoff, 1997); and (Margolis and Walsh, 2013) found a positive and significant relationship between liquidity and financial performances. This result is also consistent with the study of (Saleem and Rehman, 2017)**.** This ratio measures the efficiency of a firm at generating profit from its net assets. It can be calculated as follow:

$$\text{Return on Assets(ROA)} = \frac{\text{NetIncomeAfterTAX}}{\text{TotalAssets}}$$

3.7.4 Liquidity Indicators

i. Credit to Deposit Ratio

Credit to deposit ratio (CDR) is the ratio between loan and advances and total deposits. Loan and advances include private sectors, financial institutions, government organizations etc. and total deposit includes current deposit, saving deposit, fixed saving, and call deposit etc. It measures the liquidity condition of the bank and also evaluates that at what extent management is able to invest as loan from their deposit liabilities. . It can be calculated by using following formula:

$$Credit\ to\ Deposit\ Ratio = \frac{Loan\ and\ Advances}{Total\ Deposit}$$

ii. Investment Ratio

Investment ratio (IR) is the ratio between all investment amounts except bill purchased, loan and advances to total assets. All investments include investment and shares such as government securities, NRB bond, government non-financial institutions, other non-financial institution, nonresidents, interbank lending etc. that can be calculated by using following formula:

$$\text{Investment Ratio} = \frac{\begin{array}{c}\text{Investment on share, bond,}\\ \text{gov. securities , inter bank}\\ \text{lending, non} - \text{residents,}\\ \underline{\text{non} - \text{finnacial institutions.}}\end{array}}{\text{Total Assets}}$$

iii. **Capital Ratio**

Capital ratio is the relationship between paid up capital and total assets. It can be calculated by using following formula:

$$Capital\ Ratio = \frac{Paid\ up\ Capital}{Total\ Assets}$$

iv. Liquidity Ratio

It is the relationship between acid liquid assets and total assets. Acid liquidity assets includes cash and equivalent, cash reserve at the central banks, short term deposits in banks and other government and non-government guaranteed securities as a percentage of total assets. Many authors found that proxies of profitability and liquidity ratios are inversely related to each other. It can be calculated by *using* following formula.

$$Liquidity\ Ratio = \frac{Liquid\ Fund}{TotalAssets}$$

v. Deposit Ratio

This Ratio is also indicator of liquidity ratio which measure how much assets are financed by deposit amount. Deposit Ratio is calculated by the following formula:

$$Deposit\ Ratio = \frac{Total\ Deposit\ Amount}{Total\ Assets}$$

vi. Capital Adequacy Ratio

Capital adequacy ratio (CAR) is the relationship between capital funds and total assets. Capital fund takes paid up capital, calls in advance, statutory reserve, share premium, retained earnings, other reserves and exchange fluctuation fund etc. whereas total assets is the sum all items of the assets side of balance sheet. It measures the financial strength of bank and reveals the extent of financial stability at the bank. It is also called shareholder's equity to assets ratio which measures how much bank assets are funded with owner's fund. It is also used to measure the ability of banks to absorb the losses. In this regard, various authors have revealed the mixed result of relationship between capital

adequacy ratio and profitability. (Pradhan & Shrestha)Found that capital ratio is positively related with profitability proxy of ROE, and this is also inconsistent with the study of (Alshatti, 2018). But both above mentioned studies are consistent with ROA & capital ratios which are positively correlated each other. This ratio is calculated by dividing shareholder's equity to total assets. .

$$\text{Capital Adequacy Ratio} = \frac{\text{Capital Fund}}{\text{Total Assets}}$$

CHAPTER-IV
RESULTS AND DISCUSSIONS

This chapter especially deals with the presentation, analysis and interpretation of statistics, evidence and facts, to clarify the research works. This chapter presents the collected data for various purposes of analysis by applying financial & statistical tools and techniques to get the nature and values of different research variables. Analyzed data and results are presented clearly and simultaneously by using tables and graphs. These raw data are analyzed as below by applying required tools and techniques.

4.1Analysis of Secondary Data

Under this part, various financial and statistical tools have been analyzed and examined. Various profitability indicators such as ROA, ROE and ROD and liquidity indicators such as CAR, LR, DR, IR CR, and CDR are examined to know liquidity and profitability position of Nepalese commercial banks under the financial and statistical tools. Such tools are also employed to know the impact of liquidity indicators on these mentioned profitability indicators.

4.2 Financial Ratio Analysis

Financial Ratio Analysis is an instrument through which profitably and liquidity position of the banking institutions and non-banking institutions can be fully examined. It is the indicated quotient of two mathematical expressions and the relationship between two or more things. Therefore, to find out the liquidity position of the sampled commercial banks, the following profitability and liquidity ratios and various descriptive statistical tools such as mean, maximum, minimum, CV and standard deviation has been analyzed with the help of excel sheet.

4.2.1 Profitability Ratio Analysis

Profitability is an important and most useable financial tool which measures the operating success of banks. In another words, it measures the degree of operating success and efficiency of a bank in an accounting period. It also tries to establish relationship among profit, assets, shareholder's equity, capital employed etc. that produces the reasonable

meaning to make managerial decisions and communicate about business profitability position to the related various stakeholders such as government, owners, clients, creditors, financial institutions and others. ROE, ROD &ROA are key financial tools that have been analyzed in this study to expose the profitability positions of Nepalese commercial banks.

Return on Equity

Return on Equity (ROE) refers to return on equity which measures the relationship between earning available to equity shareholders and equity holder's funds. It indicates how efficiently and effectively the funds supplied by the equity shareholders have been used. High ROE reveals that equity shareholders' funds are extremely utilized and managed in the organization and vice versa. The position of ROE of existing Nepalese commercial banks is shown in the Table 4.1 as below:

Table 4.1

Average ROE of Nepalese Commercial Banks

Year/Bank	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	55.17	22.71	31.50	56.65	28.13	16.72	13.55	59.29	7.33	35.16	32.62
2014	59.06	35.40	19.63	33.33	45.71	18.64	11.97	42.03	194.80	45.89	50.64
2015	36.57	40.98	39.85	46.93	31.20	32.40	33.93	39.43	-36.92	33.15	29.75
2016	36.48	42.40	21.93	48.95	45.13	18.31	246.94	38.47	-24.59	37.44	51.15
2017	66.70	28.70	23.87	47.04	30.20	31.07	59.97	41.24	-190.67	54.08	19.22
2018	57.48	37.78	18.70	27.94	37.75	30.85	41.58	35.60	119.38	29.26	43.63
2019	33.10	27.55	18.28	41.03	33.75	12.17	14.10	33.23	34.41	29.52	27.71
2020	37.69	25.54	16.69	26.34	35.03	11.76	11.31	31.90	42.70	25.01	26.40
2021	42.68	32.91	24.30	22.12	35.31	12.26	19.29	29.41	27.16	22.86	26.83
2022	35.84	27.45	24.23	20.81	32.15	12.09	16.26	29.95	21.89	14.62	23.53
2023	28.64	24.73	23.18	18.56	28.67	11.89	15.32	25.69	28.70	10.05	21.54
Average	44.49	31.47	23.83	35.43	34.82	18.92	44.02	36.93	20.38	30.64	32.09
SD	12.73	6.81	6.68	13.23	5.99	8.45	69.04	9.09	95.42	12.77	11.30
CV	0.29	0.22	0.28	0.37	0.17	0.45	1.57	0.25	4.68	0.42	0.35

Source: Appendix-12

Table 4.1 shows that average ROE of Nepalese commercial banks' 32.09 during the given period. The overall average fluctuation (i.e. standard deviation) of ROE from its mean value has been found 11.30 percent of Nepalese commercial banks during the given

period.Out of sample units, the higher average ROE has been found 44.49 percent and 44.02 percent of NABIL bank and NMB bank respectively during 2013 to 2023 which are owned by private sectors.

Return on Deposit

Return on deposit (ROD) which measures the relationship between earning available and total deposit amount. It also shows that the majority of return on deposits and bank management ability to utilize the customers' deposits in order to generate profits. The situation of how efficiently and effectively Nepalese commercial banks is generating profit by utilizing their deposit liability is exposed in terms of ROD in the following:

Table 4.2

Average ROD of Nepalese Commercial Banks

Year	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	5.61	1.97	2.51	3.03	2.73	1.49	1.48	3.92	0.63	2.56	2.59
2014	5.06	2.17	2.03	1.94	2.76	1.83	0.47	2.87	3.51	3.17	2.58
2015	2.94	2.29	3.45	2.77	1.57	2.65	-1.61	2.81	6.1	2.25	2.52
2016	2.35	2.4	1.86	3.3	3.01	2.29	6.77	2.74	6.29	2.32	3.33
2017	4.35	2.1	1.21	3.41	1.87	2.68	4.49	2.87	19.95	4.01	4.7
2018	3.88	2.84	1.15	2.32	2.25	2.88	4.22	3.09	13.21	2.51	3.83
2019	2.56	2.52	1.08	3.45	2.26	1.41	1.96	2.95	5.52	2.91	2.66
2020	3.13	2.31	0.88	2.21	2.18	1.18	1.2	3.26	5.39	2.44	2.42
2021	3.67	3.19	1.32	1.93	2.55	1.15	1.71	3.09	4.49	2.23	2.53
2022	3.18	2.61	1.69	1.71	2.5	1.16	1.65	2.98	3.01	1.52	2.2
2023	2.1	2.16	2.08	1.54	1.88	1.06	1.49	2.28	3.48	0.9	1.9
Average	3.53	2.41	1.75	2.51	2.32	1.80	2.17	2.99	6.51	2.44	2.84
SD	1.12	0.36	0.75	0.71	0.44	0.70	2.24	0.40	5.45	0.81	0.81
CV	0.32	0.15	0.43	0.28	0.19	0.39	1.03	0.13	0.84	0.33	0.29

Source: Appendix-13

Table 4.2 shows that overall average ROD of Nepalese commercial banks is 2.84 percent during 2013 to 2023. The overall average fluctuation (i.e. standard deviation) of ROD from its mean value has been found 0.81 percent during the given period.

Out of sample unit banks, the higher average ROD has been found 6.51 percent and 3.53 percent of CTZN and NABIL bank respectively during 2013 to 2023 which are owned by private sectors. Maximum ROD has been also found 19.95 and 6.77 percent of CTZN and NMB respectively and minimum is - 1.61 percent of NMB.

Return on Assets

It measures that how effectively and efficiently all financial and non-financial assets have been employed in order to generate the profit. It is a comprehensive measure of overall bank performance from an accounting perspective. It also reveals the firm's ability of generating profit by utilizing the total assets. Having higher ratio of ROA represents that management of organization is able to utilize its total assets efficiently and effectively.

Table 4.3

Average ROA of Nepales Commercial Banks

Year/Banl	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	4.39	1.68	2.04	2.59	1.83	-6.90	1.13	3.33	0.49	2.23	1.28
2014	4.06	1.86	1.60	1.65	2.28	-11.90	0.36	2.47	2.73	2.61	0.77
2015	2.31	1.97	2.56	2.39	1.29	3.17	-1.19	2.31	4.04	1.86	2.07
2016	1.95	2.07	1.37	2.80	2.53	4.45	4.87	2.37	4.39	2.02	2.88
2017	3.54	1.80	1.06	2.90	1.64	4.64	3.52	2.47	11.85	3.45	3.69
2018	3.29	2.39	1.02	1.95	1.98	3.69	3.16	2.62	8.29	2.12	3.05
2019	2.07	2.06	0.97	2.86	1.99	4.38	1.43	2.48	3.47	2.39	2.41
2020	2.41	1.89	0.80	1.88	1.93	2.13	0.99	2.73	4.00	2.04	2.08
2021	2.98	2.55	1.17	1.62	2.21	1.11	1.40	2.59	3.25	1.84	2.07
2022	2.56	2.10	1.47	1.46	2.17	0.12	1.37	2.51	2.28	1.29	1.73
2023	1.75	1.77	1.75	1.32	1.56	1.48	1.25	1.97	2.70	0.76	1.63
Average	2.85	2.01	1.44	2.13	1.94	0.58	1.66	2.53	4.32	2.06	2.15
SD	0.88	0.26	0.53	0.59	0.35	5.27	1.64	0.33	3.14	0.69	0.83
CV	0.31	0.13	0.37	0.28	0.18	9.14	0.99	0.13	0.73	0.34	0.39

Source: Appendix-11

Table 4.3 exposes that overall average ROA of Nepalese commercial banks is 2.15 percent during 2013 to 2023 respectively. The overall average fluctuation (i.e. standard deviation) of ROA from its mean value has been found 0.83 percent of Nepalese commercial banks during the given time period.

Out of sample unit banks, the higher average ROA has been found 4.32 percent and 2.85 percent of CTZN and NABIL respectively during the given period. The standard deviation of KB is higher than other banks that reveal the return on assets of KB is highly fluctuated than other banks retunes. These above mentioned result are remained above the overall standards.

Overall Profitability Position of Nepalese Commercial Banks

In the overall, the Nepalese commercial banks profitability in terms of ROA, ROE and ROD has been found in increasing trend but such trend is not consistently growing over the period of 2013 to 2023 and after 2018 it has been found moving continuously in decreasing pattern. ROA profitability indicator of Nepalese commercial banks has been found highly fluctuating than another indicator such ROE and ROD. It means the average of overall CV of ROA has been found more than ROE & ROD.

4.2.2 Liquidity Ratio Analysis

Liquidity ratios are employed to analyze the liquidity position of banks. It measures the short term solvency or liquidity position of the banks. Moreover, short-term financial strength and the ability of a firm to meet its short term obligation can be only examined through the liquidity ratios. Credit to deposit ratio (CDR), Capital adequacy ratio (CAR), Liquidity Ratio (LR), Deposit Ratio (DR) Investment Ratio (IR), Capital Ratio (CR), has been examined in this study in order to analyze the liquidity position of Nepalese commercial banks.

Credit to Deposit Ratio

Credit to deposit ratio (CDR) reveals the relationship between net credit facility or loan and advances and total deposit. Net Loan to total deposit ratio is the most important ratio to measure the liquidity condition of the banks. Loans and advances are the major areas of fund mobilization of commercial banks.

It depicts how much amount of deposit liability the bank is able to invest in loan and advances. Having higher ratio indicates higher liquidity risk and higher profitability of banks and vice versa. The position of CDR of Nepalese commercial banks has been shown on the following figure.

Table 4.4

Average CDR of Nepalese Commercial Banks

Year/Bank	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	75.95	72.22	76.56	53.34	78.38	88.02	89.51	42.46	72.08	68.96	71.75
2014	67.30	68.72	74.26	58.65	73.35	88.69	88.17	38.63	69.23	72.15	69.92
2015	67.08	71.39	86.03	59.09	73.62	85.33	78.21	42.77	87.73	78.19	72.94
2016	67.41	78.56	91.68	62.84	78.47	89.58	69.46	44.90	77.36	80.17	74.04
2017	74.48	77.63	55.32	72.93	73.12	92.57	78.16	36.57	85.12	82.36	72.83
2018	71.01	81.23	51.26	77.05	76.17	85.45	77.35	45.28	88.14	82.93	73.59
2019	78.01	83.10	51.06	77.36	76.67	87.71	84.16	46.58	86.38	82.06	75.31
2020	77.66	74.57	49.50	71.82	72.74	81.00	78.06	51.09	62.79	72.28	69.15
2021	74.71	75.88	49.47	74.71	76.24	79.32	73.53	58.60	72.26	78.72	71.34
2022	74.06	71.91	64.34	68.65	77.21	82.66	80.18	56.84	72.48	79.07	72.74
2023	64.27	73.96	38.09	72.26	66.05	80.86	79.77	48.85	75.09	80.61	67.98
Average	71.99	75.38	62.51	68.06	74.73	85.56	79.69	46.60	77.15	77.95	71.96
SD	4.79	4.41	17.29	8.25	3.56	4.20	5.86	6.89	8.52	4.71	2.21
CV	0.07	0.06	0.28	0.12	0.05	0.05	0.07	0.15	0.11	0.06	0.03

Source: Appendix-14

From the above Table 4.4, it is clear that the overall average of CDR is 71.96 percent of Nepalese commercial banks during 2013 to 2023. SCB bank has 0.15 coefficient of variation which remains above the CV of overall average. It means the fluctuation of CDR of SCB bank is higher than other banks during the stated period. EB and KB have lower CV that is 0.05. it means CDR of EB and KB are more consistence over the stated period .

Investment Ratio

Investment Ratio (IR) is the relationship between the total investment and total assets. It shows that the extent to which banks is able to invest from each rupee of total assets. Higher investment ratio indicates that the banks have lower liquidity to meet its short term obligation and vice versa. The investment position of Nepalese commercial banks has been shown in the following table.

Table 4.5

Average IR of Nepalese Commercial Banks

Year/Ban	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	23.39	24.49	24.56	18.93	14.07	17.42	4.53	42.64	14.64	21.82	20.65
2014	25.42	25.78	26.94	35.06	25.37	11.87	6.95	47.95	15.49	21.71	24.25
2015	29.85	22.81	15.44	34.12	21.36	10.21	13.90	45.31	7.06	19.97	22.00
2016	25.90	17.11	16.92	33.93	17.72	10.48	18.67	40.52	9.09	17.64	20.80
2017	25.85	13.55	41.53	20.92	15.66	6.43	13.58	44.72	10.97	13.21	20.64
2018	24.93	13.26	41.28	18.53	11.91	8.15	13.57	47.80	13.41	13.59	20.64
2019	21.34	12.26	40.13	17.58	16.52	16.13	14.40	38.16	13.50	16.76	20.68
2020	19.67	14.96	41.33	18.02	13.89	10.95	16.12	30.17	16.97	17.59	19.97
2021	20.89	14.66	39.21	18.07	13.89	13.57	16.42	27.13	12.86	14.17	19.09
2022	19.50	16.72	28.24	26.32	9.10	9.60	13.47	17.15	9.18	11.42	16.07
2023	24.81	19.33	15.26	19.93	15.10	12.69	9.44	19.58	13.26	12.75	16.21
Average	22.84	17.72	30.08	23.76	15.87	11.59	12.82	36.47	12.40	16.42	20.09
SD	3.17	4.74	11.04	7.22	4.44	3.25	4.22	11.18	3.01	3.67	2.34
CV	0.14	0.27	0.37	0.30	0.28	0.28	0.33	0.31	0.24	0.22	0.12

Source: Appendix-18

Table 4.5 reveals that overall average IR is 20.09 percent which represents average investment ratio of Nepalese commercial banks. The overall maximum and minimum Nepalese commercial banks investment ratios are 24.25 percent and 16.07 percent respectively. SCB, NABIL, SBI and HB banks have 47.95 percent, 29.85 percent, 41.53 percent and 35.06 percent investment ratio respectively, which have remained higher than average Nepalese commercial banks' IR but other sample unit banks have lower investment ratio.

Capital Ratio

Capital ratio (CR) establishes the relationship between paid up capital amount and total assets. It measures banks financial viability and strength. Capital includes only paid up capital of banks. Capital ratio position of Nepalese commercial banks has been presented as below:

Table 4.6

Average capital ratio of Nepalese Commercial Banks

Year/Bi	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	2.64	3.53	4.07	2.21	5.01	6.50	7.99	1.65	4.63	4.52	4.28
2014	2.04	2.68	6.12	2.49	3.10	6.66	8.08	1.40	4.31	3.66	4.05
2015	1.66	2.80	4.21	2.34	2.22	6.09	7.93	1.38	5.04	4.02	3.77
2016	1.79	2.99	4.70	2.70	2.91	9.41	13.75	1.81	4.77	3.32	4.82
2017	2.10	2.58	2.73	2.98	2.21	6.16	12.01	2.24	11.05	4.02	4.81
2018	2.65	4.05	4.30	3.57	2.45	6.07	9.69	3.37	11.61	4.91	5.27
2019	3.31	3.93	3.97	4.06	2.73	6.78	9.31	3.56	10.97	5.31	5.39
2020	2.84	4.32	3.54	4.29	2.46	6.00	7.02	3.75	8.78	5.38	4.84
2021	3.11	4.83	3.55	4.37	2.64	5.26	5.54	3.94	8.13	5.02	4.64
2022	3.25	4.51	4.22	3.84	2.69	5.44	5.47	3.73	6.45	4.79	4.44
2023	2.93	4.30	5.01	3.88	2.14	6.07	6.34	3.39	5.57	4.50	4.41
Averag	2.58	3.68	4.22	3.34	2.78	6.40	8.47	2.75	7.39	4.50	4.61
SD	0.59	0.80	0.88	0.81	0.80	1.10	2.60	1.04	2.83	0.67	0.49
CV	0.23	0.22	0.21	0.24	0.29	0.17	0.31	0.38	0.38	0.15	0.11

Source: Appendix-19

Table 4.6 reveals that the overall average capital ratio of sample unit banks is 4.61 percent. It means average capital amount of Nepalese commercial banks is 4.61 percent of their total assets. The overall maximum and minimum capital ratio of Nepalese commercial banks is 5.39 percent and 3.77 percent of their total assets respectively. Out of sample unit banks, NMB and CTZN banks have higher capital ratio that is 13.75 percent and 11.61 percent respectively but other sample banks have lower capital ratio than its overall average.

Liquidity Ratio

Liquidity ratio (LR) is the relationship between liquid funds and total assets. Liquid fund includes cash, bank balance and money at call. It reveals highly liquid assets position of commercial banks. Liquidity position of Nepalese commercial banks has been presented in the following table.

Table 4.7

Average liquidity ratio of Nepalese Commercial Banks

Year/Bar	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	7.23	8.06	4.33	28.08	10.78	6.67	8.19	14.81	9.61	13.94	11.17
2014	9.80	10.70	6.51	8.62	9.69	8.66	9.32	12.14	10.55	15.37	10.14
2015	6.62	9.77	11.39	9.41	14.27	11.56	9.44	13.35	8.37	10.41	10.46
2016	12.02	9.34	8.88	6.67	11.20	9.54	16.04	12.38	12.59	8.33	10.70
2017	8.54	14.49	5.97	10.78	16.22	10.79	11.78	16.29	17.66	11.53	12.41
2018	8.27	12.69	9.01	9.66	18.59	15.76	16.32	8.67	12.79	11.32	12.31
2019	7.97	13.51	10.35	7.72	13.06	7.40	11.68	16.04	13.51	8.44	10.97
2020	7.13	17.21	9.61	11.86	18.31	15.12	11.45	19.76	21.89	13.08	14.54
2021	9.60	17.33	11.84	9.05	16.82	13.66	16.54	20.02	20.76	12.78	14.84
2022	11.44	18.46	10.60	7.61	18.44	16.05	12.27	31.30	23.63	12.46	16.23
2023	13.07	12.89	13.81	11.01	25.11	13.54	16.18	35.52	16.90	11.52	16.96
Average	9.24	13.13	9.30	10.95	15.68	11.70	12.65	18.21	15.30	11.74	12.79
SD	2.15	3.50	2.79	5.89	4.50	3.36	3.12	8.26	5.20	2.14	2.44
CV	0.23	0.27	0.30	0.54	0.29	0.29	0.25	0.45	0.34	0.18	0.19

Source: Appendix-16

Table no 4.7 specifies that average liquid fund of Nepalese commercial banks is 12.79 percent of their total assets which is indicated by average of overall average. 16.96 percent is the overall maximum liquid funds and 10.14 is the overall minimum liquid funds of Nepalese commercial banks. SCB, HB, EB, and CTZN banks have higher liquidity ratio than overall average of Nepalese commercial banks that is 35.52 percent, 28.08 percent, 25.15 percent and 23.63 percent respectively. It reveals that these banks have high liquid funds in overall average.

Deposit Ratio

Deposit ratio (DR) represents that the percentage of total assets of Nepalese commercial banks that has been financed by deposit liability. It includes all types of deposits that are made within the bank.

Table 4.8

Average deposit ratio of Nepalese Commercial Banks

Year/Ban	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	78.36	85.68	81.44	85.32	67.01	81.48	76.38	85.00	78.03	87.28	80.60
2014	80.17	86.01	79.01	85.16	82.58	83.07	76.61	86.02	77.83	82.37	81.88
2015	78.70	85.71	74.33	86.32	81.84	85.68	73.73	82.31	66.26	82.40	79.73
2016	82.94	85.94	73.76	84.75	83.93	81.83	71.94	86.68	69.84	87.19	80.88
2017	81.30	85.47	87.39	85.02	87.69	82.33	78.38	86.07	59.39	86.08	81.91
2018	84.85	84.12	88.61	84.01	87.82	80.97	74.95	84.73	62.74	84.44	81.72
2019	81.07	81.72	90.00	83.01	87.70	77.55	72.84	84.02	62.83	82.16	80.29
2020	76.91	81.70	90.10	85.39	88.34	82.18	82.67	83.70	74.27	83.77	82.90
2021	81.28	80.04	88.83	84.11	86.57	83.12	81.55	83.93	72.33	82.50	82.43
2022	80.40	80.26	86.82	85.78	86.92	81.99	82.78	84.50	75.82	85.04	83.03
2023	83.49	81.62	84.50	85.64	83.07	83.41	83.38	86.42	77.62	83.78	83.29
Average	80.86	83.48	84.07	84.96	83.95	82.15	77.75	84.85	70.63	84.27	81.70
SD	2.34	2.42	6.06	0.94	6.10	1.97	4.26	1.35	6.84	1.91	1.19
CV	0.03	0.03	0.07	0.01	0.07	0.02	0.05	0.02	0.10	0.02	0.01

Source: Appendix-17

Table 4.8 shows the overall average of sampled banks is 81.70 percent which indicates that average Nepalese commercial banks' deposit ratio is 81.70 percent. The maximum and minimum deposit ratio has been found as 90.10 percent and 59.39 percent of SBI and KB respectively. HB, SBI, SCB, GIME, EB and NIMB banks have higher deposit ratio than the average ratio of Nepalese commercial banks. Similarly, SBI bank has highest deposit ratio than other banks that is 90.10 percent but KB has lowest deposit ratio which is too lower than average ratio of Nepalese commercial banks.

Capital Adequacy Ratio

Capital Adequacy Ratio (CAR) is the relationship between capital funds and total assets. Capital funds includes paid up capital, calls in advance, statutory reserve, share and premium, retained earnings, other reserve and exchange fluctuation funds etc. It shows the extent to which all banking assets are funded by shareholder's equity. Having higher

ratio indicates higher the liquidity position. Nepalese commercial banks liquidity position has been presented as below:

Table 4.9

Average capital adequacy ratio of Nepalese Commercial Banks

Year/Bar	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	7.96	7.42	6.49	4.56	6.51	7.27	8.36	5.62	6.68	6.35	6.72
2014	6.87	5.26	8.15	4.96	4.98	8.17	3.02	5.88	1.40	5.69	5.44
2015	6.32	4.80	6.43	5.10	4.13	7.00	-3.50	5.86	-10.94	5.60	3.08
2016	5.35	4.87	6.26	5.72	5.61	10.22	1.97	6.17	-17.86	5.41	3.37
2017	5.30	6.26	4.42	6.16	5.44	7.11	5.87	5.98	-6.21	6.39	4.67
2018	5.73	6.32	5.44	6.97	5.24	7.56	7.61	7.35	6.94	7.24	6.64
2019	6.26	7.47	5.32	6.98	5.88	8.98	10.13	7.45	10.07	8.10	7.66
2020	6.38	7.40	4.77	7.15	5.50	8.28	8.77	8.56	9.37	8.16	7.43
2021	6.98	7.76	4.82	7.34	6.25	7.80	7.24	8.81	11.95	8.04	7.70
2022	7.14	7.63	6.05	7.03	6.74	7.90	8.41	8.39	10.43	8.85	7.86
2023	6.12	7.14	7.57	7.09	5.45	7.40	8.13	7.68	9.42	7.54	7.35
Ave.	6.40	6.58	5.97	6.28	5.61	7.97	6.00	7.07	2.84	7.03	6.18
SD	0.80	1.14	1.17	1.02	0.73	0.94	4.00	1.21	10.06	1.20	1.76
CV	0.13	0.17	0.20	0.16	0.13	0.12	0.67	0.17	3.54	0.17	0.29

Source: Appendix-15

Table 4.9 specifies that average capital adequacy funds of Nepalese commercial banks are 6.18 percent of their total assets which is indicated by overall average.. CTZN, KB, NMB have higher liquidity ratio than average of Nepalese commercial banks that is 11.95 percent, 10.22 percent and 10.13 percent respectively.

Overall Liquidity Position of Nepalese Commercial Banks

The overall liquidity position of Nepalese commercial banks is found in increasing trend as measured by various liquidity indicators such as CDR, CAR, LR, DR etc. Out of these liquidity indicators, the LR is found more fluctuating than other indicators as measured by CV.

4.3 Inferential Statistical Analysis

Under this topic, various inferential statistical tools such as regression, T-test for hypothesis testing have been examined in order to achieve the objectives of the study. They are as follows:

4.3.1 Regression Analysis and T-test

Regression analysis has been a useful and commonly applied statistical tool to analyze the impact of independent variables on dependent variables. This study has been conducted the multiple regression models to examine the relationship among the variables such as CAR LR, DR, IR and CR and their impact on response variables such as ROA, ROE and ROD.

The first regression model has been undertaken to examine the relationship between return on assets (ROA) and its corresponding explanatory variables, second Smodel with ROD and explanatory variables. Similarly, return on equity and its corresponding explanatory variables have been also regressed in the third model. Summary of all these three models has been presented in the following tables with their corresponding coefficients (β) of the explanatory variables and their significance P-values along with t-statistics.

Table 4.10

Summary of Regression Result

Model – 1: Dependent Variable; Return on Assets, Model -2: Dependent Variable; Return on Deposit and Model -3: Dependent Variable; Return on Equity.

	Model – 1(ROA)		Model – 2(ROD)		Model - 3(ROE)	
Variables	Beta	Sig. (t)	Beta	Sig. (t)	Beta	Sig. (T)
Constant	-0.475	0.047 (-2.294)	-0.546	0.035 (-2.483)	-3.961	0.250 (-1.229)
Capital Adequacy Ratio (CAR)	-0.345	0.099** (-1.842)	-0.371	0.095** (-1.866)	-2.862	0.357 (-0.970)
Liquidity Ratio (LR)	-0.271	0.038* (-2.432)	-0.349	0.016* (-2.954)	-4.202	0.038* (-2.425)
Deposit Ratio (DR)	0.623	0.024* 2.712	0.719	0.016* 2.949	5.554	0.155 1.552
Investment Ratio (IR)	-0.061	0.574 (-0.583)	-0.047	0.681 (-0.424)	-0.495	0.767 (-0.305)
Capital Ratio (CR)	1.175	0.023* (2.727)	1.336	0.017* 2.921	11.615	0.118 1.730
R Square	0.725		0.79		0.682	
Adjusted R-square	0.572		0.673		0.506	
S.E. of estimates	0.007910772		0.008396819		0.123190776	
F	4.745		6.767		3.863	
Overall Significance	0.021		0.007		0.038	
Durbin Watson Statistics	2.508		2.443		1.917	

Note : '*' sign indicates that t-statistics are significant at 5 percent level and

' ** ' indicates that t-statistics are significant at 10 percent level

Table 10 shows that the first model have been developed by regressing with aforementioned various explanatory variables and response variable as ROA; Return on assets. The above table reveals that beta coefficient of CAR, LR, DR, IR and CR is -0.345, -0.271, 0.623, -0.061 and 1.175 respectively and 0.099, 0.038, 0.024, 0.574, and 0.023 are their corresponding p-values respectively. It develops the following equation -

$$\text{ROA} = (-0.475) - 0.345\text{CAR} - 0.271\text{LR} + 0.623\text{DR} - 0.061\text{IR} + 1.175\text{CR}$$

This estimated equation exposes that CAR, LR and IR decreasing function of return on assets while DR and CR are increasing functions of return on equity. Quantitatively, 1% increase in CAR, LR and IR will affect return on assets negatively by 0.345%, 0.271%, and 0.061% respectively. Conversely, 1% increase in DR and CR would affect the ROA positively 0.623% and 1.175% respectively. Similarly, the above table no 4.12 also clears that LR, DR and CR are statistically significant at five percent level of significance with ROA while CAR is negatively significant at 10 % level of significance and IR insignificant due to their corresponding p-value is less than 0.10.

R-squares, coefficient of determination, of this model0.725 is quite high that exposed an excellent goodness of fit of the estimated regression line. It means that if the actual data has been plotted in the estimated regression line, the most of the data will cluster around it. Furthermore, the R-square shows that 72.5 % of the total variation in return on assets is explained by the independent variables and rest 24.5 % variation is explained by other variables not captured by the model. Similarly, the value of adjusted R-square is 0.572 in the model which confirms that 57.5% of changes in dependent variable are explained by the joint influence of explanatory variable.

In the same way, second model is produced by regressing ROD with above stated explanatory variables which creates the following equitation:

$$ROD = (-0.546) - 0.371CAR - 0.349LR + 0.719DR - 0.047IR + 1.336CR$$

Such estimated equitation shows that the signs of all explanatory variables except DR and CR are negative which implies that there exists inverse relationship between these explanatory variables and return on deposit.

Moreover, CAR, LR and IR decreasing function of return on deposit while DR and CR are increasing functions of Return on Deposit. Quantitatively, 1% increase in CAR, LR and IR will affect return on deposit negatively by 0.371%, 0.349%, and 0.047% respectively. Conversely, 1% increase in DR and CR would affect the ROD positively 0.719% and 1.33% respectively.

On other hands, the above table no 4.12 also exposes that LR, DR and CR are statistically significant at five percent level of significance with ROD while CAR is negatively significant at 10 % level of significant and IR insignificant due to their corresponding p-value is less than 0.10.

R-square of this model 0.79 is quite high that exposed an excellent goodness of fit of the estimated regression line. It means that if the actual data has been plotted in the estimated regression line, the most of the data will cluster around it. Furthermore, the R-square shows that 72.5 % of the total variation in return on deposit is explained by the independent variables and rest 24.5 % variation is explained by other variables not captured by the model. Similarly, the value of adjusted R-square is 0.673 in the second model which confirms that 67.3% of changes in dependent variable are explained by the joint influence of explanatory variable.

Third model is also obtained by regression return on equity on explanatory variables. Among the explanatory variables deposit and capital ratio is positively and remaining other variables are negatively related with ROE. Such relation is shown by following estimated equation:

$$ROE = (-3.961) - 2.862CAR - 4.202LR + 5.554DR - 0.495IR + 11.615CR$$

This mentioned equation reveals that CAR, LR and IR inversely and DR and CR are positively related with dependent variable as ROE. In detail, 1 percent changes on CAR, LR and IR will affect ROE inversely by 2.862, 4.20 and 0.495 respectively but DR and CR will be positively changed on ROE by 5.554 % and 11.615 %. Only LR has been found negative and statistically significant at 5 percent level of significance with ROE while other variables insignificant. The value of R-square and adjusted R-square is 0.682 and 0.506 respectively. In another words, the 50.5% of the total variation in return on

equity is explained by joint influence of stated explanatory variable and rest by the other stochastic variables.

According to F-statistic and value of overall significance in the above table, the overall regression result of all regression models are statistically significant at 95 percent of confidence level due to lower P-value of F-statistics than 0.05. It means, there exists significant relationship between all these three regression models such as ROA, ROD and ROE and their corresponding explanatory variables such as CAR, LR, DR, IR and CR.

CHAPTER-V

SUMMARY AND CONCLUSION

This chapter deals with summary, Recommendation, discussion, implications for practice and critique of the study of entire study. The main objective of the study is to examine and analyze the liquidity position and its impact on profitability of Nepalese commercial banks. Secondary data have been employed through scheduled questionnaires and financial statement of related commercial banks during 2013 to 2023. Various financial and statistical tools have been examined by using excel and SPSS software. The summary of the entire study, discussion, implications for practice and critique of the study has been presented as follows:

5.1 Summary

This study has been conducted on" Impact of Liquidity Management on Profitability of Bank: A Case of Nepalese Commercial Banks." The main objective of the study is to examine and analyze the liquidity position and its impact on profitability of Nepalese commercial banks. Liquidity and profitability both are highly controversial aspects in the financial field due to their contradictory nature. Higher liquidity generates lower return and vice versa. Lower liquidity also erodes goodwill and confidence of the people.

Trade-off between liquidity and profitability to some extent can solve this problem but it is a difficult task to bring the trade-off between the liquidity and profitability. Before deciding an appropriate level of liquidity, bank management has to evaluate the trade-off between expected profitability and the risk. Such situation is equally faced by all financial institutions weather small or large scaled.

So, different questions like whether the Nepalese commercial banks are maintaining sufficient liquidity or not? What is the profitability position of Nepalese commercial banks? How the profitability of a commercial bank is measured? What types of relationship exists between liquidity indicators and profitability indicators? This study has tried to answer these questions.

Therefore, this study might be equally important and useful for bankers, students, further researchers, stakeholders as well as others who are interested in the study of these subject matters. This study examined the actual recent data maintaining reliability, accuracy and validity depending on the views of the bankers and published source of data.

There are five chapters in this study that are introduction, review of literature and theoretical framework, methodology, result and summary, discussion, implications for practice and critiques of the study.

The first chapter deals with background, statement of problems, objectives of the study and significance of the study and organization of the study. Similarly, the second chapter includes theoretical framework, theories related with study and previous study in terms of articles, unpublished theses as well as other sources of literature review. The third chapter concerns with methodology that has been applied in this study. Likewise, fourth chapter especially focuses on empirical analysis and examination of the collected data by using specified research methodology and final chapter only consists of summary, discussion, implications for practice and critiques of the study.

This is a descriptive analytical research design which has applied various financial tools such as liquidity ratio, deposit ratio, investment ratio, credit to deposit ratio and capital adequacy ratio, return on assets, return on equity, return on deposit as well as descriptive and inferential statistical tools and techniques. Average, maximum, minimum, standard deviation etc. is the descriptive statistical tools and multiple regression analysis, coefficient of determination; adjuster's R-square, p-values etc. are inferential statistical tools of the study. Similarly, all Nepalese commercial banks were taken as population for the study out of which ten banks were taken as sample. As a technique of data collection non-random convenient sampling technique was employed in the study. Data were collected from secondary sources by using feedbacks and published banking reports. However, this study is limited to ten sample banks.

In this study, Nepalese commercial banks' profitability and liquidity position have been analyzed and examined. ROA, ROE and ROD are the indicators of the profitability and LR, IR, DR, CR, and CAR, is the liquidity indicators. The overall average ROA, ROE and ROD is 2.15%, 32.09%, and 2.84% over the 11 years period respectively. Similarly,

overall average CDR, IR, CR, LR, DR, and CAR is 70.72%, 19.44%, 4.90%, 14.43%, 81.32 % and 6.64 % respectively. Average liquidity and profitability position of Nepalese commercial banks has been found inconsistent over last eleven years period. Profitability position of Nepalese commercial banks has been found in decreasing trend whereas liquidity position is in increasing trend during the year 2013 to 2023.

Regression model is also used to examine the impact of liquidity indicators on bank profitability. DR, LR and CR have been found significantly related with return on assets and return on deposit but remaining other variables have been found insignificant at five percent level of significance. In another model, return on equity is only negatively significant with liquidity ratio.

5.2 Conclusion

The study concludes that liquidity status of the bank plays important role in banking performance in case of Nepalese commercial banks. There is a direct effect of current state of interest rate instability of our country in the field of NRB direction and policy of commercial bank and financial sector due to the violating environment in the country. Most of commercial banks have been facing the high liquidity crisis in the market. Bank and financial institution were increased the interest rate to get deposit for maintaining liquidity adequate. Despite such conditions, these commercial banks have been managed it appropriately in such critical situations. Current profitability position of the commercial Bank seems to be on higher side despite of the liquidity crunch in the market.

Liquidity and profitability are the major factors and highly debatable maters in the financial field due to their contradictory nature in relation to degree of liquidity that maintains within the firms. There are different views regarding the liquidity that should be maintained within the firm. Some people suggest for higher liquidity position some for lower liquidity position. Lower liquidity position generates more return than sloppy liquidity position but this situation may create difficulties to meet its short term obligations and compulsions. Though the liquidity crunch was noted during 2020 and thereafter the liquidity position of the bank is now improved.

This study tries to identify the impact of liquidity indicators on indicators of profitability of banks and managerial practices regarding trade-off between liquidity and profitability. To examine and analyze the liquidity position and its impact on profitability of Nepalese commercial banks, factors that are mostly influencing the liquidity position as well as to know the bankers views regarding the liquidity management, descriptive analytical research design has been employed.

Only secondary data have been analyzed in order to achieve the target objectives on "Impact of Liquidity Management on Profitability of Bank". Secondary data have been examined to know liquidity and profitability position of the Banks and the findings has been seen that the liquidity and profitability is inversely related to each other and increase in one factor results in decrease in another factor. Higher liquidity depicts the lower profitability as the lending competition is high and the interest margin is low.

5.3 Implications for Practice

This study is very important because it will provide evidence on the liquidity and profitability position as well as the nature of relationship between liquidity and profitability indicators of Nepalese commercial banks and the factors that mostly influencing the liquidity and profitability of the banks. Analysis of liquidity and profitability position as well as impact of liquidity on profitability position of Nepalese commercial banks is the major concern of this study.

Contradictory and debatable views of scholars on liquidity management and profitability has added the importance of analyzing, examining and evaluating liquidity and profitability position of banking institutions.

Both survival and successful operation in today's throat cutting competitive environment, the institution requires efficient and effective liquidity management to bring out trade-off between liquidity and profitability. Hence, the importance and necessity of understanding the nature of relationship between liquidity and profitability is interesting subject matter for all those parties who are dealing with financial field.

The main objective of this study is to examine and analyze the liquidity position and its impact on profitability of Nepalese commercial banks. Descriptive analytical research design has been conducted in order to achieve the objective of the study. From the

findings of analysis of secondary data, several implications of this study can be suggested, which may be relevant for bank management, policymakers and researchers, students, professors as well as other stakeholders, such as:

The results suggest that managers should be concerned about liquidity and profitability position as well as relationship between indicators of liquidity and profitability in order to maintain efficient liquidity position that might bring trade-off between liquidity and profitability.

Liquidity management practices and liquidity position should be the concern of all firm whether they are banking or non banking institutions. This study may also be serious concern for managers of banking institution and its stakeholders.

Liquidity position of commercial banks and liquidity management practices and policy of all Nepalese commercial banks needed to be reviewed in order to maximize the profitability.

Liquidity management practices should be taken as corporate strategy to solve the financial problems by the Nepalese banking institution so as to maximize firms' profitability and shareholders wealth, to create the goodwill and unique image of their banks in the competitive environment.

The findings of the study showed that profitability of Nepalese commercial banks can be maximized if the liquid funds are minimized by investing these funds in other areas such as government bonds, securities, hydropower etc and maximizing deposit funds, capital funds, equity capital, investable areas by developing innovative techniques, policy, plan, systems, procedures and strategies.

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Appendix 1
NABIL Bank Ltd.(In Millions)

Year	Loan and Advances	Total Deposit	Capital Fund	Total Assets	Liquid Funds	Capital	Investment	Share and Other I.	Total investment
2013	11078	14586.8	1482.4	18614.9	1345.2	491.7	2826.8	1526.35	4353.15
2014	13021.3	19348.4	1657.7	24134.6	2365.2	491.7	2332.3	3802.5	6134.8
2015	15657.1	23342.4	1874.8	29660.4	1963.1	491.7	5259.2	3593.1	8852.3
2016	21514.6	31915	2057	38478.6	4623.5	689.2	4889.6	5077	9966.6
2017	27816.6	37348.3	2436.2	45941.6	3925.4	965.7	4978.7	6896.3	11875
2018	32902.8	46334.8	3129.4	54609.8	4513.7	1449.1	8128.3	5483.8	13612.1
2019	38765.6	49691.4	3835.7	61292.6	4884.5	2029.8	8920.3	4162.5	13082.8
2020	42731.7	55023.7	4566.5	71545.3	5098.6	2029.8	8211.5	5863.4	14074.9
2021	47522.9	63611.3	5464.7	78260	7513.2	2436.8	8153.7	8194.7	16348.4
2022	55829.6	75384.5	6690.3	93760.3	10727.7	3047.2	8530.5	9748.9	18279.4
2023	66995.8	104242	7642.1	124850	16323.7	3657.7	15180	15798.6	30978.6

Net Profit	ROA	ROE	ROD	CDR	CAR	L. R.	DR	IR	CR
817.9	0.04394	0.55174	0.0561	0.75945	0.079635	0.07226	0.78361	0.23385	0.026414
979.1	0.04057	0.590638	0.0506	0.67299	0.068686	0.098	0.80169	0.25419	0.020373
685.6	0.02311	0.365692	0.0294	0.67076	0.063209	0.06619	0.78699	0.29846	0.016578
750.4	0.0195	0.364803	0.0235	0.67412	0.053458	0.12016	0.82942	0.25902	0.017911
1625	0.03537	0.666981	0.0435	0.74479	0.053028	0.08544	0.81295	0.25848	0.02102
1799	0.03294	0.574775	0.0388	0.71011	0.057305	0.08265	0.84847	0.24926	0.026536
1270	0.02072	0.331022	0.0256	0.78013	0.06258	0.07969	0.81072	0.21345	0.033117
1721	0.02405	0.376853	0.0313	0.77661	0.063827	0.07126	0.76907	0.19673	0.028371
2332	0.0298	0.426812	0.0367	0.74708	0.069827	0.096	0.81282	0.2089	0.031137
2398	0.02557	0.35837	0.0318	0.7406	0.071355	0.11442	0.80401	0.19496	0.0325
2189	0.01753	0.286387	0.021	0.6427	0.06121	0.13075	0.83494	0.24813	0.029297

Appendix 2
Nepal Investment Mega Bank (In Millions)

Year	Loan and Advances	Total Deposit	Capital Fund	Total Assets	Liquid Funds	Capital	Investment	Share & other	Total Invest.
2013	10295.4	14254.8	1234.5	16637.9	1340.4	587.7	1948.5	2125.7	4074.2
2014	13007.2	18927.3	1158.1	22007.2	2354.9	590.6	2522.3	3150.6	5672.9
2015	17482	24488.9	1370.8	28572.8	2791.5	801.4	3256.4	3262.2	6518.6
2016	27145.5	34551.8	1959	40205.5	3755	1203.9	3155	3724.4	6879.4
2017	36250.4	46697.9	3421.1	54634.5	7918	1407.1	2531.3	4871.8	7403.1
2018	40689.6	50094.7	3765.2	59554.7	7558.4	2409.1	4201.9	3694.5	7896.4
2019	41665.2	50138.1	4585.4	61357	8290.4	2409.1	4294.6	3230.5	7525.1
2020	42510.4	57010.6	5161.3	69781.5	12009.1	3012.9	6169.5	4271.6	10441.1
2021	47369.2	62428.9	6051.8	77999	13519.5	3768.6	5985.5	5449.8	11435.3
2022	53092.9	73831.3	7022.5	91986.7	16977.1	4146.7	5826.9	9556.8	15383.7
2023	67033.4	90631.5	7928	111042.9	14315	4771.2	10703.1	10759.5	21462.6

Net Profit	ROA	ROE	ROD	CD	CAR	LR	DR	IR	CR
280.3	0.0168	0.2271	0.0197	0.7222	0.0742	0.0806	0.8568	0.2449	0.0353
410.0	0.0186	0.3540	0.0217	0.6872	0.0526	0.1070	0.8601	0.2578	0.0268
561.7	0.0197	0.4098	0.0229	0.7139	0.0480	0.0977	0.8571	0.2281	0.0280
830.7	0.0207	0.4240	0.0240	0.7856	0.0487	0.0934	0.8594	0.1711	0.0299
982.0	0.0180	0.2870	0.0210	0.7763	0.0626	0.1449	0.8547	0.1355	0.0258
1422.5	0.0239	0.3778	0.0284	0.8123	0.0632	0.1269	0.8412	0.1326	0.0405
1263.2	0.0206	0.2755	0.0252	0.8310	0.0747	0.1351	0.8172	0.1226	0.0393
1318.3	0.0189	0.2554	0.0231	0.7457	0.0740	0.1721	0.8170	0.1496	0.0432
1991.5	0.0255	0.3291	0.0319	0.7588	0.0776	0.1733	0.8004	0.1466	0.0483

Appendix 3
Global IME Bank Ltd (In Millions)

Year	Loan and Advances	Total Deposit	Capital Fund	Total Assets	Liquid Funds	Capital	Investment	Share & other	Total Invest.
2013	6166.9	8942.8	650.8	10246	1428.3	463.6	2216.5	19.2	2235.7
2014	7525.2	10429.3	720.7	12660.8	1945.6	463.6	2654.8	93.6	2748.4
2015	9663.6	12358.6	840.2	14997.5	1560.9	603.1	2332	663.2	2995.2
2016	12692.9	15832.7	982	18159.1	1513.1	603.1	2113.2	1090.8	3204
2017	14894.7	18083.9	1342.1	21009.3	2421.5	844.4	1745	1029.4	2774.4
2018	16847.1	20315.8	1741.6	24058.8	2724.4	1182.2	2954.9	314.1	3269
2019	17247.8	21018.4	2071.4	25582.1	2158.9	1359.5	4002.1	284.5	4286.6
2020	18064.1	24991.4	2435.2	29834.1	3901.3	1604.2	5037.6	209.1	5246.7
2021	21805.7	27701	2700	33575.3	4290.6	1684.4	4566.1	191.7	4757.8
2022	26974.1	34115.7	3548.6	40116.4	4997.8	1920.2	4415.3	164.5	4579.8

Net Profit	ROA	ROE	ROD	CD	CAR	LR	DR	IR	CR
228.8	0.0223	0.3516	0.0256	0.6896	0.0635	0.1394	0.8728	0.2182	0.0452
330.7	0.0261	0.4589	0.0317	0.7215	0.0569	0.1537	0.8237	0.2171	0.0366
278.5	0.0186	0.3315	0.0225	0.7819	0.0560	0.1041	0.8240	0.1997	0.0402
367.7	0.0202	0.3744	0.0232	0.8017	0.0541	0.0833	0.8719	0.1764	0.0332
725.8	0.0345	0.5408	0.0401	0.8236	0.0639	0.1153	0.8608	0.1321	0.0402
509.6	0.0212	0.2926	0.0251	0.8293	0.0724	0.1132	0.8444	0.1359	0.0491
611.4	0.0239	0.2952	0.0291	0.8206	0.0810	0.0844	0.8216	0.1676	0.0531
609.0	0.0204	0.2501	0.0244	0.7228	0.0816	0.1308	0.8377	0.1759	0.0538
617.1	0.0184	0.2286	0.0223	0.7872	0.0804	0.1278	0.8250	0.1417	0.0502
518.9	0.0129	0.1462	0.0152	0.7907	0.0885	0.1246	0.8504	0.1142	0.0479
356.7	0.0076	0.1005	0.0090	0.8061	0.0754	0.1152	0.8378	0.1275	0.0450

Appendix 4
SBI Bank(In Millions)

Year	Loan and Advances	Total Deposit	Capital Fund	Total Assets	Liquid Funds	Capital	Investment	Share & other	Total Investment
2013	6619.1	8645.8	689.3	10616.6	459.6	431.9	2588.2	19.5	2607.7
2014	8059	10852.7	1119.8	13735.6	894.5	840.2	3680.4	19.5	3699.9
2015	9846.7	11445.2	989.9	15397.2	1754.5	647.8	2345.6	31.9	2377.5
2016	12574.9	13715.4	1163.3	18594	1651.6	874.5	3093.6	53.3	3146.9
2017	15465.2	27957.2	1414.6	31989.8	1910.9	874.5	3306.6	9979.6	13286.2
2018	17887.2	34896.3	2141.9	39381.3	3549.4	1693.6	4313.3	11941.8	16255.1
2019	21657.1	42415.4	2508.2	47129.9	4877.5	1869.3	5574.8	13336.2	18911
2020	26403.8	53337.1	2822.1	59196.8	5686.6	2094	4560.7	19902.7	24463.4
2021	29147.3	58920.5	3197.5	66326.6	7852.3	2355.7	3665.2	22340.6	26005.8
2022	35061.1	54493	3799	62762.3	6655	2650.2	5976.2	11746.2	17722.4
2023	19666.7	51628.2	4623.9	61095.6	8435.7	3058.1	3747	5578.8	9325.8

Net Profit	ROA	ROE	ROD	CD	CAR	LR	DR	IR	CR
217.1	0.0204	0.3150	0.0251	0.7656	0.0649	0.0433	0.8144	0.2456	0.0407
219.8	0.0160	0.1963	0.0203	0.7426	0.0815	0.0651	0.7901	0.2694	0.0612
394.5	0.0256	0.3985	0.0345	0.8603	0.0643	0.1139	0.7433	0.1544	0.0421
255.1	0.0137	0.2193	0.0186	0.9168	0.0626	0.0888	0.7376	0.1692	0.0470
337.6	0.0106	0.2387	0.0121	0.5532	0.0442	0.0597	0.8739	0.4153	0.0273
400.5	0.0102	0.1870	0.0115	0.5126	0.0544	0.0901	0.8861	0.4128	0.0430
458.4	0.0097	0.1828	0.0108	0.5106	0.0532	0.1035	0.9000	0.4013	0.0397
471.1	0.0080	0.1669	0.0088	0.4950	0.0477	0.0961	0.9010	0.4133	0.0354
776.9	0.0117	0.2430	0.0132	0.4947	0.0482	0.1184	0.8883	0.3921	0.0355
920.4	0.0147	0.2423	0.0169	0.6434	0.0605	0.1060	0.8682	0.2824	0.0422
1071.9	0.0175	0.2318	0.0208	0.3809	0.0757	0.1381	0.8450	0.1526	0.0501

Appendix 5
Himalayan Bank (In Millions)

Year	Loan and Advances	Total Deposit	Capital Fund	Total Assets	Liquid Funds	Capital	investment	Share & other	Total Investment
2013	13245	24831.1	1328.2	29102.6	8173.2	643.5	5469.7	39.9	5509.6
2014	15515.7	26456.2	1541.7	31064.9	2677.6	772.2	5144.4	5746.1	10890.5
2015	17672	29905.8	1766.1	34645.5	3259.6	810.8	6454.8	5366.8	11821.6
2016	19985.2	31805.3	2146.5	37526.8	2503.4	1013.5	7451.7	5280.3	12732
2017	25292.1	34681	2513	40790.7	4398.5	1216.2	4212.3	4319.2	8531.5
2018	28976.6	37609.4	3119.9	44768.8	4324.6	1600	4465.5	3829.8	8295.3
2019	31656.6	40920.6	3439.2	49298.5	3805.2	2000	6407.4	2257	8664.4
2020	34282.6	47731	3995.5	55898.5	6626.9	2400	9199.9	870.6	10070.5
2021	39648.7	53072.3	4632	63098.5	5710	2760	8295.2	3106.5	11401.7
2022	44399.9	64674.9	5299.7	75397.3	5738.4	2898	12183	7660.3	19843.3
2023	53124.4	73521.4	6083.4	85853.7	9449.3	3332.7	9593.1	7521.6	17114.7

Net Profit	ROA	ROE	ROD	CD	CAR	LR	DR	IR	CR
752.4	0.0259	0.5665	0.0303	0.5334	0.0456	0.2808	0.8532	0.1893	0.0221
513.8	0.0165	0.3333	0.0194	0.5865	0.0496	0.0862	0.8516	0.3506	0.0249
828.8	0.0239	0.4693	0.0277	0.5909	0.0510	0.0941	0.8632	0.3412	0.0234
1050.8	0.0280	0.4895	0.0330	0.6284	0.0572	0.0667	0.8475	0.3393	0.0270
1182.1	0.0290	0.4704	0.0341	0.7293	0.0616	0.1078	0.8502	0.2092	0.0298
871.8	0.0195	0.2794	0.0232	0.7705	0.0697	0.0966	0.8401	0.1853	0.0357
1411.0	0.0286	0.4103	0.0345	0.7736	0.0698	0.0772	0.8301	0.1758	0.0406
1052.5	0.0188	0.2634	0.0221	0.7182	0.0715	0.1186	0.8539	0.1802	0.0429
1024.4	0.0162	0.2212	0.0193	0.7471	0.0734	0.0905	0.8411	0.1807	0.0437
1102.8	0.0146	0.2081	0.0171	0.6865	0.0703	0.0761	0.8578	0.2632	0.0384
1129.1	0.0132	0.1856	0.0154	0.7226	0.0709	0.1101	0.8564	0.1993	0.0388

Appendix 6
Everest Bank(In Millions)

Year	Loan and Advances	Total Deposit	Capital Fund	Total Assets	Liquid Funds	Capital	Investment	Share & other	Total investment
2013	7914.4	10097.8	980.3	15069	1624.2	755	2100.3	19.4	2119.7
2014	10124.2	13802.5	832.5	16714.5	1619.6	518	3548.6	692.7	4241.3
2015	14059.2	19097.7	963.6	23335.3	3329.7	518	4704.6	280.5	4985.1
2016	18814.3	23976.3	1601.5	28565.9	3198.4	831.4	4906.5	154.6	5061.1
2017	24366.2	33322.9	2066.5	38000.3	6164.4	838.8	5146.6	804	5950.6
2018	28129.7	36932.3	2203.6	42053	7818.8	1030.5	4354.4	655.6	5010
2019	31534.7	41127.9	2759.1	46895.6	6122.9	1279.6	7145	600.5	7745.5
2020	36376	50006.1	3113.5	56609.2	10363.3	1391.6	6068.9	1796.4	7865.3
2021	44008.4	57720.5	4165.7	66677.6	11215.8	1761.1	6988.3	2275.6	9263.9
2022	47955.7	62108.1	4819.5	71454.2	13172.8	1921.2	2544.7	3959.5	6504.2
2023	54884.4	83093.8	5448.8	100034	25116.4	2137.4	8587.7	6515	15102.7

Net Profit	ROA	ROE	ROD	CD	CAR	LR	DR	IR	CR
275.8	0.0183	0.2813	0.0273	0.7838	0.0651	0.1078	0.6701	0.1407	0.0501
380.5	0.0228	0.4571	0.0276	0.7335	0.0498	0.0969	0.8258	0.2537	0.0310
300.6	0.0129	0.3120	0.0157	0.7362	0.0413	0.1427	0.8184	0.2136	0.0222
722.8	0.0253	0.4513	0.0301	0.7847	0.0561	0.1120	0.8393	0.1772	0.0291
624.1	0.0164	0.3020	0.0187	0.7312	0.0544	0.1622	0.8769	0.1566	0.0221
831.8	0.0198	0.3775	0.0225	0.7617	0.0524	0.1859	0.8782	0.1191	0.0245
931.3	0.0199	0.3375	0.0226	0.7667	0.0588	0.1306	0.8770	0.1652	0.0273
1090.6	0.0193	0.3503	0.0218	0.7274	0.0550	0.1831	0.8834	0.1389	0.0246
1471.1	0.0221	0.3531	0.0255	0.7624	0.0625	0.1682	0.8657	0.1389	0.0264
1549.7	0.0217	0.3215	0.0250	0.7721	0.0674	0.1844	0.8692	0.0910	0.0269
1562.2	0.0156	0.2867	0.0188	0.6605	0.0545	0.2511	0.8307	0.1510	0.0214

Appendix 7
Kumari Bank Ltd.(In Millions)

Year	Loan and Advances	Total Deposit	Capital Fund	Total Assets	Liquid Funds	Capital	Investment	Share & other	Total investment
2013	5519.2	6270.1	559.7	7695.5	513.2	500	1220.7	120	1340.7
2014	6918.3	7800.4	766.8	9390.6	813.6	625	1114.3	0.4	1114.7
2015	9011	10560	863.2	12324.4	1424.6	750	1257.9	0.4	1258.3
2016	11449	12781	1595.6	15619	1490.7	1470	1469.1	168.2	1637.3
2017	14681.8	15860.6	1370	19265.1	2078.7	1186	1080.1	158.3	1238.4
2018	14875.1	17408.5	1624.5	21499.7	3388.5	1306	1729.9	21.9	1751.8
2019	14898.4	16986.3	1966.2	21902.7	1620	1485	2804.8	727.5	3532.3
2020	17808.6	21985.2	2213.8	26751.9	4043.9	1603.8	2562.6	365.9	2928.5
2021	20083.2	25318.6	2377.1	30462.1	4160.3	1603.8	3591.8	543.3	4135.1
2022	22797.1	27578.4	2656.7	33637.9	5400	1828.3	2657.7	572.8	3230.5
2023	27023.9	33421.9	2966.5	40070.2	5427.4	2431.7	3905.7	1177.5	5083.2

Net Profit	ROA	ROE	ROD	CD	CAR	LR	DR	IR	CR
93.6	0.0122	0.1672	0.0149	0.8802	0.0727	0.0667	0.8148	0.1742	0.0650
142.9	0.0152	0.1864	0.0183	0.8869	0.0817	0.0866	0.8307	0.1187	0.0666
279.7	0.0227	0.3240	0.0265	0.8533	0.0700	0.1156	0.8568	0.1021	0.0609
292.1	0.0187	0.1831	0.0229	0.8958	0.1022	0.0954	0.8183	0.1048	0.0941
425.6	0.0221	0.3107	0.0268	0.9257	0.0711	0.1079	0.8233	0.0643	0.0616
501.1	0.0233	0.3085	0.0288	0.8545	0.0756	0.1576	0.8097	0.0815	0.0607
239.2	0.0109	0.1217	0.0141	0.8771	0.0898	0.0740	0.7755	0.1613	0.0678
260.4	0.0097	0.1176	0.0118	0.8100	0.0828	0.1512	0.8218	0.1095	0.0600
291.5	0.0096	0.1226	0.0115	0.7932	0.0780	0.1366	0.8312	0.1357	0.0526
321.1	0.0095	0.1209	0.0116	0.8266	0.0790	0.1605	0.8199	0.0960	0.0544
352.7	0.0088	0.1189	0.0106	0.8086	0.0740	0.1354	0.8341	0.1269	0.0607

Appendix 8
NMB Bank Ltd. (In Millions)

Year	Loan and Advances	Total Deposit	Capital Fund	Total Assets	Liquid Funds	Capital	Investment	Share & other	Total Invest.
2013	5934.3	6630.1	725.5	8680.3	710.6	693.6	324.7	68.1	392.8
2014	5836.6	6619.5	260.7	8640.8	805.1	698.4	521.6	78.6	600.2
2015	5083.9	6500.3	-308.3	8816.7	832.4	699.1	1155.3	70	1225.3
2016	5084.5	7320.2	200.7	10175.9	1632.2	1399.6	1835.6	64.4	1900
2017	7141.6	9137	684.7	11657	1373.4	1399.6	1427.6	155.6	1583.2
2018	8373.4	10824.7	1099	14442.5	2356.3	1399.7	1861	99.2	1960.2
2019	9217.1	10951.3	1523.3	15035.6	1755.9	1400	2005.9	159.4	2165.3
2020	12868.1	16485.4	1748.6	19940.5	2282.2	1400	3034.2	179.4	3213.6
2021	15919.5	21650.8	1922.7	26548.6	4390.6	1470	4072.8	286.1	4358.9
2022	17845.6	22256.9	2262	26886.3	3298.6	1470	3567	54.1	3621.1
2023	21267.6	26660	2600.4	31975	5174.7	2028.6	2829.2	187.7	3016.9

Net Profit	ROA	ROE	ROD	CD	CAR	LR	DR	IR	CR
98.3	0.0113	0.1355	0.0148	0.8951	0.0836	0.0819	0.7638	0.0453	0.0799
31.2	0.0036	0.1197	0.0047	0.8817	0.0302	0.0932	0.7661	0.0695	0.0808
-104.6	-0.0119	0.3393	-0.0161	0.7821	-0.0350	0.0944	0.7373	0.1390	0.0793
495.6	0.0487	2.4694	0.0677	0.6946	0.0197	0.1604	0.7194	0.1867	0.1375
410.6	0.0352	0.5997	0.0449	0.7816	0.0587	0.1178	0.7838	0.1358	0.1201
457.0	0.0316	0.4158	0.0422	0.7735	0.0761	0.1632	0.7495	0.1357	0.0969
214.8	0.0143	0.1410	0.0196	0.8416	0.1013	0.1168	0.7284	0.1440	0.0931
197.8	0.0099	0.1131	0.0120	0.7806	0.0877	0.1145	0.8267	0.1612	0.0702
370.9	0.0140	0.1929	0.0171	0.7353	0.0724	0.1654	0.8155	0.1642	0.0554
367.9	0.0137	0.1626	0.0165	0.8018	0.0841	0.1227	0.8278	0.1347	0.0547
398.3	0.0125	0.1532	0.0149	0.7977	0.0813	0.1618	0.8338	0.0944	0.0634

Appendix 9
Standard Chartered Bank Ltd.(In Millions)

Year	Loan and Advances	Total Deposit	Capital Fund	Total Assets	Liquid Funds	Capital	Investment	Share & other	Total Invest.
2013	8213.5	19344	1278.2	22758.8	3370.8	374.6	7204.6	2499.5	9704.1
2014	8905.1	23050.5	1576.3	26797.8	3253.8	374.6	8644.9	4205.7	12850.6
2011	10538.1	24640.3	1755.3	29937.4	3996.1	413.3	7115.7	6448.3	13564
2012	13355	29743.9	2117.2	34312.9	4247.7	620.8	8146.1	5756.7	13902.8
2013	13118.6	35871.8	2493.4	41678.8	6788.5	932	10007.3	8633.2	18640.5
2014	15932.2	35182.7	3053	41525.2	3598.8	1398.5	8540	11307.5	19847.5
2015	17698.2	37999.2	3371.6	45227.2	7256.7	1610.2	9965.8	7292.9	17258.7
2016	18376	35965.6	3677.8	42970.8	8492.1	1610.5	7871.2	5091.4	12962.6
2017	23125.7	39466.5	4141.2	47024	9414.1	1853.9	4830.9	7928.6	12759.5
2018	26317	46298.5	4598.8	54789.7	17148.6	2041.7	2333.9	7063.5	9397.4
2019	27986.4	57286.5	5090.4	66289.1	23549.2	2248.2	5766.2	7211	12977.2

Net Profit	ROA	ROE	ROD	CD	CAR	LR	DR	IR	CR
757.9	0.0333	0.5929	0.0392	0.4246	0.0562	0.1481	0.8500	0.4264	0.0165
662.5	0.0247	0.4203	0.0287	0.3863	0.0588	0.1214	0.8602	0.4795	0.0140
692.1	0.0231	0.3943	0.0281	0.4277	0.0586	0.1335	0.8231	0.4531	0.0138
814.4	0.0237	0.3847	0.0274	0.4490	0.0617	0.1238	0.8668	0.4052	0.0181
1028.3	0.0247	0.4124	0.0287	0.3657	0.0598	0.1629	0.8607	0.4472	0.0224
1086.8	0.0262	0.3560	0.0309	0.4528	0.0735	0.0867	0.8473	0.4780	0.0337
1120.5	0.0248	0.3323	0.0295	0.4658	0.0745	0.1604	0.8402	0.3816	0.0356
1173.2	0.0273	0.3190	0.0326	0.5109	0.0856	0.1976	0.8370	0.3017	0.0375
1217.9	0.0259	0.2941	0.0309	0.5860	0.0881	0.2002	0.8393	0.2713	0.0394
1377.5	0.0251	0.2995	0.0298	0.5684	0.0839	0.3130	0.8450	0.1715	0.0373
1307.6	0.0197	0.2569	0.0228	0.4885	0.0768	0.3552	0.8642	0.1958	0.0339

Appendix 10
Citizen Bank International Ltd.(In Millions)

Year	Loan and Advances	Total Deposit	Capital Fund	Total Assets	Liquid Funds	Capital	Investment	Share & other	Total Investment
2013	8739.8	12125.5	1038.1	15540	1493.2	719.9	2212.5	62.8	2275.3
2014	9010.7	13014.8	234.6	16721.8	1764.7	719.9	2525.3	64.8	2590.1
2015	8302.8	9464	-1562.4	14282.3	1195.3	719.9	826.8	182.2	1009
2016	8420	10883.7	-2783.4	15584.2	1962.2	744.1	1221.8	194.2	1416
2017	8507.9	9995.6	-1045.9	16829.9	2971.4	1860.3	1715.8	130.1	1845.9
2018	8860.1	10052.2	1112.2	16022.3	2049.2	1860.3	1879.2	268.6	2147.8
2019	9943.7	11511.7	1845.7	18322.1	2474.8	2009.4	2113.8	358.9	2472.7
2020	10673.4	16997.9	2144.5	22886.3	5010.2	2009.4	3724.9	159.4	3884.3
2021	12920.3	17879.9	2954	24718.7	5132.8	2009.4	3002.5	176.4	3178.9
2022	18825.4	25973	3573.4	34258.2	8094.6	2210.3	2521.1	623.9	3145
2023	25439.8	33880.7	4110.2	43648.7	7377.6	2431.4	4105.7	1680.2	5785.9

Net Profit	ROA	ROE	ROD	CD	CAR	LR	DR	IR	CR
76.1	0.0049	0.0733	0.0063	0.7208	0.0668	0.0961	0.7803	0.1464	0.0463
457.0	0.0273	1.9480	0.0351	0.6923	0.0140	0.1055	0.7783	0.1549	0.0431
576.9	0.0404	-0.3692	0.0610	0.8773	-0.1094	0.0837	0.6626	0.0706	0.0504
684.3	0.0439	-0.2459	0.0629	0.7736	-0.1786	0.1259	0.6984	0.0909	0.0477
1994.2	0.1185	-1.9067	0.1995	0.8512	-0.0621	0.1766	0.5939	0.1097	0.1105
1327.7	0.0829	1.1938	0.1321	0.8814	0.0694	0.1279	0.6274	0.1341	0.1161
635.1	0.0347	0.3441	0.0552	0.8638	0.1007	0.1351	0.6283	0.1350	0.1097
915.7	0.0400	0.4270	0.0539	0.6279	0.0937	0.2189	0.7427	0.1697	0.0878
802.3	0.0325	0.2716	0.0449	0.7226	0.1195	0.2076	0.7233	0.1286	0.0813
782.1	0.0228	0.2189	0.0301	0.7248	0.1043	0.2363	0.7582	0.0918	0.0645
1179.8	0.0270	0.2870	0.0348	0.7509	0.0942	0.1690	0.7762	0.1326	0.0557

Appendix 11
Average Return on Asset

Year	NABIL	NIMB	SIB	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	4.39	1.68	2.04	2.59	1.83	-6.9	1.13	3.33	0.49	2.23	1.28
2014	4.06	1.86	1.6	1.65	2.28	-11.9	0.36	2.47	2.73	2.61	0.77
2015	2.31	1.97	2.56	2.39	1.29	3.17	-1.19	2.31	4.04	1.86	2.07
2016	1.95	2.07	1.37	2.8	2.53	4.45	4.87	2.37	4.39	2.02	2.88
2017	3.54	1.8	1.06	2.9	1.64	4.64	3.52	2.47	11.85	3.45	3.69
2018	3.29	2.39	1.02	1.95	1.98	3.69	3.16	2.62	8.29	2.12	3.05
2019	2.07	2.06	0.97	2.86	1.99	4.38	1.43	2.48	3.47	2.39	2.41
2020	2.41	1.89	0.8	1.88	1.93	2.13	0.99	2.73	4	2.04	2.08
2021	2.98	2.55	1.17	1.62	2.21	1.11	1.4	2.59	3.25	1.84	2.07
2022	2.56	2.1	1.47	1.46	2.17	0.12	1.37	2.51	2.28	1.29	1.73
2023	1.75	1.77	1.75	1.32	1.56	1.48	1.25	1.97	2.7	0.76	1.63

Appendix 12
Average Return on Equity

Year	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	55.17	22.71	31.5	56.65	28.13	16.72	13.55	59.29	7.33	35.16	32.62
2014	59.06	35.4	19.63	33.33	45.71	18.64	11.97	42.03	194.8	45.89	50.64
2015	36.57	40.98	39.85	46.93	31.2	32.4	33.93	39.43	-36.92	33.15	29.75
2016	36.48	42.4	21.93	48.95	45.13	18.31	246.94	38.47	-24.59	37.44	51.15
2017	66.7	28.7	23.87	47.04	30.2	31.07	59.97	41.24	-190.67	54.08	19.22
2018	57.48	37.78	18.7	27.94	37.75	30.85	41.58	35.6	119.38	29.26	43.63
2019	33.1	27.55	18.28	41.03	33.75	12.17	14.1	33.23	34.41	29.52	27.71
2020	37.69	25.54	16.69	26.34	35.03	11.76	11.31	31.9	42.7	25.01	26.4
2021	42.68	32.91	24.3	22.12	35.31	12.26	19.29	29.41	27.16	22.86	26.83
2022	35.84	27.45	24.23	20.81	32.15	12.09	16.26	29.95	21.89	14.62	23.53
2023	28.64	24.73	23.18	18.56	28.67	11.89	15.32	25.69	28.7	10.05	21.54

Appendix 13

Average Return on Deposit

Year	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	5.61	1.97	2.51	3.03	2.73	1.49	1.48	3.92	0.63	2.56	2.59
2014	5.06	2.17	2.03	1.94	2.76	1.83	0.47	2.87	3.51	3.17	2.58
2015	2.94	2.29	3.45	2.77	1.57	2.65	-1.61	2.81	6.1	2.25	2.52
2016	2.35	2.4	1.86	3.3	3.01	2.29	6.77	2.74	6.29	2.32	3.33
2017	4.35	2.1	1.21	3.41	1.87	2.68	4.49	2.87	19.95	4.01	4.7
2018	3.88	2.84	1.15	2.32	2.25	2.88	4.22	3.09	13.21	2.51	3.83
2019	2.56	2.52	1.08	3.45	2.26	1.41	1.96	2.95	5.52	2.91	2.66
2020	3.13	2.31	0.88	2.21	2.18	1.18	1.2	3.26	5.39	2.44	2.42
2021	3.67	3.19	1.32	1.93	2.55	1.15	1.71	3.09	4.49	2.23	2.53
2022	3.18	2.61	1.69	1.71	2.5	1.16	1.65	2.98	3.01	1.52	2.2
2023	2.1	2.16	2.08	1.54	1.88	1.06	1.49	2.28	3.48	0.9	1.9

Appendix 14

Average Credit to Deposit Ratio

Year	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	75.95	72.22	76.56	53.34	78.38	88.02	89.51	42.46	72.08	68.96	71.75
2014	67.3	68.72	74.26	58.65	73.35	88.69	88.17	38.63	69.23	72.15	69.92
2015	67.08	71.39	86.03	59.09	73.62	85.33	78.21	42.77	87.73	78.19	72.94
2016	67.41	78.56	91.68	62.84	78.47	89.58	69.46	44.9	77.36	80.17	74.04
2017	74.48	77.63	55.32	72.93	73.12	92.57	78.16	36.57	85.12	82.36	72.83
2018	71.01	81.23	51.26	77.05	76.17	85.45	77.35	45.28	88.14	82.93	73.59
2019	78.01	83.1	51.06	77.36	76.67	87.71	84.16	46.58	86.38	82.06	75.31
2020	77.66	74.57	49.5	71.82	72.74	81	78.06	51.09	62.79	72.28	69.15
2021	74.71	75.88	49.47	74.71	76.24	79.32	73.53	58.6	72.26	78.72	71.34
2022	74.06	71.91	64.34	68.65	77.21	82.66	80.18	56.84	72.48	79.07	72.74
2023	64.27	73.96	38.09	72.26	66.05	80.86	79.77	48.85	75.09	80.61	67.98

Appendix 15
Average Capital Adequacy Ratio

Year	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	7.96	7.42	6.49	4.56	6.51	7.27	8.36	5.62	6.68	6.35	6.72
2014	6.87	5.26	8.15	4.96	4.98	8.17	3.02	5.88	1.4	5.69	5.44
2015	6.32	4.8	6.43	5.1	4.13	7	-3.5	5.86	-10.94	5.6	3.08
2016	5.35	4.87	6.26	5.72	5.61	10.22	1.97	6.17	-17.86	5.41	3.37
2017	5.3	6.26	4.42	6.16	5.44	7.11	5.87	5.98	-6.21	6.39	4.67
2018	5.73	6.32	5.44	6.97	5.24	7.56	7.61	7.35	6.94	7.24	6.64
2019	6.26	7.47	5.32	6.98	5.88	8.98	10.13	7.45	10.07	8.1	7.66
2020	6.38	7.4	4.77	7.15	5.5	8.28	8.77	8.56	9.37	8.16	7.43
2021	6.98	7.76	4.82	7.34	6.25	7.8	7.24	8.81	11.95	8.04	7.7
2022	7.14	7.63	6.05	7.03	6.74	7.9	8.41	8.39	10.43	8.85	7.86
2023	6.12	7.14	7.57	7.09	5.45	7.4	8.13	7.68	9.42	7.54	7.35

Appendix 16
Average Liquidity Ratio

Year	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	7.23	8.06	4.33	28.08	10.78	6.67	8.19	14.81	9.61	13.94	11.17
2014	9.8	10.7	6.51	8.62	9.69	8.66	9.32	12.14	10.55	15.37	10.14
2015	6.62	9.77	11.39	9.41	14.27	11.56	9.44	13.35	8.37	10.41	10.46
2016	12.02	9.34	8.88	6.67	11.2	9.54	16.04	12.38	12.59	8.33	10.7
2017	8.54	14.49	5.97	10.78	16.22	10.79	11.78	16.29	17.66	11.53	12.41
2018	8.27	12.69	9.01	9.66	18.59	15.76	16.32	8.67	12.79	11.32	12.31
2019	7.97	13.51	10.35	7.72	13.06	7.4	11.68	16.04	13.51	8.44	10.97
2020	7.13	17.21	9.61	11.86	18.31	15.12	11.45	19.76	21.89	13.08	14.54
2021	9.6	17.33	11.84	9.05	16.82	13.66	16.54	20.02	20.76	12.78	14.84
2022	11.44	18.46	10.6	7.61	18.44	16.05	12.27	31.3	23.63	12.46	16.23
2023	13.07	12.89	13.81	11.01	25.11	13.54	16.18	35.52	16.9	11.52	16.96

Appendix 17
Average Deposit Ratio

Year	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	78.36	85.68	81.44	85.32	67.01	81.48	76.38	85	78.03	87.28	80.6
2014	80.17	86.01	79.01	85.16	82.58	83.07	76.61	86.02	77.83	82.37	81.88
2015	78.7	85.71	74.33	86.32	81.84	85.68	73.73	82.31	66.26	82.4	79.73
2016	82.94	85.94	73.76	84.75	83.93	81.83	71.94	86.68	69.84	87.19	80.88
2017	81.3	85.47	87.39	85.02	87.69	82.33	78.38	86.07	59.39	86.08	81.91
2018	84.85	84.12	88.61	84.01	87.82	80.97	74.95	84.73	62.74	84.44	81.72
2019	81.07	81.72	90	83.01	87.7	77.55	72.84	84.02	62.83	82.16	80.29
2020	76.91	81.7	90.1	85.39	88.34	82.18	82.67	83.7	74.27	83.77	82.9
2021	81.28	80.04	88.83	84.11	86.57	83.12	81.55	83.93	72.33	82.5	82.43
2022	80.4	80.26	86.82	85.78	86.92	81.99	82.78	84.5	75.82	85.04	83.03
2023	83.49	81.62	84.5	85.64	83.07	83.41	83.38	86.42	77.62	83.78	83.29

Appendix 18
Average Investment Ratio

Year	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	23.39	24.49	24.56	18.93	14.07	17.42	4.53	42.64	14.64	21.82	20.65
2014	25.42	25.78	26.94	35.06	25.37	11.87	6.95	47.95	15.49	21.71	24.25
2015	29.85	22.81	15.44	34.12	21.36	10.21	13.9	45.31	7.06	19.97	22
2016	25.9	17.11	16.92	33.93	17.72	10.48	18.67	40.52	9.09	17.64	20.8
2017	25.85	13.55	41.53	20.92	15.66	6.43	13.58	44.72	10.97	13.21	20.64
2018	24.93	13.26	41.28	18.53	11.91	8.15	13.57	47.8	13.41	13.59	20.64
2019	21.34	12.26	40.13	17.58	16.52	16.13	14.4	38.16	13.5	16.76	20.68
2020	19.67	14.96	41.33	18.02	13.89	10.95	16.12	30.17	16.97	17.59	19.97
2021	20.89	14.66	39.21	18.07	13.89	13.57	16.42	27.13	12.86	14.17	19.09
2022	19.5	16.72	28.24	26.32	9.1	9.6	13.47	17.15	9.18	11.42	16.07
2023	24.81	19.33	15.26	19.93	15.1	12.69	9.44	19.58	13.26	12.75	16.21

Appendix 19
Average Capital Ratio

Year	NABIL	NIMB	SBI	HB	EB	KB	NMB	SCB	CTZN	GIME	Average
2013	2.64	3.53	4.07	2.21	5.01	6.5	7.99	1.65	4.63	4.52	4.28
2014	2.04	2.68	6.12	2.49	3.1	6.66	8.08	1.4	4.31	3.66	4.05
2015	1.66	2.8	4.21	2.34	2.22	6.09	7.93	1.38	5.04	4.02	3.77
2016	1.79	2.99	4.7	2.7	2.91	9.41	13.75	1.81	4.77	3.32	4.82
2017	2.1	2.58	2.73	2.98	2.21	6.16	12.01	2.24	11.05	4.02	4.81
2018	2.65	4.05	4.3	3.57	2.45	6.07	9.69	3.37	11.61	4.91	5.27
2019	3.31	3.93	3.97	4.06	2.73	6.78	9.31	3.56	10.97	5.31	5.39
2020	2.84	4.32	3.54	4.29	2.46	6	7.02	3.75	8.78	5.38	4.84
2021	3.11	4.83	3.55	4.37	2.64	5.26	5.54	3.94	8.13	5.02	4.64
2022	3.25	4.51	4.22	3.84	2.69	5.44	5.47	3.73	6.45	4.79	4.44
2023	2.93	4.3	5.01	3.88	2.14	6.07	6.34	3.39	5.57	4.5	4.41

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i CHAPTER-I INTRODUCTION 1.1 Background of the Study Liquidity and profitability both are highly controversial contents in the financial field due to their contradictory nature. Higher liquidity generates lower return and, vice versa. Lower liquidity also erodes goodwill and confidence of the people. Efficient handling of company's liquidity provides goodwill about the company as well as success of the company. Therefore, some people advocate for higher liquidity position and some for the lower position of liquidity in the banking and non-banking institutions. Both the liquidity deficit and more liquidity surplus indicate the problem in the financial health of a commercial bank (Sthapit & Maharjan, 2016). However, no any measurement unit has been developed to measure the exact level of liquidity to gain required return in the institution yet. The level of liquidity to be