CHAPTER – I

INTRODUCTION

1.1 Background of the Study

Generally, an institution established by law, which deals in money and credit is called bank. When a bank performs multiple tasks, the efficiency and effectiveness of work becomes weak. Hence, different banks are established for different purposes. The commercial bank is the oldest form of bank. There is considerable change in the original form of commercial bank. In general, bank means the commercial banks. Hence, the definitions of bank are also equally applicable to commercial banks. The profit maximization is the main objective of these banks.

Large inventory and a substantial trade credit policy may lead to high sales. Firms kept larger inventory to reduce the risk of a stock out. Trade credit may arouse sales because it allows customers to assess product quality before paying (Long, Maltiz&Ravid 1993). Liquidity is concerned with making sure that firms have exactly the right amount of money and lines of credit available to the business at all times. A popular measure of liquidity is cash gap or cash conversion cycle, the time lag between the expenditure for the purchases of raw materials and the collection of sales of finished goods (Deloof, 2003). The longer this time lag, the larger the investment in working capital. A longer cash gap might increase profitability because it leads to increase in sales of companies. However, corporate profitability might also decrease with the cash gap.

The liquidity is essential for company existence. It principally has an effect on financial costs reduction or growth, changes in the sales dynamic, as well as it influences on company risk level. The significance of liquidity to company performance might lead to the conclusion that it determines the profitability level of company. The decisive significance of liquidity means that it is important for company development and at the same is one of the fundamental endogenous factors which are responsible for company market position. Liquidity management is important for every firm as it virtually affects its overall liquidity and profitability (Appuhami, 2008).

The profitability is more important for financial institutions and banks are the part of them. Competition, concentration, efficiency, productivity, and profitability are the various terms of expressed by the performance of banks. In the financial environment, the profitability of the banking system is one of the hot issues. The banking sector fulfills an important economic function in providing financial intermediation by converting deposits into productive investments. Banks are the providers of funds needed for investment. Stability is most important to the financial system. Therefore profitability of the banking sector is most important the economy of the country. High profits in banking sector always leads to financial stability (Pokharel S. P. Pokhrel B. P., 2019).

Firms involved in the processing of goods (manufacturing companies), usually keep working capital in the form of the cash, marketable securities, cash equivalent and the inventories. The working capital comprises almost half of the sum of the asset side of balance sheet, whereas this proportion may be higher in the case of firms involved in the business of trading these products (merchandising companies). The excessive amount of investment in these assets may result in the barrier of the company's precious cash resources and eventually profit of firms may decline. There is always tradeoff between liquidity and profitability (Eljelly, 2004). Liquidity and profitability are important goals for any firm and to sacrifice one goal at the cost of other can create severe problems for the firm (Kargar and Bluementhal, 1994). Profitability is important for long term survival of firms which helps to maximize the wealth of shareholders. On the other hand liquidity is important to cover its short term obligations like payment to supplier and to protect itself from bankruptcy (Howorth and Westhead, 2003, Deloof, 2003, Afza and Najir, 2007, Afza and Najir, 2008). Liquidity management requires a careful attention since it plays a major role in firms effectiveness, value and risk (Smith, 1980).

Profitability and liquidity are two important variables which give information about the performance of any business entity. For long-term survival and healthy growth both profitability and liquidity should go parallel to each other .Profitability is one of the major goals of any business. Without being profitable it is not possible for a business to survive and the business growth is difficult. To generate profit a business need short-term funds to fulfill its day to day needs in operations and other

requirements. Business will be more profitable when this short- term need of funds is generated by business operation not through external debts. So the liquidity tells about the business capability to meet short-terms need of funds by the business and profitability tells about the profit generated from the operations of business (Bhnadari, 2013).

History of modern banking industry in Nepal dates back to 1937 in which year Nepal Bank Limited, the first commercial bank, was established. The then government brought the chartered act to establish, operate and regulate the banks. The then government promulgated Nepal Bank Act, 1937 to establish and operate Nepal Bank Ltd. Similarly, the government enacted RastriyaBanijya Bank Act, 1965 to establish and run the second commercial bank in the country. The then government of Nepal, brought the concept of general act to operate and regulate the existing two commercial banks and promulgated the commercial Bank Act, 1974 and repealed the two chartered acts – Nepal Bank Act, 1937 and RastriyaBanijya Bank Act, 1965 – in 1974. Thus, the existing banks were regulated under this general act. This act was in enforce till the enforcement of bank and financial Institution Ordinance, 2004 and this ordinance was passed by parliament in 2006 as an umbrella act of all licensed depository financial institutions. All depository institutions licensed by Nepal Rastra Bank were brought under this broader umbrella act. Bank and Financial Institution Act, 2006 was replaced with Bank and Financial Institution Act, 2017 and now, all commercial banks are established and operated under this act.

Commercial Banks in Nepal

In Nepal, the history of the modern banking institution was introduced when the first commercial bank, Nepal Bank Limited (NBL) was established in 1994 B.S. under the Nepal Bank act 1993 B.S. Being a commercial bank, it was natural that NBL paid more attention to profit-generating business and preferred opening branches in urban areas. Nepal Rastra Bank (NRB) was set up in 2013 B.S. as a central bank under the NRB act 2012 B.S. Since then it has been fluctuating as the government bank and has contributed to the growth of the financial sector. After this, the government set up RastriyaBanijya Bank (RBB) in B.S. 2022 as a fully government-owned commercial bank. As the name suggests, commercial banks are to carry out commercial

transactions only. But commercial banks had to carry out the function of all types of financial institutions. Hence, the Industrial Development Center (IDC) was set up in 2013 B.S. for industrial development. In 2016, IDC was converted to Nepal Industrial Development Corporation (NIDC). Similarly, the Agricultural Development Bank (ADB) was established in 2024 B.S. to provide finance for agricultural produces so that agricultural productivity could be enhanced by introducing modern agriculture techniques. The commercial bank has been established gradually after the "commercial bank act 2031". In the 2041B.S. Nepal government established five rural development banks under the control and supervision of Nepal Rastra bank. After 2041 B.S. to provide quality banking service, efficiency, and healthy competition foreign investment and new technology in the banking sector were introduced to adopting liberalization policy. The first joint venture bank, Nepal Arab bank was established in 2041 B.S. i.e. NABIL. Similarly, two foreign banks named Nepal Indosuez bank limited and Nepal Grind lays bank limited entered in the forms of joint venture banks and the trend is continuous till today as many Nepalese owned banks are also running e.g. Prabhu bank, Megabank, NCC bank. The banking activities are getting very much dynamic as well as complex. Because of the higher return on investment, entrepreneurs were interested in the setting of the new bank including branches of foreign banks. However, the current political and economic scenario of the country coupled with new prudential norms of Nepal Rastra Bank and stiff competition may make the entrepreneurs give a second thought to the idea of establishing banks. Current scenario banking in Nepal After the merger and acquisition of the recent publication of Nepal Rastra Bank (NRB), 27 commercial banks were operating in Nepal.

1.2 Problem of Statement

The banking sectors are facing many problems in maintaining the liquidity position, as in banking sectors lack of adequate liquid assets may impact a negative effect on financial performance due to incapacity in delivering to pay short term debts and other financial expenses. The mobilization of the capital by the commercial banks of Nepal in the productive sectors is found minimal. Banks are not able to collect the fund and allocate them in effective and efficient sector. The inefficiency and weakness in the analysis of financial statement affect the bank's financial

performance. It reflects the inefficiency in liquidity management (Shrestha, 2020).

In response to the economic liberalization policy of the government, established of private and joint venture banking is continued. The tendency to concentrate these banks only in urban areas has raised certain questions. This state of affairs cannot contribute much to the socio-economic development of the country. These commercial banks are reluctant to extent their operation in rural areas. But these banks are inclined to pay fines rather than directing their resources to such less profitable sector. This problem remains to be solved.

This study will basically focus its attention to reveal the struggle and success achieved by the joint venture banking. Commercial banks' main motive is to take profit by providing services to the customers. In Nepal, the profitability rate, operating expenses, dividend distribution among the shareholders etc. have been found inconsistent. Against this backdrop, this study possesses the following research questions:

i. What is the liquidity position of Nepalese commercial bank?

ii. What is the profitability status of Nepalese commercial bank?

iii. What is the relationship between liquidity and profitability of Nepalese commercial banks?

1.3 Objective of the study

The major objective of the study is to discuss, examine and evaluate the relationship between liquidity and profitability position of the concerned commercial banking system in Nepal. Thus, this study has been conducted to achieve the following objectives:

i. To analyze the liquidity position of Nepalese commercial banks.

ii. To analyze the profitability position of Nepalese commercial banks.

iii. To identify the relationship between liquidity and profitability of Nepalese commercial banks.

1.4 Significance of the study

The study of the analysis of liquidity and profitability position of commercial banks in Nepal plays vital role in the managerial decision. Every organization has to analyze its financial performance in the every step of its operation, promotion, and expansion. There should be an appropriate equilibrium between the earning and non-earning assets. Commercial banks are always guided by the objective of profitability. All financial decisions of commercial banks are for the betterment of shareholders wealth. There should be an effective system of funds allocation in order to safeguard the banks from the danger of illiquidity. An appropriate level must be achieved between them. The study ponders to find out whether commercial banks are not alert or not in this regard.

This study will be helpful to enhance the financial performance of concern organization. This study will be usable and valuable for academicians, students, teachers, and practitioners in the field of accounting and finance. This study also enlightens the shareholders, financial agencies, stock exchange, stock trader customers, depositors and debtors who can objectively identify the better banks to deal with.

1.5 Limitation of the study

In the context of Nepal, problem of reliable data is the major problem for research study. There is considerable place for arguing about its accuracy and reliability. Every study has limitations due to different factors of institutions, time-period taken, reliability of statistical data, tools and variances. The following limitations are pointed out in this study of relationship between liquidity and profitability position of commercial banks in Nepal:

i. The study analyses only the relationship between liquidity and profitability of the five commercial banks. Hence, it does not cover the characteristics of entire Nepalese commercial banking sector.

ii. This study mainly conducted on the basis of secondary data. Therefore, the generation of findings depends upon truthfulness of secondary data.

iii. This study covers the analysis of only five years data from fiscal year 2015/16 to 2019/20. Hence, the conclusion drawn confirms to the above period only.

1.6 Chapter Plan

The research is organized into five chapters, which presents in such a way that the research objective has been easily meet and research questions can be answered properly. The results and findings of the study depicts systematic manner. Each chapter's content is further described as follows:

Chapter 1 – Introduction

It has contained the general introduction and background of the research with the short overview of selected commercial banks. The chapter also has the statement of problem, research objectives, limitations of the study, significance of the study.

Chapter 2 – Review of Literature

This chapter has looked for the review of the previous studies related to this research subject to know the prevalent situations. The first part has deal with the conceptual framework and second part considers the review of different sources of information.

Chapter 3 – Research Methodology

This chapter is considered about method of doing research on which whole study is based upon, which has contained the nature and sources of data to be used in the research and sampling method and procedures are mentioned with data analysis tools.

Chapter 4 –Results and Discussions

The fourth chapter is deals with the presentations and analysis of the data collected from various sources using different financial and statistical tools with findings and brief comment on them.

Chapter 5 – Conclusion

This chapter has contained summary, conclusions and recommendation of the study.

References and Appendices are also attached at the end of the study.

CHAPTER – II

REVIEW OF LITERATURE

Going through previous studies and books with the purpose of knowing the research issue in detail and find out appropriate methodology is known as literature review.The review of literature is a very important part of the research. It also tries to find out knowledge gap, past debates on topic, problems of the past, current status of the research on the topic, etc. The purpose of a literature review is to convey what knowledge and ideas have been established on a topic in the past and what are their strength and weaknesses. This chapter highlights upon the existing literature. For this, several books, dissertation, reports, handouts and articles published in journals and newspapers are reviewed.

2.1 Theoretical Review

2.1.1 Liquidity of Commercial Banks

Liquidity means an immediate capacity to meet one's financial commitment. Liquidity management can be defined in two major forms. The first one refers to the ability to trade different types of assets at its current price. Another is applied by financial institutions such as the capacity to meet cash and collateral obligation deprived of incurring a substantial loss (Shrestha, 2012).

The liquidity indication of organization depends upon the relation between cash assets with addition of various assets which can quickly turned into cash and payment to the awaited short-term liabilities. Investment and liquidity are two counterparts of the company. For more earning, more investments are made which may result in less degree of liquidity which may lead to different types of loss penalty. In the case of banks, cash is available from deposit received straight from public, institutions, companies in the form of demand deposits and term deposits (Ahmed Arif, 2012).

Liquidity in commercial banks represents the capacity to fulfill the immediate financial obligation. The contractor needs to pay the funds for its obligation at the time of maturity of contracts, including the borrowing, investments, withdrawals, of the deposits and accrued liabilities (Mutahhar, 2016).

Liquidity is a measure of the availability of cash for use in the day by day business. A liquid asset is one that is cash or can easily be turned into cash. Liquidity plays a crucial role to both the internal and external analysts because of its close relationship with day-to-day operations of a business (Bhunia, 2010). Weaker liquidity position poses a threat to the solvency as well as profitability of a firm and makes it unstable (Niresh, 2012). Current ratio and quick ratio are two common measures of the liquidity of a company. Usually a high current ratio is considered to be an indicator of the firm's ability to promptly meet its short-term liabilities.

Liquidity is the status and part of the assets which can be used to meet the obligation. Liquidity can be viewed in terms of liquidity stored in the balance sheet and in terms of liquidity available through purchased funds. The degree of liquidity depends upon the relationship between cash assets plus those assets which can be quickly turned into cash and the liability awaiting payment. Generally, the definition of liquidity can't be found in the same way, in the countries of whole world. Because, it is known as, as much as development of the monetary sector take place or the use of monetary device increases, so much the definition of it goes wider. Liquidity means the whole money stock of money, (Bhandari, 2013).

Liquidity ratio measures the ability of the firm to meet its current obligations. In fact, analysis of liquidity needs the preparation of cash budgets and cash and fund flow statements, but liquidity ratios, by establishing a ratio between cash and other current assets to current obligations, provide a quick measure of liquidity. A firm should ensure that it does not suffer from lack of liquidity, and also that it does not have excess liquidity. The failure of a company to meet its obligations due to lack of sufficient liquidity will result in a poor creditworthiness, loss of creditor's confidence, or even in legal tangles resulting in the closure of the company. A very high degree of liquidity is also bad; idle assets earn nothing. The firm's fund will be unnecessarily tied up in current assets. Therefore, it is necessary to strike a proper balance between high liquidity and lack of liquidity (Pandey, 2000).

Liquidity is the availability of cash at the time when needed at a reasonable cost. One of the most important tasks faced by the management of any bank is ensuring adequate liquidity. A bank is considered to be well liquidity maintaining bank if it has

ready access to immediately spendable funds at reasonable cost precisely at the time when those funds are needed. This suggests that a well liquidity maintaining bank either has the right amount of immediately spendable funds on hand when they are required or can quickly raise liquid funds by borrowing or by selling assets.

The liquidity position of a firm would be satisfactory if it is able to meets its current obligations when they become due. A firm can be said to have the ability to meet its short-term liabilities if it has sufficiently liquid funds to pay the interest on its short-maturing debt usually within a year as well as to repay the principal. This ability is reflected in the liquidity ratios of a firm. The liquidity ratios are particularly useful in credit analysis by banks and other suppliers for short-term loans.

A bank can't run without liquidity. The Nepal Rastra Bank from time to time changes the legal provision about the liquidity. The compulsion about the commercial banks should keep the cash in their various funds shows the importance of liquidity. The commercial banks and financial institutions should maintain the balance of cash fund in required quantity as per the law and the NRB. The importance of liquidity is considered very sensitive because if it can't maintain the liquidity, it has to pay fine.

2.1.2 Profitability of Commercial Banks

The word profitability is composed of two words, namely, profit and ability. The term profit has been explained above and the term ability indicates the power of a business entity to earn profits. The ability of a concern also denotes its earning power or operating performance.

The profitability may be defined as the ability of a given investment to earn a return from its use. Profitability is a relative concept whereas profit is an absolute connotation. Productivity of capital employed and to measure operational efficiency, profitability analysis is considered as one of the best techniques (Tulsian, 2014).

Profitability refers to the net income of the bank where company's revenues exceed its expenses. Income is generated from the activities of the banks and expense is the cost of resources which are used to generate profit. Profitability is the main objective of the companies. Businesses cannot be survived in the market for the long run without profitability. So evaluating past profitability, calculating current profitability

and foretelling future profitability is very important for the company. Revenue and expense are shown at the income statement which refers to the profitability of the company while cash inflow and cash outflow are shown at cash flow statement which refers to the liquidity of the company (Das, Chowdhury, Rahman, &Dey, 2015).

The profitability of the organization determines and measures the efficiency of the firm. In another word, it is a measure of earning power of the organization and to operate the organization. The efficiency of an organization which is managed by its financial performance. In short, profitability is determined by the ability to make profit from the operations (Owolabi, 2012).

Profit is the difference between revenues and expenses over a period of time (usually one year). Profit is the ultimate 'output' of a company, and it will have no future if it fails to make sufficient profits. Therefore, the financial manager should continuously evaluate the efficiency of the company in terms of profit. The profitability ratios are calculated to measure the operating efficiency of the company. Besides management of the company, creditors and owners are also interested in the profitability of the firm. Creditors want to get interest and repayment of principal regularly. Owners want to get a required rate of return on their investment. This is possible only when the company earns enough profits (Pandey, 2012).

Commercial banks are established to earn profit. Without profit, they cannot survive for the long period of time. All the stakeholders of the bank put pressure on the bank management to earn profit for their own sake. Without profit these stakeholders cannot be satisfied and without them bank cannot exists. So, bank wants to invest all of its funds in those sectors which ensure higher return. Further more, there is always positive attitude of depositors and other lenders towards the highly profitable banks. As a result, bank can acquire funds easily and can spend in their transactions.

Profit is a reward for risk taking. Profit for a bank is the difference between borrowing rate of interest and lending rate of interest. Generally, an interest rate is the composite of liquidity risk premium, default risk premium, inflation risk premium and risk free rate. Investments on liquid assets are free from liquidity risk and default risk. So, interest rates or rate of return from such investments are comparatively very low. Banks wants to invest on those assets which ensures higher return rate. However, they

cannot escape from the investment on liquid assets. So, appropriate investment portfolio which ensures both liquidity and profitability is essential.

2.1.3 Relationship between Liquidity and Profitability

Liquidity and profitability are foundations of the organization which are always topic of concern to evaluating the financial position (Olagunju, 2011). The survival of any bank is determined by these issues. The short-term survival is depending upon the liquidity of the bank whereas, growth in profitability will make the survival of banks in long run. As the elementary function of the banks is to collect deposits and lend credit facility (Mahmud, 2014). The banks should maintain the sufficient liquidity to cope the unseen risk. There is a huge risk for the financial institution if neglect in management of liquidity (Naqvi, 2009). However, increasing the liquidity adversely affect the profit of the banks. Hence, management and the balance in profitability and liquidity must be the topic of concern for mitigating the risk.

The corporate health and efficiency of commercial bank can be determined by proactive parameters such as profitability and liquidity position. The bank plays an intermediary role which collects money from the depositors which are the surplus group and provide the deficit group with the fund from that collected deposits (Macharia, 2013). Thus, banks are also known as financial intermediately unit. This process of bank brings the people together who have excess fund and who need money. Liquidity management is the crucial aspect in implementation of monetary policy (Botoe, 2012). This will aid to economic management and promotes the sustainable economic growth in long run. Banks keeping good mobilization of the monetary and liquid assets and sustainable credit expansion leads to step towards economy's non inflationary potential and liquidity management on time (Khokhar, 2015). The well manage form of liquidity and effective mobilization of the resources will always help in maintaining the health of the bank and gain required profitability.

For a bank, the words liquidity and profitability come again and again. There is no possibility of profitability without liquidity. Also, there is no growth in liquidity without profitability. These are compliment to each other. But these two also are opponent to each other. If there is high liquidity in bank, the bank can't gain profit. Because, most part of the liquidity is reserved in the bank, it doesn't give profit to the

bank. The bank can't invest the amount. It is not possible to hope profitability without investment (Budha, 2016).

Liquidity and profitability are often seen like a different side of a coin. According to the risk and return theory, which states that the higher the risk, the higher the return and vice versa, profitability and liquidity are not in the same line, meaning that they have an inverse relationship, because the more liquid a company is, it indicates funds are confined to liquid assets, making them inaccessible for productive activities that generate profit or for investments. Moreover, the maintenance cost for all those liquid assets could affect the overall profitability of a company. According to Panigrahi (2014), to maximize shareholders wealth, liquidity and profitability need to be traded – off. Liquidity is important for the short – term, the more liquid a company is, the lower chance of it being unable to pay its short –term debts. Liquidity is really important for a company's survival. Therefore, a financial manager must find the right balance between liquidity to ensure the survival of a company and also keep profitability maintained in order to give the optimal return for its shareholder (Shin &Soenen, 1998).

Profitability and liquidity are two important variables which give information about the performance of any business entity. For long-term survival and healthy growth both profitability and liquidity should go parallel to each other. Profitability is one of the major goals of any business. Without being profitable it is not possible for a business to survive and the business growth is difficult. To generate profit a business need short-term funds to fulfill its day to day needs in operations and other requirements. Business will be more profitable when this short- term need of funds is generated by business operation not through external debts. So the liquidity tells about the business capability to meet short-terms need of funds by the business and profitability tells about the profit generated from the operations of business.

If the bank attempts to run its transactions ignoring these two principles, certainly the bank will bear an economic disaster. Hence, the bank gives emphasis upon the necessity of internal co-ordination between liquidity and profitability due to following reasons:

i. Liquidity is necessary to make payment of all sorts of deposits.

ii. Liquidity is necessary to save the bank from the economic rise and fall.
iii. The bank should not keep high liquidity to gain profit.
iv. In the lack of profitability, the bank can't be operated.
v. Also, if there is liquidity crisis in the bank, it can't be run.
vi. Also, the bank should earn much profit to pay the shareholders, creditors and the employees of the bank.
vii. Also, for competition, the bank should gain profit.
viii. The bank can't manage its transactions without gaining profit.

With the above mentioned reasons, the liquidity and the profitability have their peculiar importance in the bank. So, from business point of view, it is necessary to maintain balance, between principalities of liquidity and profitability (Bhandari, 2013).

The importance of liquidity and profitability in a bank is paramount. They are recognized as two wheels of a cart because in the absence of any of them, the bank cannot forgo ahead. However, there is a practice of treating them as antagonistic to each other because liquidity is maintained at the cost of profitability and vice-versa.

Similarly, a bank always puts in efforts to maximize its profitability. This is so because its shareholders expect fair rate of return, depositors expect better rate of interest and employees expect handsome salary and bonus. If the bank cannot satisfy either of these parties then the success of the bank is always questioned.

2.2 Theories related to Liquidity and Profitability

2.2.1 Anticipated Income Theory

Prochnow (1949) formulated this theory and it presupposes that the greatest guarantee for insuring adequate liquidity is by laying more emphases on the credit worthiness and the earning potential of a borrower (Odunayo&Oluwafeyisayo, 2015). The theory presupposes that the expected earnings of a borrower can be used to manage the bank's liquidity. This enables banks to give out loans because the settlement of those loans are linked to the borrowers expected income and are to be paid periodically and with regular premiums and that will allow the bank to offer a relatively high liquidity when cash inflows are standard and can be anticipated (Koranteng, 2015).

Additionally, the anticipated income theory presumes that liquidity can be ensured if planned loan payments are made on prospect income of the borrower. The theory relates loan repayment to income than rely on collateral (Botoe, 2012).

The theory also equates intrinsic soundness of term loan, with the growing significance of suitable settlement schedules adapted to the predictable earning of the borrower (Botoe, 2012). The theory asserts that a bank can also manage its liquidity through suitable directing of the issued loans, collect them when they are due and reduce any possibility of delays in repayments. The theory recognizes that certain types of loans have more liquidity than others (Botoe, 2012). This theory has encouraged and helped many deposit money banks to adopt an advanced collection of investment (Odunayo&Oluwafeyisayo, 2015). This theory holds that management of liquidity could be enhanced by adequately phasing and structuring of the loan commitments to customers (Tamunosiki, Giami, &Obari, 2017). This theory also depicts that a banks liability can be influenced by the maturity pattern of loans and investment portfolio (Botoe, 2012).

2.2.2 Shiftability Theory

This theory was formulated by Moulton (1995) and it contends that an excellent source of liquidity can be obtained from the highly marketable securities that a bank holds. This theory assumes that bank's liquidity is a function of their capacity to acquire assets that are convertible or marketable to other lenders or investors should there be imminent need for cash (tamunosiki, Giami, &Obari, 2017). The shiftability theory holds that banks could well protect themselves when there is a ready market for the instruments they hold. Instrument included in liquidity reserve may comprise of commercial papers, treasury bills and bankers acceptances. Normally, these instruments are marketable and, and since they mature quickly, certainty of capital is guaranteed (Botoe, 2012).

The shiftability theory is either based on the proposal that assets that a bank holds are to be sold to other lenders or investors or shifted to central bank, which stands ready to purchase the assets offered for sale (Tamunosiki, Giami, &Obari, 2017). The theory also contends that access to central bank could be had only if the loans satisfy eligibility rules such as self-liquidating commercial loans. Therefore, banks should

hold highly marketable government securities to meet liquidity needs. The shiftability approach allows banks to efficiently run with small amount of reserves or by making long term investments on assets. Banks can attempt to prevent liquidity crisis by always selling their securities at good prices as presumed by the shiftability theory. That is, banks hold assets that are marketable and their convertability will not be at a discount. The theory ensures banks are liquid by assisting in the shiftability of assets (Koranteng, 2015).

2.2.3 Liability Management Theory

This theory associated with Dodds (1982) and focused on the liability side of bank's statement of financial performance. The contentment of the theory is that liabilities of a bank could be used to derive extra liquidity. In accordance to this theory, the ability of banks to procure all the funds that they require provides no essence of storing excess of liquid assets (Ibe, 2013). Laying more emphasis in maintaining liquid assets as well as liquid investment by banks is of no essence, but banks have to focus on liabilities side of its balance sheet. By borrowing cash (liquid assets) in the capital and money markets, banks can effectively solve their liquidity problems. Banks should consider both sides of its balance sheet to be a source of liquidity as contributed in this theory (Koranteng, 2015).

Liquidity management theory entails all those activities involved in obtaining cash from the depositors and creditors (from the market especially) and also determining the suitable mix of funds for a particular bank (Ibe, 2013). The theory posits that, since banks can borrow and obtain funds from depositors and other creditors, they need not to hold liquid assets. That is, the liquidity needs are catered for by the borrowed funds (Koranteng, 2015). The liability management theory depicts that in meeting liquidity requirements, banks can bid for extra funds to enable them meet their deposit withdrawal as well as the loan demands. Liquidity needs of a bank can be met by issuing liabilities. Old norms of maintaining liquidity need not to be followed as depicted by this theory (Botoe, 2012).

2.2.4 Liquidity Transformation Theory

Bryant (1980) and Diamond and Dybvig (1983) asserted that transformation of

liquidity which is the formation of liquid claims that are backed by illiquid assets and is a key function of many commercial banks (Chernenko&Sunderam, 2016). Accorded by this theory, banks financially support illiquid loans in creating liquidity with liquid demand deposits. Banks normally create liquidity by transforming less liquid assets into more liquid liabilities (Odunga, 2016). This theory states the transformation of liquid liabilities (deposits) into illiquid claims (loans) by the banks. According to liquidity transformation theory the basic intermediation role of financial institutions (banks) relies on a maturity disparity between the deposits and loans that it makes, making it difficult to finance liquidity risk that may accrue (Bonfim& Kim, 2014).

In accordance to this theory, banks that are less risky and even more liquid efficient are those that produce more liquidity than others. The theory states that it is the banks which should provide investors with more highly liquid demand deposits (liabilities) while they finance illiquid even during tough times (Bonfim& Kim, 2014). The theory supports liquidity transformation as it also plays a vital role in shadow banking system which is the functioning of the system of market-based intermediaries (Chernenko&Sunderam, 2016).

2.2.5 Clark Theory of Profitability

Clark begins his theory with an analysis of a profit-less economy and taking into account its key futures. The profit less economy is compared with profit-generating economies and significant differences were identified to indicate the causes of profit. This method was adopted by Schumpeter and Knight. The profit-less economy is referring to as ‘static state’, in which all factors are constant and not subject to change, the market is assumed to be perfect; hence the absence of monopoly and entrepreneurial efforts are rewarded according to management wage levels. There is perfect mobility and flow of all economic units in a frictionless environment; in short all impediments to perfect competition are dissolved.

“The society acts and lives, but does so in a changeless manner” (Siddiqi, 1971). Any change in these factors will produce a tremor in the system but the economy will adjust and settle at new equilibriums. So changes in population and capital will result in corresponding fluctuations in wages and interest rates, the economy will absorb

these changes and then settle back to a static state. Similarly, changes in techniques of production will affect output and prices; adoption of the same techniques by other producers will cause a shift in the equilibrium, but once these become ubiquitous the equilibrium will resume. The ability of the economy to endure such changes is due to the competitive equilibrium dynamics of the free market. Competition, remarks Knight, has the "tendency to eliminate profit or loss and bring the value of economic goods to equality with their cost" (Knight, 1921). Real economies as noted by Clark will, however, not buffer such changes instantaneously as there will necessarily be a time lag. It is into this frictional delay that the entrepreneur seeks to enter and make his profit before equilibrium returns and consumes his profit. Profit is hence a transitional phenomenon: "untransformed increments of wages and interest" (Siddiqi, 1971), its temporary nature demands from the entrepreneur a dynamic endeavor to seek out or generate opportunities on which he can capitalize. This process is summed up in Clark's statement that "dynamic forces, then, account today for the existence of an income that static forces will begin to dispose of tomorrow". (Siddiqi, 1971). Economies are, however, in constant change, the five variables mentioned by Clark are never static; population and capital are in constant growth, innovation in production and management of resources are continually researched and consumer demands are subject to ever-changing fashions and trends. The entrepreneur thus finds permanence for as long as he can keep ahead of the changes, react before competitors and organize his efforts with sound knowledge of the market. Clark's analysis determines that the essential cause of profit is change. These changes yield a surplus in the market prior to equilibrium and they are the sought-after profits of the entrepreneur.

2.2.6 Schumpeter Theory of Profitability

Following on the method of Clark, Schumpeter developed the 'circular flow model' in which a profit-less economy is described where perfect competition extinguishes surpluses of monopoly and friction. The analyses of the 'circular flow' economy differ in detail from the 'static state' model of Clark. So departures between an ideally competitive environment and actual economies yield the causes of profit. Schumpeter, however, is far more selective in his approach six than Clark. 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. Schumpeter goes on to describe five areas in which innovation will lead to profit generation (Siddiqi, 1971):

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.

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 accrue 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 (Siddiqi, 1971). 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.

2.3 Review of Related Studies

Various studies have been conducted in different aspect of commercial banks and JVBs. The conclusion of the previous studies on the different aspects of commercial banks is relevant to this study. Thus, the studies of previous articles, journals and thesis are reviewed in this regard.

2.3.1 Review of Journal and Articles

Eljelly (2004) investigated the liquidity and profitability trade – off : an empirical investigation in an emerging market, found a negative relationship between profitability and liquidity indicators. In his study, he used current ratio and cash gap (cash conversion cycle) as liquidity indicator and net operating income as a

profitability indicator. Those variables were tested using pearson correlation analysis and regression analysis. He also found that current ratio was more important as liquidity measure that affects profitability, however, within sector, cash gap was found to be more important than current ratio in affecting profitability.

Bordeleau and Graham (2010) investigated the importance of sound bank liquidity management. In response, regulators are devising new liquidity standards with the aim of making the financial system more stable and resilient. In this paper, the authors analyzed the impact of liquid asset holdings on bank profitability for a sample of large U.S and Canadian banks. Results suggest that profitability is improved for banks that hold some liquid assets, however, there is a point at which holding further liquid assets diminishes a bank's profitability, all else equal. Moreover, empirical evidence also suggests that this relationship varies depending on a bank's business model and the state of the economy. These results are particularly relevant as policymakers devise new standards establishing an appropriate level of liquidity for banks. While it is generally agreed upon that banks undervalued liquidity prior to the recent financial crisis, one must also consider the trade-off between resilience to liquidity shocks and the cost of holding lower-yielding liquid assets as the latter may impact bank's ability to generate revenues, increase capital and extend credit.

Niresh (2012) investigated the trade – off between liquidity and profitability of selected manufacturing firms in Sri Lanka during period 2007 - 2011. The variables used in this study was current ratio, quick ratio, and liquid ratio for liquidity indicators, whereas for profitability indicators the variable used was net profit, return on capital employed, and return on equity (ROE). Using correlation analysis and descriptive statistics, he found that there is no significant relationship between liquidity and profitability among the listed 31 manufacturing firms in Sri Lanka during 2007 – 2011.

Lartey, Samuel and Eric (2013) investigated the relationship between the liquidity and profitability of banks listed on the Ghana Stock Exchange. Seven out of nine listed banks were involved in the study. The study was descriptive in nature. Data emanated from listed banks' financial reports published and unpublished books, scholarly journals, business and financial news papers and other magazines and corporate

journals. The result showed that the listed banks were increased both liquid and illiquid assets. Despite the fact that the liquid asset holdings of the listed banks were increased, there liquidity and profitability was also decreased. The research concluded that there was a weak positive relationship between the liquidity and profitability.

Alshatti (2014) investigated the effect of liquidity management on profitability in the Jordanian Commercial Banks. The study used investment ratio, quick ratio, capital ratio, and liquid assets ratio as liquidity indicators, while for the profitability indicator, return on equity and return on asset were used during time period 2005 – 2012 found that the increase in quick ratio and the investment ratio affect profitability positively. However, negative effect was found of capital ratio and liquid assets ratio on Jordanian commercial banks profitability.

Akter and Mahmud (2014) investigated the relationship between liquidity and profitability, and the nature and extent of the relationship between liquidity and profitability in Bangladesh banking industry. The study considered twelve banks in four different sectors (Government banks, Islamic banks, multinational banks and private commercial banks). The bank-specific data being examined in the study are derived from both income statements and balance sheets of commercial banks published in the website. The result revealed that there is no significant relationship exists between liquidity and profitability in all the categories on banks in Bangladesh. Even as a total industry there is no significant relationship between liquidity and profitability. The study concluded that there is no significant relationship between liquidity and profitability in banks of different sectors.

Irawan and Faturohman (2014) investigated the liquidity and profitability relationship in Indonesian Capital Market. The study aims to check the relationship between liquidity and profitability in agriculture and consumer goods sectors and aiming to identify the nature of the relationship and whether the relationship is statistically significant or not. The data for the research was collected from the financial report of Indonesian companies. The financial report data was requested from Indonesian Stock Exchange (IDX). There are different results in the two sectors analyzed. In agriculture sector, using spearman rank correlation analysis the cash conversion cycle has a weak negative correlation with ROE, while current ratio has a very weak negative

correlation with ROE. In consumer goods sector, it is found that cash conversion cycle has a very weak negative correlation with ROA and ROE. The study concluded that there is indeed negative relationship between liquidity and profitability in consumer goods and agriculture sectors. The study recommended that financial managers should improve inventory turnover, collect as fast as possible and pay payable as long as possible. Liquidity is still important for the survival of the company.

Ahmad (2016) investigated the relationship between two important ratios of the financial statements i.e. profitability and liquidity of Standard Chartered Bank Pakistan. The study used secondary data collection method. The data is collected from the annual reports of standard chartered bank Pakistan. The study shows that profitability has a positive relation with the majority of liquidity ratios. The relation between quick ratio and profitability has the highest intensity and the intensity of relation between net-working capital and profitability is lowest. The study concluded that there is positive relationship between profitability and liquidity, there is negative relation between current ratio and profitability and there is positive relation between net-working capital and profitability.

Bibi and Amjad (2017) investigated the relationship between liquidity and profitability: a case study of Karachi Stock Exchange. The purpose of the study was to investigate the relationship between firm's liquidity and profitability; and to find out the effects of different components of liquidity on firm's profitability. The sample in this study was 50 listed firms of Karachi stock exchange. The sample comprises merchandising and manufacturing firms from 12 sectors. Data collected from secondary sources. The analysis was based on information from annual reports. There were seven variables, with two profitability measures (net operating income and return on assets) and five independent variables (cash gap in days, current ratio, net sales, total assets and market capitalization). The result analysis showed that there is a significant negative relationship between cash gap and return on assets while current ratio has significant positive relationship with profitability. The study concluded that current ratio and total assets shows a positive and significant relationship with net operating income while cash gap in days depicts a negative relationship.

Al-Qadi and Khanji (2018) examined the relationship between liquidity and profitability, through more than liquidity indicator. The paper main objective was to answer the following questions: Do different indicators of liquidity have the same effect on profitability either negatively or positively? Liquidity indicators includes current ratio and quick ratio which measure the company's ability to meet its short-term obligations, while profitability is measured by ROA and ROE. The study used the 2008-2015 financial reports of 11 Jordanian trade companies listed at Amman Stock Exchange (ASE). Different tests applied to analyze the relationship between liquidity and profitability. This study sought to find out whether liquidity through quick ratio has significant impact on Jordanian trade services companies profitability through return on asset (ROA). The study revealed that there is significant impact of independent variable quick ratio on dependent variable return on asset (ROA). That means profitability through return on assets (ROA) is significantly influenced by liquidity through current and quick ratio.

Shrestha (2018) investigated the relationship between liquidity management and profitability of commercial banks in Nepal. The objective of the study was identify the relationship between the liquidity management and profitability and its impact on profitability. The collected data were analyzed using SPSS version 21.0. Descriptive research approach, correlationcoefficient and regression analysis was applied to study. The result revealed that liquidity does not have significant impact on profitability in Nepalese commercial banks.

Pokharel and Pokhrel (2019) investigated the influence of liquidity on the profitability in the Nepalese commercial banks. The main objective of the study was impact of liquidity on profitability on the basis of total assets. The study used 5 commercial banks over the period 2010/11 to 2016/17. The secondary data was analyzed by using MS Excel and tested through descriptive statistics, correlation and regression. The study indicated that largely zigzag trend of average profitability of commercial banks, although the trend of liquidity ratios of the bank is unstable. The study concluded that bank's liquidity ratios have below the prescribed standard. Similarly, CRR is extremely heavy thanprescribed by monetary policy 2016/17. It also has reported that there is significant relationship between liquidity ratios with profitability, except between IGSCA and ROA

Table 2.1 Summary of Literature Review

Author	Title	Methodology	Major Findings
Eljelly (2004)	Liquidity and Profitability Trade-off: An Empirical Investigation in an Emerging Market	Pearson correlation analysis and regression analysis	The study found that the current ratio was more important as liquidity measure that affects profitability.
Bordeleau & Graham (2010)	Impact of Liquidity on bank Profitability	Correlation and regression analysis	The result found that policymaker devise new standards establishing an appropriate level of liquidity for banks. While it is generally agreed upon that banks undervalued liquidity prior to the recent financial crisis.
Shah (2012)	Evaluation of Profitability and Liquidity relationship	Multivariate working capital analysis	The study found that operating cycle period is the variable that should be given more attention than the current ratio and quick ratio as a measure of liquidity.
Niresh (2012)	Trade-off between Liquidity and Profitability of Selected Manufacturing Firms	Correlation analysis and descriptive analysis	The study found that there is no significant relation between liquidity and profitability.

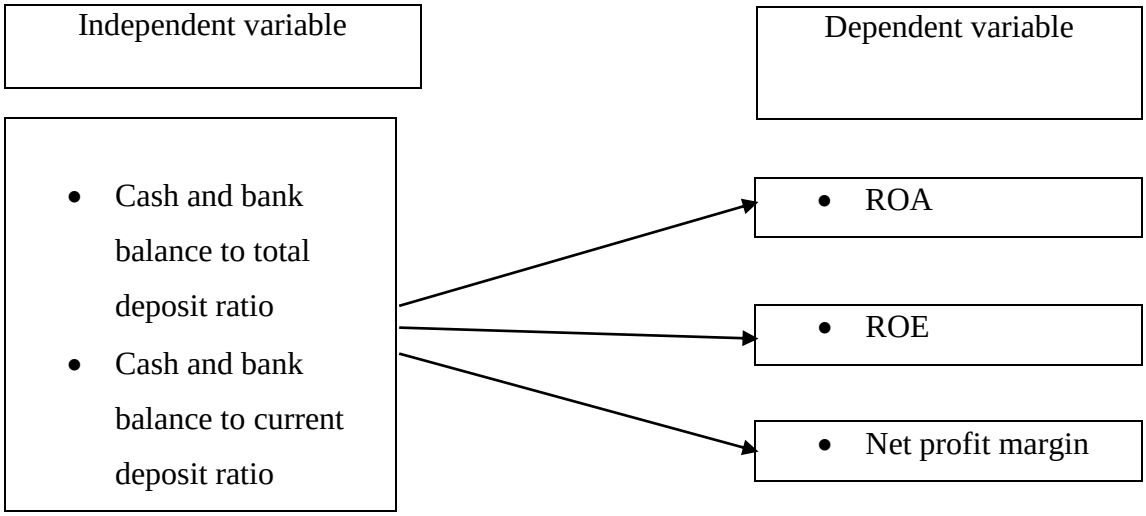
	in Sri Lanka		
Lartey, Samuel & Eric (2013)	Relationship between the liquidity and profitability of banks listed on the Ghana Stock Exchange	Correlation and regression analysis	The study found that there was a very weak positive relationship between liquidity and profitability.
Alshatti (2014)	Effect of Liquidity management on profitability in the Jordadian Commercial Banks.	Correlation and regression analysis	The study found that negative effect of capital ratio and liquid assets ratio on Jordadian commercial banks profitability.
Akter & Mahmud (2014)	Liquidity-profitability Relationship in Bangladesh Banking Industry	Linear regression analysis	The study concluded that there is no significant relationship between liquidity and profitability.
Irawan & Faturohman (2014)	Liquidity and Profitability relationship in Indonesian Capital Market	Spearman rank correlation analysis	The study concluded that there is indeed negative relationship between liquidity and profitability in consumer goods and agriculture sector.
Ahmad (2016)	A Study of Relationship between Liquidity and Profitability of standard Chartered	Correlation and regression analysis	The study concluded that there is positive relationship between profitability and liquidity, there is

	Bank Pakistan		negative relationship between current ratio and profitability and there is positive relation between net working capital and profitability.
Bibi & Amjad (2017)	Relationship between Liquidity and Profitability: A Case Study of Karachi Stock Exchange	Correlation and regression analysis	The study found that current ratio and total assets shows a positive and significant relationship with net operating income while cash gap in days depicts a negative relationship.
Al-Qadi & Khanji (2018)	Relationship between Liquidity and Profitability	Pearson Correlation and regression analysis	The study reveals that there is significant impact of independent variable quick ratio on dependent variable ROA. That means profitability through ROA is significantly influenced by liquidity through current and ratio.
Shrestha (2018)	Liquidity Management and Profitability of Commercial Banks in Nepal	Pearson correlation analysis and regression analysis	The result revealed that liquidity does not have its significant impact on profitability in Nepalese commercial banks.

Pokharel&Pokhrel (2019)	Impact of Liquidity on Profitability in Nepalese Commercial Banks	Correlation and regression analysis	The study concluded that bank's liquidity ratios have below the prescribed standard CRR is extremely heavy than prescribed by monetary policy 2016/17. It also has reported that there is significant relationship between liquidity with profitability except between IGSCA and ROA.

2.4 Conceptual Framework

The conceptual framework is the foundation on which the entire thesis is based. This research is comprised the independent variable (liquidity) and the dependent variable (profitability).



Source: Pangeni(2018)

Profitability is a dependent variable affected by various factors such as liquidity. The liquidity and profitability ratios used to examine the relationship between liquidity and profitability in commercial banks of Nepal. Liquidity ratios as independent variables and profitability ratios as dependent variables were used in the study.

2.5 Research Gap

The relationship between liquidity and profitability of commercial banks in Nepal has conducted by few researchers. However, the comparative study between ADBL, Nabil, NIC Asia, Mega, and Siddhartha Banks has not been carried out till date. The research has taken into consideration the liquidity and profitability relationof commercial banks of Nepal which included ADBL, Everest, Himalayan, Nepal SBI, Nepal Investment, Nabil, Laxmi, Global IME, Kumari and Prime commercial banks on the basis of research conducted by Rewati Raman Pangeni of Central Department of Management. In global context various related research between banks of different nations has been taken into consideration.

The previous research is only limited to financial and statistical analysis of commercial banks of Nepal. The previous researchers has been incomplete to show the impact of profitability over the maintained liquidity it has only explained the trend that has been established between the liquidity and profitability, it has become incomplete to explain the impact over the operational efficiency and the specific problems faced by the banks due to conflicting impact of profitability over liquidity. Therefore this research is broader and is aimed to analyze the impact of profitability and liquidity by analyzing their trends using statistical and financial tools to draw the effective conclusion.

CHAPTER – III

RESEARCH METHODOLOGY

Research methodology refers to the various steps that are adopted by researchers during the course, of studying a problem with certain objectives. A systematic research study requires a proper methodology to achieve the set of objectives. Research methodology is a systematic method of finding solution of a problem i.e. systematic collection, presentation, analysis, interpretation and reporting of data and information. This chapter aims to present a basic framework of the research work. This chapter contains the research design, sample size, data collection procedure, data processing tools and techniques and variables under study that ensure validity, reliability and ethical standards in the study.

3.1 Research Design

This study seeks to analyze and evaluate the relationship between liquidity and profitability position of the selected commercial banks and provide suggestions on the basis of evaluation. To accomplish this objective descriptive and analytical research approach has been adopted. It tries to describe and analyze all these facts that have been collected for the purpose of the study.

Mostly the secondary data have been used for the research study. The data are collected from the various websites, annual reports of the respective banks etc. Hence, the research design is made by collecting the information from the different source and data have been tabulated and analyzed by using various financial and statistical tools. The financial tools include liquidity and profitability ratios. Similarly, the statistical tools include arithmetic mean, standard deviation, coefficient of variation, coefficient of correlation and regression analysis. This study tries to make comparison and establishes relationship between two or more variables.

3.2 Population and Sample

All the observations or units that are exist under the research interest is known as population. And a sample is a representative portion of population which posses all the characteristics that are exist in population. In the present context, there are 27

commercial banks operating in Nepal. All the listed commercial banks in the country are the target population. Among all the commercial banks five commercial banks are selected as a sample are ADBL, Nabil, NIC Asia, Mega and Siddhartha banks. The sample had selected from theone government banks, one from joint venture banks and other three commercial banks are convenience sampling technique.

3.3 Sources of Data

This study seeks to describe the relationship between liquidity and profitability of the commercial banks which has been operated in Nepal. Data for this research was collected from annual published reports of selected banks i.e. ADBL, Nabil, NIC Asia, Mega and Siddhartha banks. The data was taken over a period of five years (2015/16 to 2019/20). The data was collected from secondary sources such as published financial reports, different previous studies and related bulletins, reports and periodically published from various government bodies. The source of data is completely secondary hence, intervention in the research was negligible from the side of researcher. The independent variable for this research was liquidity and the dependent variable was profitability.

3.4 Data Collection and Processing Procedure

Data collection is considered as an integral part of the research activity. In this regard, the annual report i.e. financial statement of the concerned fiscal years has been collected from the respective banks. Moreover, several books, journals, articles and magazines and various authentic websites of those sampled banks and NRB have also been referred for the information. Data mining is the other important task which is collected from original sources. Those, direct use of original data will not help in reliable analysis. So, they have been rechecked, re-evaluated, edited and tabulated to bring them into appropriate form for the analysis purpose.

Data so obtained have no meaning unless they are arranged and presented in a systematic way. Further, they need to be simplified for analysis. The relevant data have been inserted in meaningful tables. Only the data that are relevant to the study have been presented in tabular form in the understandable way and unnecessary data excluded. It is attempted to draw out the conclusion from the available data, with the

help of various financial as well as statistical tools. For the calculation of statistical value like mean, standard deviation, coefficient of variance, correlation etc. the computer software excel and SPSS has been used.

3.5 Data Analysis Tools

Data analysis is one of the most decisive parts of research work. The data is analyzed using financial and statistical tools to achieve the objective. These two tools are treated as the most reliable till present context. The tools can make the analysis efficient, effective, convenient, and reliable. For the analysis of the data the financial and statistical tools relevant to the topic are used. They are as follows:

3.5.1 Description of Variables

Financial tools are those which are used for the analysis and interpretation of financial data. Here in this study, the financial tools include:

3.5.1.1 Liquidity Ratio

Liquidity ratios measure a firm's ability to pay its short-term obligations out of current and liquid assets. They are used to ascertain the short-term solvency of a firm. Bank is an institution which deals with money. Cash is the most liquid fund and it is considered as the defense of banks. The bank should maintain certain amount of cash in order to meet its cash requirements of the depositors. The structure of cash was in the form of cash in it vault and the cash kept in other banks as well as in central bank of the country. The central bank, NRB also directs all the commercial banks to maintain certain percentage of cash and bank balance for the purpose of maintenance of liquidity.

(a) Cash and Bank Balance to Current Deposit Ratio

This ratio is designed to measure the bank's ability to meet the immediate obligations. It is employed to measure whether cash and bank balance is sufficient to cover its current calls margin including deposits. Current deposit must be paid when depositors demand their deposit. The higher ratio indicates the bank is in high liquid and the lower ratio indicates the bank is in less liquid. In the previous studies like Shah,

Niresh (2012), Irawan and Faturohman (2014), Ahmad (2016) used CBBCDR as a independent variable. This ratio is computed by:

$$Cash\ and\ Bank\ Balance\ to\ Current\ Deposit\ Ratio = \frac{Cash\ and\ Bank\ Balance}{Current\ Deposit}$$

(b) Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance to total deposit ratio measures the availability of bank highly liquid funds to meet its unanticipated calls on different types of deposits. This ratio indicates the ability of banks funds to cover their saving, fixed call and other deposit. This ratio also access that what proportion of cash and bank balance remains with the bank. In the previous studies like Niresh (2012), Ahmad (2016), Pokharel and Pokhrel (2019) used CBBTDR as a independent variables. This ratio is computed by:

$$Cashand\ Bank\ Balance\ to\ Total\ Deposit\ Ratio = \frac{Cash\ and\ Bank\ Balance}{Total\ Deposit}$$

3.5.1.2 Profitability Ratio

Profitability is the end result of a number of corporate policies and decisions. It measures how effectively the firm is being operated and managed. Owners and managers of a firm are interested to know the profit earning capacity of the firm. Particularly, owners are eager to know their returns whereas managers are interested in their operating efficiency. So they calculate profitability ratios earned by the firm. Besides owners and managers, creditors are also interested to know the financial soundness of the firm. One of the focus of commercial banks is to be enough profitable so as to meet a variety of objectives like achieving a desirable liquidity position, meet fixed interest obligation, overcome the future contingencies, explicit hidden investment opportunities, encourage branch expansion etc. Profitability ratio, as a matter of fact, is the best indicator of overall efficiency of the bank.

(a) Return on Assets

The return on assets (ROA), which is often called the firm's return on total assets, measure the overall effectiveness of management in generating profit with its available assets. The higher the firm's return on assets the better it is doing operation

and vice versa. This ratio judges the effectiveness in using the total fund supplied by the owners and creditors. In the previous studies Bordeleau and Graham (2010), Al-Qadi and Khanji, Shrestha (2018), Pokharel and Pokhrel (2019) used ROA as a dependent variables. It is calculated as under:

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

(b) Return on Equity

The return on equity (ROE) measures the return on the owner's investment in the firm. The owners' investment refers to the equity capital employed by the firm. It includes common stock, paid-in capital and retained earnings. Higher ratio of return on equity is better for owner. Niresh (2012), Akter and Mahmud (2014), Al-Qadi and Khanji, Shrestha (2018), Pokharel and Pokhrel (2019) are used ROE as a dependent variable in their study. It is calculated as under:

$$ROE = \frac{Net\ Income}{Shareholder's\ Equity}$$

(c) Net Profit Margin

Net profit ratio shows the relationship between net profit and operating income. The purpose of net profit is to show the overall profitability i.e. efficiency of the bank. Higher the net profit ratio, the better it is considered. This ratio is also useful in making inter-firm comparison of the profitability. It also helps in determining the efficiency with which the affairs of the business are being managed. A net profit margin would enable the firm to withstand adverse economic conditions and low margin will have opposite implications. In the previous studies like Lartey, Samuel and Eric (2013), Alshatti (2014), Ahmad (2016) used NPM as a dependent variable. It is calculated as under:

$$Net\ Profit\ Margin = \frac{Net\ Profit}{Interest\ Income}$$

3.5.2 Statistical Tools

Statistical tools measure the data and give the result in numeric form which helps to analyze the data in logical way. The following statistical tools are applied for the study.

3.5.2.1 Average/ Mean

Average is calculated by adding all the numbers of all observations and dividing by the total number of observations. It is in fact, a value which is represented to stand for whole group of which it is part, as typical of all the value in the group.

$$\text{Mean} = \frac{\sum X}{n}$$

Where,

X = Number in X-series

n = Number of Observations in a sample

3.5.2.2 Standard Deviation

The standard deviation (σ) is another measure of investment risk. It is absolute measures of dispersion. The smaller the standard deviation the lower will be the degree of risk of the stock. In other words, a small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series and vice versa. The formula for calculating the standard deviation is:

$$\sigma = \sqrt{\frac{\sum (X - \overline{X})^2}{n}}$$

Where,

σ = Standard Deviation

X = Number in X-series

X = Mean

n = Number of Observations in a sample

3.5.2.3 Coefficient of Variation

The coefficient variation (CV) is the other useful measure of risk. It is the standard deviation divided by the expected return, which measures risk per unit of return. It

provides a more meaningful basis for comparison when the expected returns on two alternatives are not the same. If investors believe that the rate of return should increase as the risk increase, then the coefficient of variation provides a quick summary of the relative trade-off between expected return and risk.

$$CV = \frac{\sigma}{\overline{X}}$$

Where,

CV	=	Coefficient of Variation
$\overline{X}$	=	Mean
σ	=	Standard Deviation

3.5.2.4 Correlation Coefficient

Correlation may be defined as the degree of linear relationship existing between two or more variables. Two variables are said to be correlated is accompanied by the change of another variable. If the increase (decrease) in the value of one variable on an average is associated with the increase (decrease) in the value of another variable, positive relationship is said to be existed. The relationship will be negative if increased (decreased) in the variable of one variable is associated with the decreased (increased) in the value of another variable. But the correlation coefficient always remains within the limit of +1 to -1. By Karl Pearson, the simple correlation coefficient (between two variables say X and Y) is given by:

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

Where,

r	:	Correlation between X and Y
n	:	Number of observations in series X and Y
$\sum X$	:	Sum of observations in series X
$\sum Y$	:	Sum of observations in series Y
$\sum X^2$	:	Sum of square observations in series X
$\sum Y^2$	:	Sum of squared observations in series Y
$\sum XY$	:	Sum of product of observations in series X and Y

3.5.2.5 Regression Analysis

A statistical technique that is used to see the degree of relationship between dependent and independent variable is known as regression analysis. It has two variables i.e. dependent and independent variables. It determines the nature and strength of relationship between two variables. Thus, regression is the estimation of unknown values or prediction of one variable from known values of other variables. It is considered as a useful tool for determining the strength of relationship between two (Simple Regression) or more (Multiple Regression) variables. The regression line of dependent variable (Y) on independent variable (X) is given by:

$$Y = a + bX \quad \text{..... (I)}$$

Where,

a = Constant

b = regression coefficient

3.5.2.5.1 Multiple Regression Analysis

Multiple regression analysis is a logical extension of the simple linear regression analysis. Instead of single independent variable, two or more independent variables are used to estimate the unknown values of a dependent variable. However the fundamental concept in the analysis remains the same. Multiple regression is defined as statistical device which is used to estimate (or predicts) the most probable value of dependent variable on the basis of known value of two or more independent variables. The following multiple regression equation is analyzed.

Multiple Regression Model

$$\hat{Y} = a_1 + b_1X_1 + b_2X_2 + b_3X_3 + ei.$$

Where,

$\hat{Y}$	=	Dependent variable
X_1, X_2, X_3	=	Independent variable
a_1	=	Constant
b_1, b_2, b_3	=	Regression Coeffficient
ei	=	Error term

CHAPTER – IV

RESULTS AND DISCUSSION

This chapter is the main body part of this study. This chapter is the heart of the study. The basic objective of this study is to observe and analyze the relationship between liquidity and profitability position of ADBL, Nabil, NIC Asia, Mega and Siddhartha banks. The result in this study has been done through the help of financial statements of the year from FY 2015/16 to FY 2019/20. Data are presented in the form of tabular and diagrammatic form and are analyzed with help of widely accepted tools of financial ratios. Moreover, statistical tools such as, average mean, standard deviation, coefficient of variation, correlation coefficient, and regression analysis have been used to analyze the data. A balance should always be maintained between liquidity and profitability hence, the bank should follow certain principles of liquidity and profitability.

4.1 Liquidity Ratio

Commercial banks need liquidity to meet loan demand and deposit withdrawals. Liquidity is also needed for the purpose of meeting cash reserve ratio (CRR) requirements prescribed by NRB. The commercial banks should ensure that they do not suffer from the liquidity problem and should ensure that it does not have excess liquidity as well. The failure of the bank to meet this obligation will result bad credit image and loss of creditors confidence.

4.1.1 Cash and Bank Balance to Current Deposit Ratio

This ratio is designed to measure the bank’s ability to meet the immediate obligations. It is employed to measure whether cash and bank balance is sufficient to cover its current calls margin including deposits.

Table 4.1 Cash and Bank Balance to Current Deposit Ratio

YEAR	ADBL	NABIL	NIC ASIA	MEGA	SIDDHARTHA
2015/16	84.88	63.21	334.01	349.27	187.06
2016/17	151.75	77.26	417.2	300	238.18
2017/18	156.56	147.09	179.99	325.56	143.24
2018/19	110.69	165.4	260.16	237.99	155.38
2019/20	124.79	136.12	154.32	235.64	163.19
Mean	125.73	117.82	269.14	289.69	177.41
S.D	29.68	44.95	108.79	51.32	37.55
C.V	23.60%	38.15%	40.42%	17.72%	21.17%

Source: Appendix I to V

The table 4.2 measures the cash and bank balance kept by the banks in respect to the current deposit collected. The table presented that the cash and bank balance to current deposit of ADBL was fluctuating trend. The cash and bank balance to current deposit ratio of ADBL in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 84.88%, 151.75%, 156.56%, 110.69%, and 124.79% respectively. In average, ADBL kept 125.73% of the current deposit as cash and bank balance to meet the immediate cash requirement. However, the standard deviation is 29.68 and coefficient of variation is 23.60%.

The cash and bank balance to current deposit ratio of Nabil Bank limited for the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 63.21%, 77.26%, 147.09%, 165.4%, and 136.12% respectively. In average, Nabil Bank Limited kept 117.82% of the current deposit as cash and bank balance. And the standard deviation and coefficient of variation of Nabil is 44.95 and 38.15% respectively.

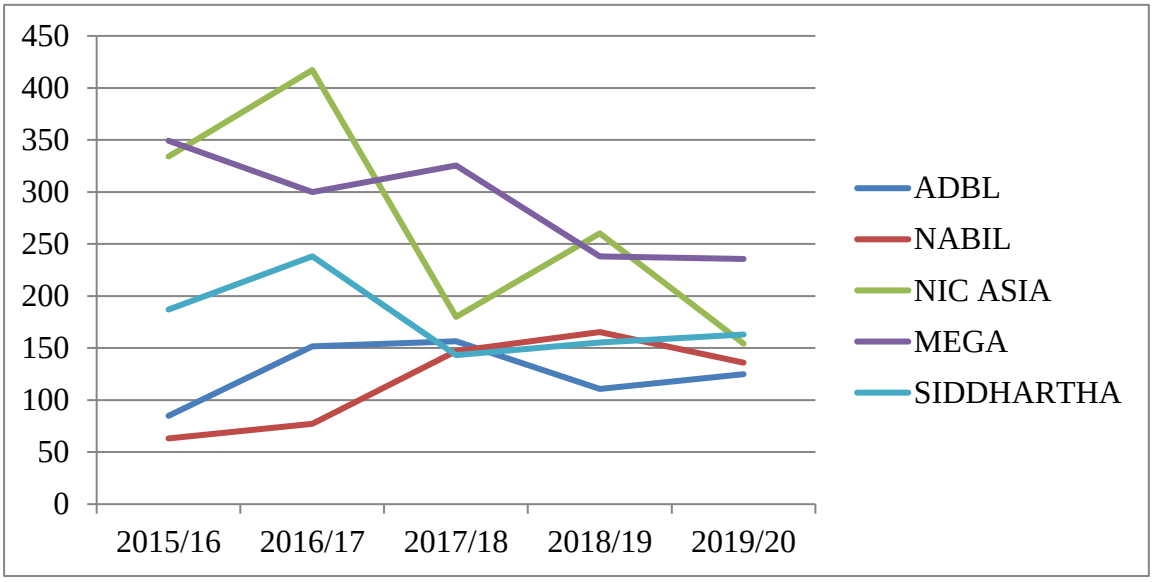
The cash and bank balance to current deposit ratio of NIC Asia Bank Limited in the FY 2015/16, 2016/17, 2017/18, 2018/19, and FY 2019/20 are 334.01%, 417.2%, 179.99%, 260.16%, and 154.32% respectively. In average cash and bank balance to current deposit ratio is 269.14%, standard deviation is 108.79, and coefficient of variation is 40.42%.

The cash and bank balance to current deposit ratio of Mega Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 349.27%, 300%, 325.56%, 237.99% and 235.64% respectively. Its average cash and bank balance to current deposit ratio is 289.69%, standard deviation is 51.32, and coefficient of variation is 17.72%.

The cash and bank balance to current deposit ratio of Siddhartha Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 187.06%, 238.18%, 143.24%, 155.38%, and 163.19% respectively. In average, Siddhartha Bank Limited kept 177.41% of the current deposit as cash and bank balance. The standard deviation is 37.55 and coefficient of variation is 21.17%.

Comparing five sampled banks on the basis of cash and bank balance to current deposit ratio, it can be concluded that Mega Bank Limited has the practice of highest and Nabil Bank Limited has lowest percentage current deposit collected in the form of cash and bank balance.

Figure 4.1 Cash and Bank Balance to Current Deposit Ratio



4.1.2 Cash and Bank Balance to Total Deposit Ratio

Adequate liquidity is also must in the banking sector in order to protect its solvency and to honor its short-term obligations and liabilities. Hence, bank should have enough cash and bank balance in comparison to total deposit.

Table 4.2 Cash and Bank Balance to Total Deposit Ratio

YEAR	ADBL	NABIL	NIC ASIA	MEGA	SIDDHARTHA
2015/16	12.2	9.31	11.12	13.23	10.23
2016/17	15.64	11.01	15.86	9.62	12.76
2017/18	18.71	18.9	14.55	20.22	13.24
2018/19	16.28	18.26	20.75	15.01	13.31
2019/20	18.15	13.01	15.38	17.51	11.84
Mean	16.20	14.10	15.53	15.12	12.28
S.D	2.57	4.30	3.46	4.05	1.29
C.V	15.87%	30.51%	22.25%	26.78%	10.47%

Source: Appendix I to V

The table 4.2 measures the cash and bank balance kept by the banks in respect to the total deposit collected. The table presented that the cash and bank balance to total deposit of ADBL was fluctuating trend. The cash and bank balance to total deposit ratio of ADBL in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 12.20%, 15.64%, 18.71%, 16.28%, and 18.15% respectively. In average, ADBL kept 16.20% of the total deposit as cash and bank balance to meet the cash requirement. Its standard deviation is 2.57 and coefficient of variation is 15.87%.

The cash and bank balance to total deposit ratio of Nabil Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 9.31%, 11.01%, 18.90%, 18.26%, and 13.01% respectively. Its average cash and bank balance to total deposit ratio is 14.10%, standard deviation is 4.30, and coefficient of variation is 30.51%.

The cash and bank balance to total deposit ratio of NIC Asia Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 11.12%, 15.86%, 14.55%, 20.75%, and 15.38% respectively. The average cash and bank balance to total deposit ratio of NIC Asia Bank Limited is 15.53%, standard deviation is 3.46 and coefficient of variation is 22.25%.

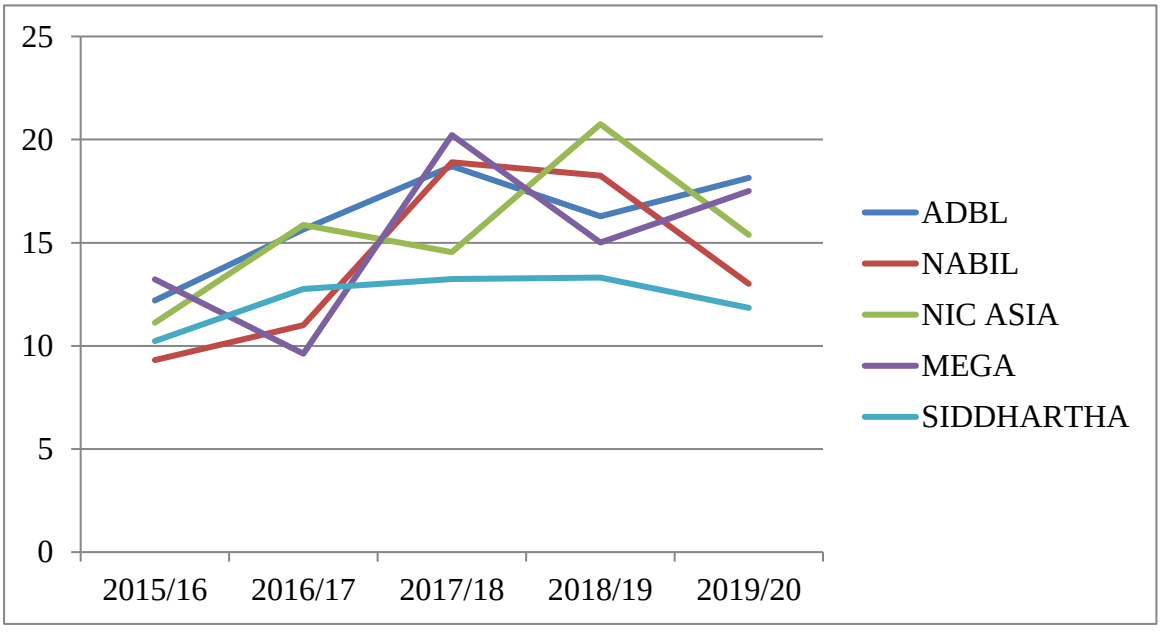
The cash and bank balance to total deposit ratio of Mega Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 13.23%, 9.62%,

20.22%, 15.01%, and 17.51% respectively. In average Mega Bank Limited kept 15.12% of the total deposit as cash and bank balance. Its standard deviation is 4.05 and coefficient of variation is 26.78%.

The cash and bank balance to total deposit ratio of Siddhartha Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 10.23%, 12.76%, 13.24%, 13.31%, and 11.84% respectively. Its average cash and bank balance to total deposit ratio is 12.28%, standard deviation is 1.29, and coefficient of variation is 10.47%.

Comparing the five sampled banks on the basis of cash and bank balance to total deposit ratio, it can be concluded that ADBL has the practice of highest percentage of total deposit collected in the form of cash and bank balance than other banks to meet the immediate cash requirement.

Figure 4.2 Cash and Bank Balance to Total Deposit Ratio



4.2 Profitability Ratio

Profit maximization and wealth maximization are primary objectives of any organization. Therefore all the organization tries to maximize its profit. It is very important for their survival in this competitive market for their future growth. Profit indicates the present condition of the organization where they stand in the market. In

this section various profitability ratios, which reflects the operating efficiency of the bank have been analyzed.

4.2.1 Return on Assets (ROA)

Return on assets explains the contribution of total assets to generating net profit. Return on assets is calculated by dividing net profit by total assets of the company. Higher return on total assets indicates the higher efficiency in the utilization of total assets and vice-versa.

Table 4.3 Return on Assets (ROA)

YEAR	ADBL	NABIL	NIC ASIA	MEGA	SIDDHARTHA
2015/16	2.21	2.21	1.33	1.38	1.7
2016/17	2.02	2.57	1.49	1.74	1.66
2017/18	2.54	2.47	0.78	1.6	1.59
2018/19	2.77	2.11	1.39	1.65	1.47
2019/20	1.86	1.46	1.24	1.02	1.18
Mean	2.28	2.16	1.25	1.48	1.52
S.D	0.37	0.44	0.28	0.29	0.21
C.V	16.36%	20.13%	22.14%	19.51%	13.76%

Source: Appendix I to V

The table 4.3 shows that the return on assets ratio of selected banks. The return on assets ratio of ADBL in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 2.21%, 2.02%, 2.54%, 2.77%, and 1.86% respectively. In average return on assets of ADBL is 2.28%, standard deviation is 0.37 and coefficient of variation is 16.36%.

The return on assets ratio of Nabil Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 2.21%, 2.57%, 2.47%, 2.11%, and 1.46% respectively. Its average return on assets is 2.16%, standard deviation is 0.44 and coefficient of variation is 20.13%.

The return on assets ratio of NIC Asia Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 1.33%, 1.49%, 0.78%, 1.39%, and

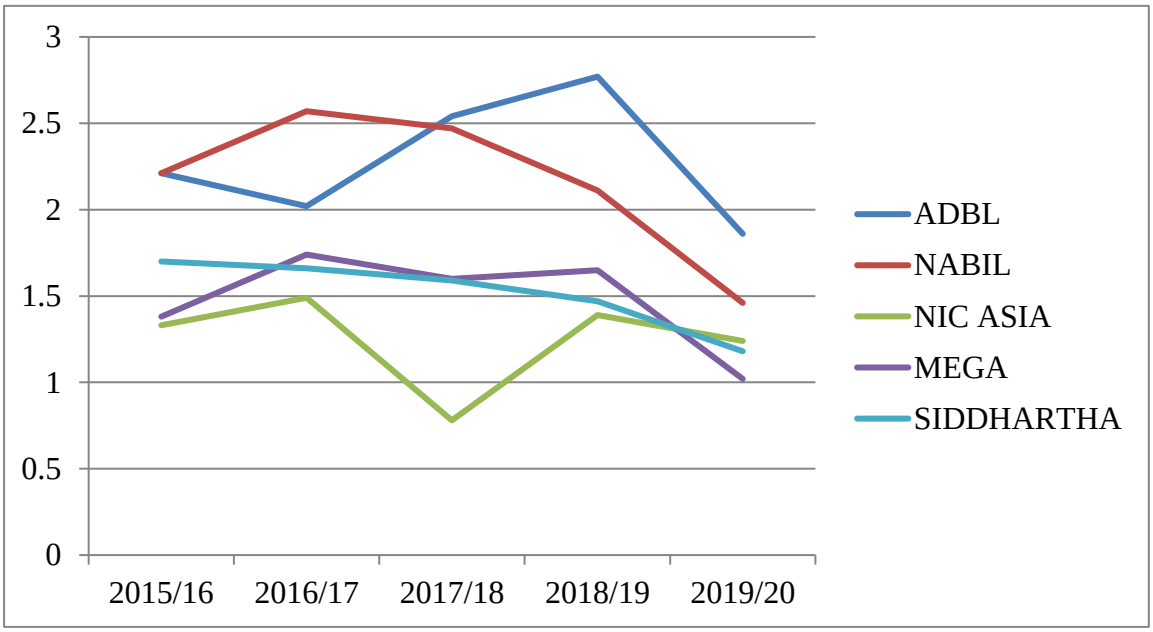
1.24% respectively. In average return on assets of NIC Asia Bank Limited is 1.25%. Its standard deviation is 0.28 and coefficient of variation is 22.14%.

The return on assets ratio of Mega Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 1.38%, 1.74%, 1.60%, 1.65%, and 1.02% respectively. Its average return on assets is 1.48%, standard deviation is 0.29, and coefficient variation is 19.51%.

The return on assets ratio of Siddhartha Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 1.70%, 1.66%, 1.59%, 1.47%, and 1.18% respectively. The average return of assets of Siddhartha Bank Limited is 1.52%. Its standard deviation is 0.21 and coefficient of variation is 13.76%.

Comparing the five sampled banks on the basis of return on assets, it can be concluded that the average ROA of ADBL is highest i.e. 2.28% and the lowest is of NIC Asia Bank Limited i.e. 1.25%. The higher return on assets the better it is doing in operation and vice-versa.

Figure 4.3 Return on Assets (ROA)



4.2.2 Return on Equity (ROE)

Return on shareholder's equity reflects how well the firm has used the resources of the owners. It is calculated by dividing net profit by net worth. The ratio of net profit to owner's equity reflects the extent to which social responsibility toward owners has been accomplished. This ratio is thus a great interest to present as well as prospective shareholders and a great concern to management.

Table 4.4 Return on Equity (ROE)

YEAR	ADBL	NABIL	NIC ASIA	MEGA	SIDDHARTHA
2015/16	13.6	24.31	14.45	13.19	20.28
2016/17	11.77	25.63	14.59	13.52	14.88
2017/18	13.01	19.34	11.44	10.42	13.89
2018/19	14.79	18.28	20.24	12.06	15.02
2019/20	11.7	13.39	17.97	8.81	13.39
Mean	12.97	20.19	15.74	11.60	15.49
S.D	1.30	4.93	3.42	1.98	2.76
C.V	10.02%	24.41%	21.71%	17.03%	17.83%

Source: Appendix I to V

The table 4.4 indicates the efficiency of the banks in generating profit through mobilizing the shareholders' property. The table showed that the return on equity of ADBL in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 13.6%, 11.77%, 13.01%, 14.79%, and 11.70% respectively. In average, the return on equity of ADBL was 12.97%, which indicated that ADBL was able to generate Rs. 12.97 as net income from the mobilization of Rs. 100 of shareholders'equity. The standard deviation of ADBL is 1.30 and coefficient of variation is 10.02%.

The return on equity ratio of Nabil Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 24.31%, 25.63%, 19.34%, 18.28%, and 13.39% respectively. Its average return on equity is 20.19%, standard deviation is 4.93 and coefficient of variation is 24.41%.

The return on equity ratio of NIC Asia Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 14.45%, 14.59%, 11.44%, 20.24%, and

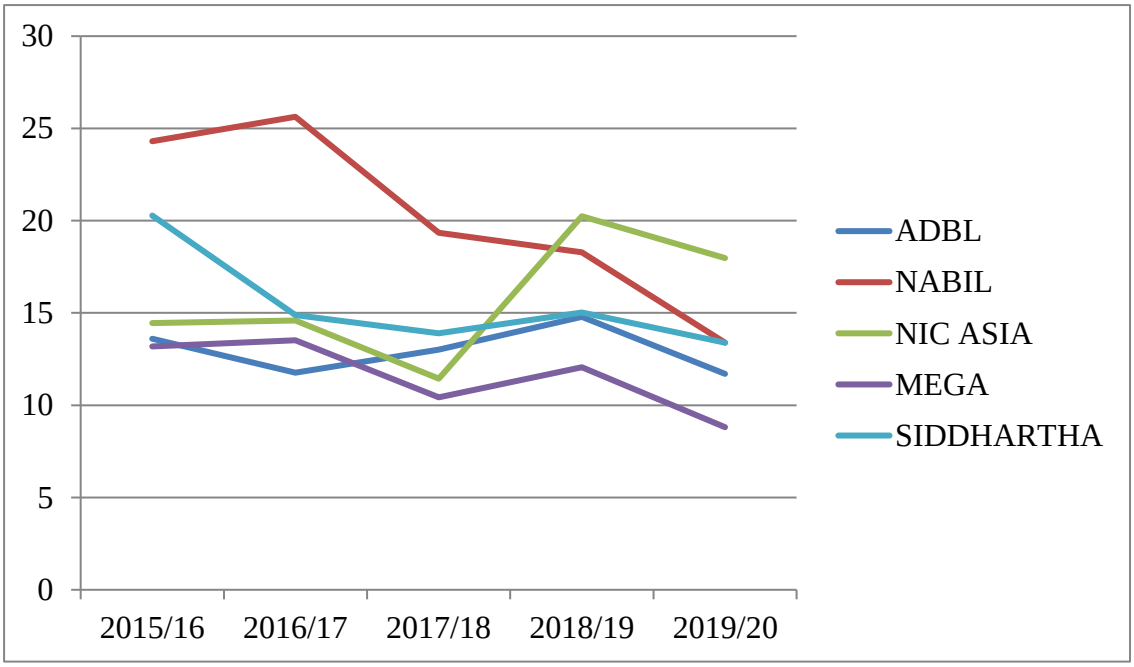
17.97% respectively. In average the return on equity of NIC Asia Bank Limited is 15.74%, standard deviation is 3.42 and coefficient of variation is 21.71%.

The return on equity ratio of Mega Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 13.19%, 13.52%, 10.42%, 12.06%, and 8.81% respectively. Its average return on equity is 11.60%, standard deviation is 1.98, and coefficient of variation is 17.03%.

Finally, the return on equity ratio of Siddhartha Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 20.28%, 14.88%, 13.89%, 15.02%, and 13.39% respectively. Its average return on equity is 15.49%, standard deviation is 2.76 and coefficient of variation is 17.83%.

Comparing the five sampled banks on the basis of return on equity (ROE), it can be concluded that the average ROE of Nabil Bank Limited is highest i.e. 20.19% and the lowest is of Mega Bank Limited i. e. 11.60%. This shows that the shareholders of Nabil Bank Limited get the highest return whereas the return to shareholders of Mega Bank Limited was lowest.

Figure 4.4 Return on Equity (ROE)



4.2.3 Net Profit Margin (NPM)

Net profit margin indicates margin of compensation left to the owners for providing their capital, after all expenses have been met. It helps in determining the efficiency with which the affairs of the business are being managed. A net profit margin would enable the firm to withstand adverse economic conditions and low margin will have opposite implications.

Table 4.5 Net Profit Margin (NPM)

YEAR	ADBL	NABIL	NIC ASIA	MEGA	SIDDHARTHA
2015/16	25.62	45.79	24.24	25.72	30.83
2016/17	22.65	44.79	21.36	19.23	22.41
2017/18	25.3	35.08	9.86	21.87	18.93
2018/19	27.08	27.81	15.63	17.39	17.41
2019/20	21.06	21.04	14.95	15.27	13.89
Mean	24.34	34.90	17.21	19.90	20.69
S.D	2.43	10.71	5.66	4.06	6.44
C.V	10.00%	30.69%	32.91%	20.41%	31.12%

Source: Appendix I to V

The table 4.5 shows that the net profit margin of ADBL in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 25.62%, 22.65%, 25.3%, 27.08%, and 21.06% respectively. The average net profit margin of ADBL is 24.34%, standard deviation is 2.43, and coefficient of variation is 10%.

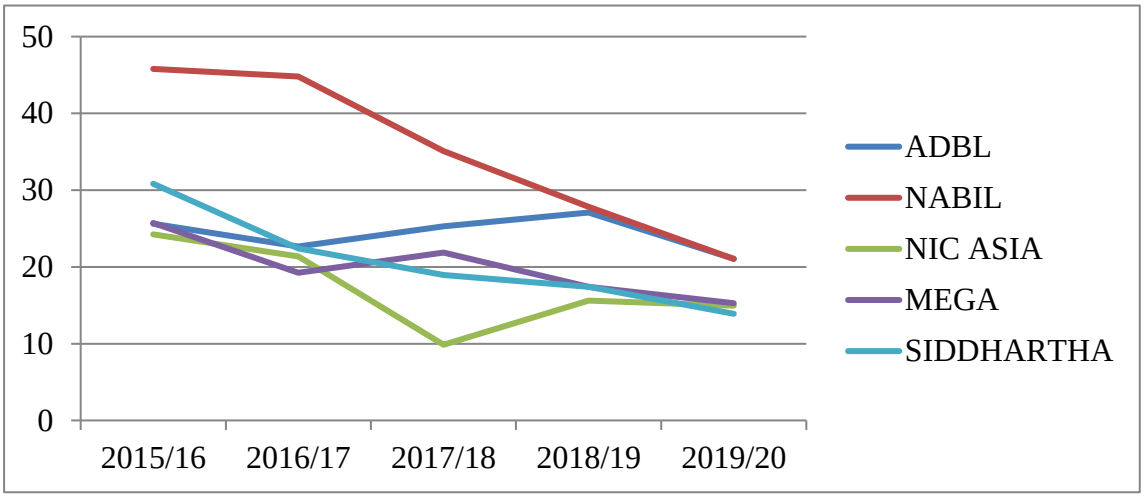
The net profit margin ratio of Nabil Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 45.79%, 44.79%, 35.08%, 27.81%, and 21.04% respectively. Its average net profit margin ratio is 34.90%, standard deviation is 10.71, and coefficient of variation is 30.69%.

The net profit margin ratio of NIC Asia Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 24.24%, 21.36%, 9.86%, 15.63%, and 14.95% respectively. Its average net profit margin ratio is 17.21%, standard deviation is 5.66 and coefficient of variation is 32.91%.

The net profit margin ratio of Mega Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 25.72%, 19.23%, 21.87%, 17.39%, and 15.27% respectively. The average net profit margin ratio of Mega Bank Limited is 19.90%, standard deviation is 4.06, and coefficient of variation is 20.41%.

Finally the net profit margin ratio of Siddhartha Bank Limited in the FY 2015/16, FY 2016/17, FY 2017/18, FY 2018/19, and FY 2019/20 are 30.83%, 22.41%, 18.93%, 17.41%, and 13.89% respectively. Its average net profit margin ratio is 20.69%, standard deviation is 6.44 and coefficient of variation is 31.12%.

Figure 4.5 Net Profit Margin (NPM)



4.3 Coefficient of Correlation (r)

Correlation analysis was used to determine the strengthand direction of the linear relationship between the variables under consideration.

Table 4.6 Correlation Matrix

Correlations						
		CBBTDR	CBBCDR	ROA	ROE	NPM
CBBTDR	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	25				
CBBCDR	Pearson Correlation	.141	1			
	Sig. (2-tailed)	.501				
	N	25	25			
ROA	Pearson Correlation	.067	-.490*	1		
	Sig. (2-tailed)	.750	.013			
	N	25	25	25		
ROE	Pearson Correlation	-.273	-.363*	.424*	1	
	Sig. (2-tailed)	.187	.015	.035		
	N	25	25	25	25	
NPM	Pearson Correlation	-.278	-.364**	.737**	.727**	1
	Sig. (2-tailed)	.179	.000	.000	.000	
	N	25	25	25	25	25

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Source: The results are drawn from SPSS output

Table 4.6 presents the correlation among the dependent and independent variables. Obviously, this table shows the correlations between the liquidity variables (i.e. cash and bank balance to total deposit ratio and cash and bank balance to current deposit ratio) and profitability variables (i.e. return on assets, return on equity and net profit margin).

The correlation coefficient between CBBTDR and ROA is 0.067. The correlation of CBBTDR with ROA is positive but insignificant relationship. The correlation coefficient between CBBTDR and ROE is -0.273. The correlation of CBBTDR with ROE is negative and insignificant relationship. Also, the correlation coefficient between CBBTDR and NPM is -0.278, which was negative and insignificant relationship.

Finally, the correlation coefficient between CBBCDR and ROA is -0.490. The correlation of CBBCDR with ROA is negative but significant relationship. The

correlation coefficient between CBBCDR and ROE is -0.363. The correlation of CBBCDR with ROE is negative but significant relationship. Also, the correlation coefficient between CBBCDR and NPM is -0.364, which was negative but significant relationship.

4.5 Regression Analysis

Regression is a statistical method for investing relationship between the variables by the establishment of an approximate functional relationship between them. It is considered as a useful tool for determining the strength of relationship between two (Simple Regression) or more (Multiple Regression) variables.

4.5.1 The Multiple Regression of ROA on Liquidity

The regression of ROA and liquidity variables (i.e. current ratio, cash and bank balance to total deposit ratio and cash and bank balance to current deposit ratio) impact has been analyzed by defining the ROA changes in terms of liquidity position of selected banks. The equation for this regression module is as follows:

$ROA = a_1 + b_1 CBBCDR + b_2 CBBTDR$…… (i)

Where,

ROA = Return on Assets

CBBTDR = Cash and bank balance to total deposit ratio

CBBCDR = Cash and bank balance to current deposit ratio

a_1 = Constant

b_1, b_2, = Regression Coefficient

Table 4.7 Regression of ROA on Liquidity Position.

Model	Regression Coefficient	Coefficient of Determination (r^2)	P- Value	F- test	Result
Constant	1.981	0.259	0.001	3.835	Significant
CBBTDR	0.021				
CBBCDR	-0.003				

a) Dependent variable: ROA

b) Predictors: (Constant), CBBTDR, CBBCDR

c) Correlation is significant at the 0.05 level (2-tailed)

Source: Appendix VI

In the table 4.7, the multiple regression of ROA on liquidity shows that regression coefficient is positive for CBBTDR. But there is negative regression coefficient between CBBCDR and ROA. Hence, when CBBCDR increase, ROA decrease and while CBBTDR increase ROA also increase and vice versa.

Similarly, in the table 4.7 the coefficient of determination of the equation is 0.259. That means the variables CBBTDR and CBBCDR is responsible on ROA 25.90% and the rest are covered by the other factors on determining the ROA of selected commercial banks.

Similarly, the test of P- value adds to include that the relationship between ROA and CBBTDR, CBBCDR of selected commercial banks is significant. Since, calculated P-value is 0.001, which is less than P-value of 0.005 at 5% level of significance.

4.5.2 The Multiple Regressionof ROE on Liquidity

The regression of ROE and liquidity variables (i.e. current ratio, cash and bank balance to total deposit ratio and cash and bank balance to current deposit ratio) impact has been analyzed by defining the ROE changes in terms of liquidity position of selected banks. The equation for this regression module is as follows:

$ROE = a_1 + b_1 CBBCDR + b_2 CBBTDR$ ……..……. (ii)

Where,

ROE = Return on Equity

CBBTDR = Cash and bank balance to total deposit ratio

CBBCDR = Cash and bank balance to current deposit ratio

a_1 = Constant

b_1, b_2, = Regression Coefficient

Table 4.8 Regression of ROE on Liquidity Position

Model	Regression Coefficient	Coefficient of Determination (r^2)	P- Value	F- test	Result
Constant	22.242	0.182	0.004	2.441	Significant
CBBTDR	-0.281				
CBBCDR	-0.015				

a) Dependent variable: ROE
b) Predictors: (Constant), CBBTDR, CBBCDR
c) Correlation is significant at the 0.05 level (2-tailed).

Source: Appendix VII

In the table 4.8 the multiple regression of ROE on liquidity shows that there is a negative regression coefficient for CBBTDR. And also that there was negative regression coefficient between CBBCDR and ROE.

Similarly, in the table 4.8 the coefficient of determination of the equation is 0.182. That means the variables CBBTDR and CBBCDR is responsible on ROE 18.20% and the rest are covered by other factors on determining the ROE of selected commercial banks.

Similarly, the test of P-value adds to include that the relationship between ROE and CBBTDR, CBBCDR of selected commercial bank is significant. Since, calculated P-value is 0.004, which is less than P-value of 0.05 at 5% level of significance.

4.5.3 The Multiple Regression of NPM on Liquidity

The regression of NPM and liquidity variables (i.e. current ratio, cash and bank balance to total deposit ratio and cash and bank balance to current deposit ratio) impact has been analyzed by defining the NPM changes in terms of liquidity position of selected banks. The equation for this regression module is as follows:

$NPM = a_1 + b_1 CBBCDR + b_2 CBBTDR$ …… (iii)

Where,

NPM = Net Profit Margin

CBBTDR = Cash and bank balance to total deposit ratio

CBBCDR = Cash and bank balance to current deposit ratio

a_1 = Constant

b_1, b_2, = Regression Coefficient

Table 4.9 Regression of NPM on Liquidity Position

Model	Regression Coefficient	Coefficient of Determination (r^2)	P- Value	F- test	Result
Constant	38.310	0.185	0.006	2.492	Significant
CBBTDR	0.600				
CBBCDR	-0.031				

a) Dependent variable: NPM
b) Predictors: (Constant), CBBTDR, CBBCDR
c) Correlation is significant at the 0.05 level (2-tailed).

Source: Appendix VIII

In the table 4.9, the multiple regression of NPM on liquidity shows that regression coefficient is positive for CBBTDR. But there is negative regression coefficient between CBBCDR and NPM. Hence, when CBBTDR increases, NPM also increases and while CBBCDR increases NPM decreases and vice versa.

Similarly, in the table 4.9 the coefficient of determination of the equation is 0.185. That means the variables CBBTDR and CBBCDR is responsible on NPM 18.50% and the rest are covered by other factors on determining the NPM of selected commercial banks.

Similarly, the test of P-value adds to include that the relationship between NPM and CBBTDR, CBBCDR of selected commercial bank is significant. Since, calculated P-value is 0.006, which is less than P-value of 0.05 at 5% level of significance.

4.6 Major Findings of the Study

From the above data analysis, the following major findings have been drawn:.

I. The average cash and bank balance to current deposit ratio of ADBL was 125.73%, NABIL was 117.82%, NIC ASIA was 269.14%, MEGA was 289.69% and SIDDHARTHA was 177.41%. The highest average cash and bank balance to current deposit ratiois of Mega Bank Limited and lowest is of Nabil Bank Limited. It shows that the cash and bank balance of Mega Bank Limited is highest in comparison to current deposit collected, and lowest is of Nabil Bank Limited.

II. The average cash and bank balance to total deposit ratio of ADBL was 16.20%, NABIL was 14.10%, NIC ASIA was 15.53%, MEGA was 15.12% and SIDDHARTHA was 12.28%. The highest average cash and bank balance to total deposit ratio is of ADBL i.e. 16.20% and the lowest is of Siddhartha Bank Limited was 12.28%. It shows that the liquidity maintained by ADBL is highest in comparison to total deposit ratio and the lowest is of Siddhartha Bank Limited.

III. The average return on assets (ROA) of ADBL was 2.28%, NABIL was 2.16%, NIC ASIA was 1.25%, MEGA was 1.48% and SIDDHARTHA was 1.52%. The highest average ROA is of ADBL i.e. 2.28% and the lowest is of NIC ASIA i.e. 1.25%. It shows that the average return earned by ADBL was highest in comparison to asset utilized whereas NIC Asia was lowest.

IV. The average return on equity (ROE) of ADBL was 12.97%, NABIL was 20.19%, NIC ASIA was 15.74%, MEGA was 11.60% and SIDDHARTHA was 15.49%. The highest ROE is of Nabil Bank Limited and the lowest ROE is of Mega Bank Limited. it shows that the return on equity (ROE) utilized was more in Nabil Bank Limited and less in Mega Bank Limited among the selected banks on the study.

V. The average Net Profit Margin (NPM) of ADBL was 24.34%, NABIL was 34.90%, NIC ASIA was 17.21%, MEGA was 19.90% and SIDDHARTHA was 20.69%. It shows that the highest NPM is of Nabil Bank Limited and the lowest is of NIC Asia Bank Limited.

VI. The correlation coefficient between ROA and CBBTDR is 0.067. It shows that the positive but insignificant relationship. Similarly, the correlation coefficient between ROA and CBBCDR is -0.490. It was negative but significant relationship.

VII. The correlation coefficient between ROE and CBBTDR is -0.273. It shows that the negative and insignificant relationship. Similarly, the correlation coefficient between ROE and CBBCDR is -0.363. It shows that the negative but significant relationship between ROE and CBBCDR.

VIII. The correlation coefficient between NPM and CBBTDR is -0.278. It shows that the negative and insignificant relationship. Similarly, the correlation coefficient between NPM and CBBCDR is -0.364. It shows that the relationship between NPM and CBBCDR is negative but significant relationship.

4.7 Discussion

The study purpose that all the sample banks have inter-relationship between liquidity and profitability. Liquidity and profitability are two important aspects of a banking system.The higher the liquidity of a banking system, the lower the profitability that the bank could not fulfill its short-term debt. However, it means that the funds are confined and couldn't be used for productive activities, hence lowering the profitability. On the contrary, the lower the liquidity of a banking system, the higher the profitability that the bank could not fulfill its short-term debt, however it means that the funds could be used for productive activities or investment, hence improving its profitability.

The CBBTDR has negative insignificant relationship with the profitability ratios of sampled banks.The finding is similar to the previous researcher and they are Niresh (2012), Akter and Mahmud (2014). And the CBBCDR has negative significant relationship with profitability ratios of selected commercial banks.The result is supported with the Irawan and Faturohman (2014) and shrestha (2018). In the banking sector, more liquidity implies less profitability, and vice versa. Liquidity shows the strength of the banks in terms of their operations and profitability shows their effective and efficient value maximization over the period of time.

CHAPTER – V

SUMMARY AND CONCLUSION

This chapter of the study is divided into three sections. The first section provides the brief summary of the study. The second section shows the conclusion of the study and finally the third section includes implication find out in the background of the analysis carried out.

5.1 Summary

Lack of strength and efficiency relating to the analysis of financial statements affects the financial performance of the bank. Commercial bank's cash and bank balance and cash reserve with NRB have fluctuating and declining trend while various deposits have been increasing; it reflects inefficiency in liquidity management of the bank. The main objective of this study is to identify the relationship between liquidity and profitability of Nepalese Commercial Banks. Hence, only five commercial banks are taken in consideration for the purpose. This study has been carried out with the use of different secondary sources data which are published financial reports of selected banks. The study covers only five years data from 2015/16 to 2019/20. The data and information collected through different sources has been analyzed and presented where analysis and evaluation were conducted with the use of different financial and statistical tools. Various liquidity and profitability ratios are used as financial tools whereas, average, standard deviation, coefficient of variation, correlation coefficient and regression analysis was used as statistical tools.

The findings of the study show that liquidity of Nepalese commercial banks is positively correlated with profitability. This may be taken to mean that as bank increases its liquidity level, its profitability would also increase. Therefore banks can increase value for share holders by maintaining an optimal liquidity level that will ensure that the bank is in a position to meet the short term obligations as they fall dues. This will ensure that the bank does not incur unnecessary costs associated with stock outs and bankruptcy costs and the opportunity costs associated with excess liquidity. Liquidity level should not fall below minimum requirement as it will lead to

the inability of the organization to meet short term obligation that are due. Banks needed to develop various strategies to improve their liquidity position.

In this study after analyzing the financial data, ADBL seems good in terms of current ratiowhereas, NIC Asia is the least in the current ratio among sampled banks. Mega Bank limited appears good as per CBBCDR whereas, Nabil Bank limited deemed as least attractive in terms of CBBCDR. Similarly, ADBL seems good whereas Siddhartha Bank limited is the least in terms of CBBTDR among sampled banks. ADBL seems to be most attractive bank and NIC Asia Bank limited is least attractive commercial banks in terms of return on assets (ROA). But Nabil Bank limited seems attractive and Mega Bank limited is least attractive as per return on equity (ROE). And similarly, Nabil bank limited seems most attractive in terms of net profit margin (NPM) and NIC Asia bank limited deemed as least attractive as per NPM among the selected commercial banks.

5.2 Conclusion

Liquidity is the most sensible and crucial aspect of the bank, which often compared to lifeblood of the human being. Lack of adequate liquidity is often one of the first signs that a bank is in serious financial trouble and lead to the loss of public faith upon banks. Thus, ensuring adequate liquidity is a never-ending problem for the bank management that will always have significant implications for the bank's profitability. Liquidity is very important for any institutions and profitability shows the financial strength of that institution. Liquidity shows the strength of the banks in terms of their operations and profitability shows their effective and efficient value maximization over the period of time.

The CBBTDR of Mega Bank limited has most fluctuating and other ADBL, Nabil, NIC Asia and Siddhartha bank limited has lowest fluctuating. The CBBCDR of Nabil bank limited has increasing in first four years of research periods and last year has slightly decreased. And other banks CBBCDR has most fluctuating in the research period.

Similarly, the profitability position of financial indicators: ROA of NIC Asia has most fluctuating and ADBL, Nabil and Mega Bank limited has lowest fluctuation. The

ROA of Siddhartha Bank limited has slightly decreasing over the periods of study. The ROE of ADBL and Siddhartha Bank limited has seems unattractive due to high fluctuation. And the ROE of Nabil, NIC Asia has lowest fluctuating while Mega bank limited shows the consistency over the study period. Net profit margin (NPM) of NIC Asia, Mega and Siddhartha bank limited has most fluctuating and the ADBL and Nabil Bank limited has lowest fluctuating over the study period of Nepalese commercial banks.

The CBBTDR has negative and insignificant relationship with the ROE and NPM and also has positive and insignificant relationship with ROA. Similarly, the CBBCDR has shows negative and significant relationship with ROA, ROE and NPM of selected commercial banks over the study period.

5.3 Implications

The implications are presented in the last part of this chapter considering the major findings and gaps fund. The implications presented have been certainly milestone to improve existing condition in this field. These implications may also have some repercussions, but there is no doubt of these measures to improve the existing conditions. The following recommendations have been given foe the enhancement of the liquidity and profitability position of the selected banks:

I. The average cash and bank balance to current deposit ratio of Nabil Bank limited is lower among the selected commercial banks. So, it is highly recommended to maintain the industry average cash and bank balance to current deposit ratio.The average cash and bank balance to total deposit ratio of Siddhartha Bank limited is comparatively lower than other selected commercial banks, so it is recommended to maintain adequate cash and bank balance to total deposit ratio.

II. The average ROA of NIC Asia Bank limited is lower among the selected commercial banks, so it is recommended for NIC Asia Bank limited to increase the utilization of assets that drives more profits.The average ROE of Mega Bank limited is comparatively lower among the selected commercial banks, so it is recommended to increase the performance that yield more profit to the bank.The average NPM of NIC Asia Bank limited

is lowest among the selected commercial banks. So, it is strongly recommended to increase the profitability by decreasing the operating and other expenses.

III. All these selected commercial banks under study are suggested to concentrate more on their performance, market value, business growth, categorizing its assets, loan, and other various investments by following good governance and under compliance.Banks are suggested to be aware of goodwill, market reputation, quality and diversified service and products to gain wide range of customers and get more profit.

IV. The study may be helpful to fulfill the gap of proper research about the relationship between liquidity and profitability. It may provide the knowledge about liquidity management in Nepalese commercial banks and their profitability position.

5.4 Implications for further research

I. This study only reveals the relationship between liquidity and profitability position of five selected commercial banks only. Further researchers can be carried out using large sampling other commercial and development banks too.

II. As this study is limited to the analysis of secondary data. Future researcher can be done using primary data with more sample and questionnaire which may yield different result.

III. As this study cover commercial banks in Nepal, it doesn't consider financial institutions and other sector to provide a more broad based analysis. It is also recommended to research relationship between liquidity and profitability position of other financial institutions of Nepal except commercial banks.