**LIQUIDITY AND PROFITABILITY ANALYSIS OF COMMERCIAL BANKS IN NEPAL**

A Dissertation Submitted to the office of the Dean, Faculty of Management in partial fulfillment of the requirement for the Masters Degree

By

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**CERTIFICATION OF AUTHORSHIP**

I hereby corroborate that I have researched and submitted the final draft of dissertation entitle the **Liquidity and Profitability Analysis of Commercial banks in Nepal**. The work of this dissertation has not been submitted previously for the purpose of conferral of any degree nor has it been proposed and presented as part of requirements for any other academic purposes. The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the references section of the dissertation.

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**APPROVAL SHEET**

We have examined the dissertation entitled **Liquidity and Profitability Analysis of Commercial banks in Nepal** presented by Prem Prasad Devkota for the degree of Master of Business Studies. We hereby certify that the dissertation for the award of degree.

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**REPORT OF RESEARCH COMMITTEE**

Ms. Prem Prasad Devkota has defined research proposal entitled **Liquidity and Profitability Analysis of Commercial banks in Nepal** successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestion and guidance of supervisor **Govinda Khanal** submits the Dissertation for evaluation and viva voce examination.

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**ABBREVIATIONS**

ADBL : Agricultural Development Bank Ltd.

C.V. : Coefficient of Variation

CA : Current Assets

CB’s : Commercial Banks

CBB : Cash and Bank Balance

CD : Current Deposit

CL : Current Liabilities

CR : Current Ratio

CRR : Cash Reserve Ratio

DPR : Dividend Payout Ratio

DPS : Dividend per Share

EBL : Everest Bank Limited

EPS : Earning per Share

FD : Fixed Deposit

FY : Fiscal Year

IE : Interest Expenses

LA : Loan and Advances

NIMBL :Nepal Investment Mega Bank Ltd.

NPAT : Net Profit after Tax

NRB : Nepal Rastra Bank

NSBNL : Nepal SBI Bank Nepal Ltd

RBBL : Rastriya Banijya Bank Ltd.

S.D. : Standard Deviation

SE : Shareholder’s Equity

TA : Total Assets

TD : Total Deposits

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**ABSTRACT**

This study examine the comparative study on financial statement analysis of Public and Private Commercial banks in Nepal with references to NIMB, NSBI, ADBL and RBB. The secondary sources of data had been used from annual reports of the banks and supervision report of Nepal Rastra Bank. The regression models are estimated to test the significance and effect of bank financial performances analysis of Nepalese Commercial banks. Further, the correlation is found to be negative for quick ratio with return on equity. Beta coefficients for investment ratio and capital adequacy was positively significant with bank performance, which indicate that increase in investment ratio and capital ratio leads to increase the performance of the banks.

Financial institutions are the backbone of the economic commercial of any country. Bank came to existence mainly with the objective of collecting the idle fund and mobilizing them to productive sector causing overall economic commercial. This research was aimed of studying the non-performing assets of private Commercial banks. For this purpose, descriptive and analytical research design was adopted out of total population of 21 commercial banks, four banks were taken as sample using random sampling method, and they are NIMB, NSBI, ADBL and RBB. In this study secondary data were used. Besides this, newspaper, relevant thesis, journals, articles, related website etc. were also taken for this research. The data collected from secondary sources are recorded systematically and presented in appropriate forms of table and charts and appropriate mathematical, statistical and financial tools had been applied to analyze the collected data in suitable manner. The present study emphasizes on the management of nonperforming assets in private Commercial banks in Nepal by covering asset classification norms, identification of non-performing assets, provisioning against advances etc. Commercial banks provide finance to needy covering various sectors including priority, no-priority and public sectors.

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**CHAPTER I**

**INTRODUCTION**

**1.1 Background of the Study**

Managing liquidity involves estimating liquidity needs and providing for them in the most cost-effective way possible. Banks can obtain liquidity from both sides of the balance sheet as well as from off-balance-sheet activities. A manager who attempts to control liquidity solely by adjustments on the asset side is sometimes ignoring less costly sources of liquidity. Conversely, focusing solely on the liability side or depending too heavily on purchased wholesale funds can leave the bank vulnerable to market conditions and influences beyond its control. Effective liquidity managers consider the array of available sources when establishing and implementing their liquidity plan. Bank management should understand the characteristics of their funds providers, the funding instruments they use, and any market or regulatory constraints on funding. In order to accomplish this, management must understand the volume, mix, pricing, cash flows, and risks of their bank's assets and liabilities, as well as other available sources of funds and potential uses for excess cash flow. They must also be alert to the risks arising from funding concentrations (Baxley, 2017).

The state of profitability is a variable thing like the temperature and humidity of a day. The determination of profitability by an accountant or analyst is very much similar to temperature reading and study of humidity by a meteorologist. A meteorologist records the weather on daily basis with an intention to forecast its future prospects. Likewise, an analysis records yearly profit of a bank with a view to make prediction of the future prospects. The purpose of profitability measurement is to see whether a bank has effectively used its resources to achieve its profitability objectives. The profitability objectives refer not to the maximum profit the business can produce but to the minimum it must produce. The minimum profit is the profit at the minimum rate required for the desired type of investment in the bank. However, there mustn’t be enough profit to yield the capital in the market rate of return on money, which is already sunk in business, but also to provide additional capital needed to cover the cost of staying in business *(*Crossee, 2018*).*

Mergers had become the most widely used business strategy of restructuring and strengthening bank to achieve competitiveness, to ensure long term existence with considerable profitability, to forge entering in new markets, and to ascertain the capital

base etc. Specially, the merger law policy-2011 and monetary policy-2015 issued by Nepal Rastra Bank, the regulatory body of banks in Nepal, had been experienced as the most effective weapons for merger in Nepalese Banking industry. The foremost requirement for a corporate looking to go global, to start with, was to change the old technocrat mindset and think big and global. Companies working in overly competitive environment had to change fast as per the evolving dynamics in their industry of operation. In such scenario mergers could be a useful for the company. Besides that, it helps in generating greater values for the company. It can be found very useful in adapting change and making flexible decisions during the era of change and transformation in the company. Merger could be a milestone for the company in achieving economies of scale and being competent enough to make crucial decision regarding pricing and valuations of the product and service of the company (Pintoo,2011).

The Nepalese financial sector had witnessed a tremendous growth in the number of financial institutions after the 1980’s by adopting an economic liberalization regulation with a mixed economic model. However, the unnatural increment of the BFIs had brings several financial challenges and complexities. The financial indicator had indicated that the Nepalese financial sector was weak, vulnerable and, at the verge of a collapse. Merger was a golden opportunity for BFIs. This facility was floated to reduce the number of BFIs to strengthen them Meanwhile, due attention was also given to avoid possible contraction in access to finance and concentration of business risks as a result of the merger process (Pintoo, 2011).

The term “profitability” is composed of two words ‘profit’ and ability. There are two main concepts with regard to the word profit economic and accounting. According to Farn (2019) “Profit is the sum remaining after the payment of all wages in economics includes payments to officers of corporations, to proprietors, to partners and to farmers, as well as to what we today term (labour), and rent on the unimproved value of land, as the return to capital. Profit has been universally recognized and accepted as a measure of business efficiency. Thus, the larger the profits, the more efficiency and profitable the business organization is deemed to be. This criterion has the greater advantage that it provides a common standard of measuring the efficiency if different bank. Regarding this clearly states, “Profit is the simple, convenient and the most popular yard stick of jugging the efficiency of private and public business enterprises. Profit helps in judging the overall efficiency and is easy to calculate. Even through profit maximization , unlike private enterprise, is not objective of public enterprises, yet profit services as a well accepted criterion for the judging the overall efficiency of public enterprises too. For private enterprise is taken to be the most satisfactory criterion of efficiency. Profit helps in judging the overall efficiency and is easy to calculate. Even through profit maximization, unlike private enterprise, is not objective of public enterprises, yet profit services as a well accepted criterion for the judging the overall efficiency of public enterprises too *(*Kobita,2017).

Financial analysis was the process of examining a company’s performance in the context of its industry and economic environment in order to arrive at a decision or recommendation. Often, the decisions and recommendations addressed by financial analysts pertain to providing capital to companies specifically, whether to invest in llthe company’s debt or equity securities and at what price. An investor in debt securities was concerned about the company’s ability to pay interest and to repay the principal lent. An investor in equity securities was an owner with a residual interest in the company and was concerned about the company’s ability to pay dividends and the likelihood that its share price will increase (Thapa, 2020).

Financial performance of business allows decision makers to judge the results of businessstrategies and activities in objective monetary terms. Normally the ratios were used to determine the financial performance an organization. A well designed and implemented financial management was expected to contribute positively to the creation of a firm's value (Pintoo,2011).

Liquidity of the bank should be maintained according to the standard. Excess liquidity as well as lack of liquidity can be considered as bad symptoms to the firm. On the other hand the bank cannot operate its internal and other marketing function properly. If the bank does not hold adequate liquidity, it will not be able to take advantage of favorable business opportunities and meet emergencies such as fires or competitors marketing campaign. A very high degree of liquidity is also bad, here assets remain idle which adds nothing to bank's earning. The firm's funds will be unnecessarily tied up in current assets which could be used otherwise. Liquidity describes the degree to which an [asset](https://www.investopedia.com/terms/a/asset.asp) or [security](https://www.investopedia.com/terms/s/security.asp) can be quickly bought or sold in the market at a price reflecting its intrinsic value. In other words: the ease of converting it to cash. [Cash](https://www.investopedia.com/terms/c/cash.asp) is universally considered the most liquid asset, while tangible assets, such as real estate, fine art, and collectibles, are all relatively illiquid. Other financial assets, ranging from equities to partnership units, fall at various places on the liquidity spectrum *(*Thapa, 2020).

Market liquidity refers to the extent to which a [market](https://www.investopedia.com/terms/m/market.asp), such as a country's stock market or a city's real estate market, allows assets to be bought and sold at stable, transparent prices.

In the example above, the market for refrigerators in exchange for rare books was so illiquid that, for all intents and purposes, it does not exist. The stock market, on the other hand, was characterized by higher market liquidity. If an exchange had a high volume of trade that was not dominated by selling, the price a buyer offers per share (the [bid price](https://www.investopedia.com/terms/b/bidprice.asp)) and the price the seller is willing to accept (the [ask price](https://www.investopedia.com/terms/a/ask.asp)) will be fairly close to each other. Investors, then, had not had to give up unrealized gains for a quick sale. When the [spread](https://www.investopedia.com/terms/b/bid-askspread.asp) between the bid and ask prices grows, the market becomes more illiquid. Markets for real estate are usually far less liquid than stock markets. The liquidity of markets for other assets, such as derivatives, contracts, currencies, or commodities, often depends on their size, and how many open exchanges exist for them to be traded on (Khadka, 2017*).*

**Profile of Sample Organization**

**Nepal Investment Mega Bank Limited**

Nepal Investment Mega Bank Ltd. (NIMB), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIMB) was Credit Agricola Indosuez, a subsidiary of one of the largest banking group in the world (www.nimb.com).

Later, in 2002 a group of Nepalese companies comprising of bankers, professionals, industrialists and businessmen acquired the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd., and accordingly the name of the Bank also changed to Nepal Investment Mega Bank Ltd.(www.nimb.com)

**Nepal SBI Bank Limited**

Nepal SBI Bank Ltd. (NSBL) is the first Indo-Nepal joint venture in the financial sector sponsored by three institutional promoters, namely State Bank of India (SBI), Employees Provident Fund and Agricultural Development Bank of Nepal through a Memorandum of Understanding signed on 17 July 1992. NSBL was incorporated as Public Limited Company at the Office of the Company Registrar on 28 April 1993 under Regn. No. 17-049/50 with an Authorized Capital of Rs.12 Crores and was licensed by Nepal Rastra Bank on 6 July 1993 under license No. NRB/l.Pa./7/2049/50. NSBL commenced operation with effect from 7 July 1993 with one full-fledged office at Durbar Marg, Kathmandu with 18 staff members. The staff strength has since increased to 991 as on 09.02.2021 on NSBL working in 88 branches, 19 extension counters, 7 Provincial Offices, 1 Intouch outlet & a Corporate

office (www.nsbi.com.np).

Under the Banks & Financial Institutions Act, 2063, Nepal Rastra Bank granted fresh license to NSBL classifying it as an "A" class licensed institution on 26 April 2006 under license No. NRB/I.Pra.Ka.7/062/63.[8] The Authorized capital is Rs.1500.00 crore and Paid up Capital is Rs.895.62 Crores. The management team consists of Managing Director & CEO, Dy.CEO & Chief financial officer and Chief Operating Officer from SBI (They are deputed by SBI for management support as per the Technical Services Agreement). State Bank of India (SBI) holds 55 percent of the total share capital of the Bank, 15 percent is held by the Employees Provident Fund and the balance is held by the general public ([www.nsbi.com.np](http://www.nsbi.com.np)).

**Agricultural Development Bank Limited**

With the main objective of providing institutional credit for enhancing the production and productivity of the agricultural sector in the country, the Agricultural Development Bank, Nepal was established in 1968 under the ADBN Act 1967, as successor to the cooperative Bank. The Land Reform Savings Corporation was merged with ADBN in 1973. Subsequent amendments to the Act empowered the bank to extend credit to small farmers under group liability and expand the scope of financing to promote cottage industries. The amendments also permitted the bank to engage in commercial banking activities for the mobilization of domestic resources.

The bank worked as a premier rural credit institution since its establishment, contributing substantial agricultural credit supply in the country. Rural finance has been the principal operational area of ADBN in the past. However, the bank is also involved in commercial banking operations since 1984, to provide commercial banking services (www.adbl.com.np).

The bank has 51% share of Government of Nepal and 49% of general public. Most of its shareholders are customers and employees. The enactment of Banks and Financial Institutions Act (BAFIA) took all the banks and financial institutions (BFIs) under its umbrella and abolished all the acts related to the BFIs including the ADBN Act, 1967. Since then, the bank has been working as a public limited company registered under the Companies Act, 2006 and is licensed as "A class financial institution" by Nepal Rastra Bank from 2006 (www.adbl.com).

**Rastriya Banijya Bank Limited**

Rastriya Banijya Bank Limited (RBBL) has a history of serving its customers far and wide across the nation for more than half a century. The bank then fully owned by Government of Nepal, was established on 10 Magh 2022 (23 January 1966) under the special statute "Rastriya Banijya Bank Act, 2021" and had operated under "Commercial Bank Act,2031” until it was re-registered as public limited company on 6 Baishak 2063 (19 May 2006). At present, the Bank operates as "A" class financial institution licensed by Nepal Rastra Bank and carries out commercial banking activities as per the provisions of the "Bank and Financial institutions Act 2073," (www.rbb.com.np).

RBBL endured many stressful years of business and faced existential questions at some point of time in the past. But learning the lessons from the events and craving towards the brighter future, the Bank successfully implemented a restructuring plan; and now it stands as one of the most preferred bank with the highest number of customers all 77 districts and 7 provinces of the country. The Bank has been able to imprint its presence in national economy through efficient allocation of resources in all sectors of economy thereby enhancing production and generating employment opportunities within the country. The unflinching faith and goodwill bestowed by our customers continued support from the Government, well wishers and general public has been the reason for us to stand as the most trusted bank in the country (www.rbb.com.np).

**1.2 Problem Statement**

Commercial banks collect money from the local people savings and grant those accumulate resources as loan and provide other wide variety of services. In today’s globalize world economy, business without commercial bank was impossible. Bank is the heart of the commercial activities. Liquidity and profitability management is an important function of any business because it is the determinant of whether the entity was in operation in the foreseeable future. Liquidity management is even more crucial as the lifeline of banking itself is money. For a bank, liquidity means having sufficient funds to meet regulatory, contractual and relationship obligations when required and at a reasonable cost to the bank. Sufficient liquidity is a signal to the wider market as a whole that the bank is prudent, profitable and well managed. This helps to reduce the risk premium that a bank has to pay on its borrowed funds. However, more than enough liquidity is also harmful and thus invites profitability risk. Thus, proper liquidity and profitability management ensures that all of a bank's lending commitments are met. Assessing a bank’s, liquidity position can be challenging. An adequate position for one bank may not be sufficient for another. Moreover, a position considered adequate for a bank in one time period may not be so in another. For the study, the following research questions have been raised:

1. What is the liquidity position of sample banks?
2. What is the profitability position of sample banks.
3. What is the relationship between liquidity and profitability position of sample banks?

**1.3 Objectives of the Study**

The main objective of the study was to examine the liquidity and profitability position of the selected commercial banks of Nepal. The other specific objectives of the study are;

1. To examine the liquidity position of sample banks.
2. To examine the profitability position of sample banks.
3. To assess the relationship between liquidity and profitability position of sample banks.

**1.4 Rationale of the Study**

The study was mainly significant to the shareholders, depositors and other creditors to identify the productivity of their funds and to measure the risk associated with liquidity in the sample banks. Likewise other financial agencies, e.g. stock exchange and stock brokers are also interested in the liquidity and profitability management of bank, as it has been listed in the stock exchange market. Besides them, the study will also help the management of the banks to synchronize the liquidity with the profitability and to make policy that can tussle with the competitors. The study will also be equally significant to the central bank to formulated the new liquidity policy, as there are certain loopholes as a result the chances of bankruptcy has been regarded as the main problem of financial institutions in these days. An appropriate level must be achieved between them.

1. This study was helpful to enhance the financial performance of concern organization.
2. This study was usable and valuable for academicians, students, teachers and practitioners in the field of accounting and finance.
3. This study enlightens the shareholders, financial agencies, stock exchange, stock trader, customers, depositors and debtors who can objectively identify the better banks to deal with.
4. This study analyses and states to maintain balance between principalities of liquidity and profitability.
5. This study was a helpful tool for the bank also in analyzing its practices on trade off between liquidity and profitability.
   1. **Limitations of the Study**

The major limitations of the study were as follows:

1. There were 21 commercial banks(nrb.org.np) are operate in Nepal and only 4 commercial banks are taken which is not covers all commercial banks.
2. The study focuses only four banks, namely Nepal SBI Bank Limited, Agricultural Development Bank Limited, Rastriya Banijya Bank Limited and Nepal Investment Mega Bank Limited, which may not truly represent the whole population.
3. The study analyzes only the liquidity and profitability position of the commercial banks and hence does not touch the other financial aspects.
4. The data is taken only 2012/13 to 2021/22.

**1.6 Organization of the Study**

The study had been organized mainly into five chapters;

**Chapter – I: Introduction**

Chapter one deal with the subject matters of the study. It consists of background of the study, statement of the problem, objectives of the study, significance of the study and limitation of the study

**Chapter – II: Literature Review**

It deals with review of literature. It includes a discussion on the conceptual framework on liquidity and profitability. It also includes the research gap.

**Chapter – III: Research Methodology**

This chapter explains the research methodology used to evaluate liquidity and profitability position of commercial banks in Nepal. It consists of research design, population and sample, source of data collection, method of analysis financial tools and statistical tools used in the analysis.

**Chapter – IV: Results and Discussion**

Chapter four fulfills the objective of the study by presenting data and analyzing them with the help of various statistical tools as per methodology. It are concluded with the findings of the study and discussions.

**Chapter – V: Summary and Conclusion**

It states summary, conclusion and recommendation of the study based on the data presentation and its analysis using the tools used in the analysis.

At last , references and Appendix were included.

**CHAPTER II**

**LITERATURE REVIEW**

This chapter depicts upon existing literature and research related to the present study for the purpose of finding out what had already been explained and how this research adds to required dimension. Literature review is a way to develop a better understanding of a problem area in which one is investing and have limited experience and knowledge. It also familiarizes one with past research results, data sources, and type of data available. Various books, journal, articles and related previous research works have been reviewed. This chapter is divided into four parts; Conceptual Review, Review of Journals and Articles, Review of Thesis and Research Gap. The primary purpose of literature review is to learn not to accumulate. It enables the researcher to know. Review of literature means reviewing research studies or other relevant propositions in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted (Adhikari, 2020).

**2.1 Liquidity Management**

Managing liquidity involves estimating liquidity needs and providing for them in the most cost-effective way possible. Banks can obtain liquidity from both sides of the balance sheet as well as from off-balance-sheet activities. A manager who attempts to control liquidity solely by adjustments on the asset side is sometimes ignoring less costly sources of liquidity. Conversely, focusing solely on the liability side or depending too heavily on purchased wholesale funds can leave the bank vulnerable to market conditions and influences beyond its control. Effective liquidity managers consider the array of available sources when establishing and implementing their liquidity plan. Bank management should understand the characteristics of their funds providers, the funding instruments they use, and any market or regulatory constraints on funding. In order to accomplish this, management must understand the volume, mix, pricing, cash flows, and risks of their bank's assets and liabilities, as well as other available sources of funds and potential uses for excess cash flow. They must also be alert to the risks arising from funding concentrations. In the banking sector, various tools and strategies are employed for liquidity management. Central to these efforts is the creation of a diversified portfolio of assets with varying degrees of liquidity. Banks often hold a mix of liquid assets, such as government securities and short-term money market instruments, alongside less liquid assets like loans. This diversified approach allows banks to manage their liquidity position dynamically, adjusting to changing market conditions and customer demands. Additionally, banks engage in liability management to ensure a stable and reliable source of funding. This involves carefully monitoring and controlling the composition of liabilities, including the mix of short-term and long-term deposits. By understanding the maturity profile of their liabilities, banks can proactively plan for potential liquidity challenges. Regulatory authorities also play a crucial role in shaping liquidity management practices within the banking sector. They establish guidelines and frameworks to ensure that banks maintain adequate liquidity buffers to withstand unforeseen shocks and market disruptions. Compliance with regulatory requirements is a key aspect of prudent liquidity management.(Baxley, 2017)

***Types of Liquidity***

Mainly the liquidity of the firm are categorized under two headings. They are;

***A) Asset Liquidity***

Banks typically hold some liquid assets to supplement liquidity from deposits and other liabilities. These assets can be quickly and easily converted to cash at a reasonable cost, or are timed to mature when the managers anticipate a need for additional liquidity. Liquid assets include those that can be pledged or used in a repurchase agreement. Although management expects to earn some interest income on their liquid assets, their main purpose is to provide liquidity. The concept of liquidity is often represented by the bid-ask spread—the difference between the highest price a buyer is willing to pay (bid) and the lowest price a seller is willing to accept (ask). Tighter spreads usually indicate higher liquidity. Investors need to consider liquidity when building their portfolios, as it affects the ease of buying and selling assets. Highly liquid assets are generally preferred for short-term investments or trading, while long-term investors may be more tolerant of lower liquidity for certain assets. In summary, asset liquidity is a critical factor in investment decision-making, impacting the ease and cost of buying or selling assets in the market. It's an essential consideration for investors looking to balance risk and return in their portfolios(Crossee, 2018).

***The Investment Portfolio***

A bank's investment portfolio can provide liquidity in three ways: (1) the maturity of a security, (2) the sale of securities for cash, or (3) the use of “free” securities as collateral in a repurchase agreement or other borrowing. For an investment security to be saleable, it must not be encumbered, i.e., the security cannot be sold under repurchase agreement or pledged or used as collateral, and it must be marketable. A “free” security is an instrument that can be used as collateral in a transaction. A security that is severely depreciated, a small face amount, already pledged or encumbered, or of poor credit quality is not a good candidate for collateral and should not be considered free. Because of these judgmental factors, the amount of free securities owned by a bank cannot easily be determined from the general ledger, and levels are generally estimated. Periodically, management should analyze in detail the investment portfolio to validate the bank’s estimates of free securities. For accounting purposes, investment portfolios are separated into two categories, available-for-sale (AFS) and held-to-maturity (HTM). These designations may affect how a bank uses its securities for liquidity purposes (Ross, 2011).

***Cash Operating Accounts***

Operating accounts such as vault cash, cash items in process of collection, correspondent accounts, and the Federal Reserve account usually are not liquid assets in an ongoing institution. These accounts are needed to accommodate daily business transactions; if these funds are used, they must be replenished before further business activities are conducted. Most well- managed banks maintain the minimum balance needed to accommodate transactions in these accounts, since the balances do not generally earn interest (Ross, 2011).

***Reverse Repurchase Transactions***

In a securities purchased under resale agreement, also known as a “reverse repurchase agreement,” a bank lends money to counterparty by purchasing a security and agreeing to resell the security to the counterparty at a future date. This is an exchange of the most liquid asset (surplus cash) for a less liquid asset (a security). A reverse repo provides earnings to the lending bank with limited credit risk because the loan is collateralized.

***B) Liability Liquidity***

Large regional and money center banks, and increasingly more community banks, rely heavily on liability liquidity. Larger banks generally have ready access to money markets and usually find that borrowing is the most economical way for them to meet short-term or unanticipated loan demand or deposit withdrawals. While community banks generally do not have the same broad access to money markets, their reliance on liability liquidity is increasing as the availability of core deposits continues to decline. By managing liabilities instead of assets, banks can tailor liabilities to fit their cash flow needs instead of apportioning asset types and amounts to a given liability base (Singh, 2017)

***Retail Funding***

Retail funding is supplied by the deposits a bank receives from the general public, primarily consumers and small businesses. These deposits are most banks' primary funding source and for many banks continue to be a relatively stable source of funds. Retail funds providers usually maintain balances of $100,000 or less, to be fully insured by the FDIC. Retail accounts include (Ross, 2011).

* Transaction accounts such as demand deposit accounts (DDAs), negotiable order of withdrawal accounts (NOWs), or money market demand accounts (MMDAs); and
* Savings accounts and time certificates of deposit (CDs).

***Wholesale Funding***

Many banks are increasing their use of wholesale funding, replacing lost retail deposits with funds provided by professional money managers. Wholesale funds providers are typically large commercial and industrial corporations, other financial institutions, governmental units, or wealthy individuals. Wholesale funds transactions are typically not insured or are in amounts that exceed the FDIC insurance limit. As a result, these funds are generally very sensitive to credit risk and interest rates, and pose greater liquidity risk to a bank (Ross, 2011).

***Other Debt Securities***

Many large banks also use other debt securities to provide longer-term sources of funds. Under the provisions of the Gramm-Leach-Bliley Act (GLBA), if a bank is one of the 100 largest insured banks and owns a financial subsidiary, it must have outstanding “eligible debt” that is rated in one of the three highest investment grade rating categories by a nationally recognized statistical rating organization (Singh, 2017)

**2.2 Strategy for Liquidity Management**

Liquidity Management was a tough task to be discharged by the management of every business entity. Inadequate liquidity tarnishes the image of the organization while excess liquidity is detrimental to the profitability.

Objective of liquidity management:

* To meet maturing liabilities
* To minimize the cost of fund
* To improve liquidity
* To improve the return on investment
* Meeting short-term obligations.
* Maintaining solvency.
* Optimizing cash flow.
* Reducing the cost of liquidity.
* Managing unforeseen events.
* Building confidence.
* Complying with regulatory requirements.
* Adapting to changing conditions.
* Enhancing financial flexibility.
* Minimizing the impact of market volatility
* Facilitating strategic investments.
* Supporting growth opportunities.
* Mitigating liquidity risks.
* Improving creditworthiness.
* Ensuring operational continuity.
* Aligning with corporate goals and strategies.
* Safeguarding against market shocks.
* Aligning with business growth objectives.

In order to achieve the said objectives, banks adopt following strategies:

* Asset Management
* Liability Management
* Asset Liability (Funds) Management

The liquidity management strategies should be supported by the following:

* Prediction of Liquidity Needs
* Most Productive Use of Liquid Assets
* Maintenance of Protective Liquidity
* Effective Liquidity Mobilization
* Secured Loans and Advances and Investment Portfolio
* Rapport with Corporate and Financial Institutions.
* Diversification of funding sources.
* Effective management of cash conversion cycles.
* Implementation of stress testing.
* Development of contingency plans.
* Monitoring and managing concentration risk.
* Utilization of central bank facilities.
* Establishment of a liquid asset buffer.
* Regular assessment of market conditions.
* Strategic management of short-term liabilities.
* Integration of technology for real-time monitoring.
* Coordination with regulatory requirements.
* Maintenance of a robust liquidity risk management framework.
* Establishment of liquidity risk limits.
* Adoption of dynamic liquidity risk modelling.
* Utilization of liquidity risk metrics and indicators.
* Monitoring and managing intra-day liquidity.
* Participation in interbank markets.
* Establishing relationships with other financial institutions for potential liquidity support.
* Ongoing review and adjustment of liquidity management strategies.
* Incorporation of liquidity risk considerations into overall risk management practices (Sharma, 2019).

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**2.3 Importance of Liquidity Management**

Liquidity risk was a greater concern and management challenge for banks today than in the past. Increased competition for consumer deposits, a wider array of wholesale and capital market funding products, and technological advancements have resulted in structural changes in how banks are funded and how they manage their risk. In particular, two recent trends in funding make it more important for banks to actively manage their liquidity risk: 1) the increased use of credit-sensitive wholesale funds providers and 2) the growth of off-balance-sheet activity (Singh, 2017).

Traditionally, banks have relied upon retail transaction and savings accounts as a primary funding source. These deposits generally represent a stable and low-cost source of funds. However, for the past several years, core deposits as a percentage of assets have steadily declined. More recently, the absolute growth of core deposits has been flat and may well decline in the future as retail consumers continue to evaluate the variety of competing savings vehicles and their relative returns. The growth in, and consumers' acceptance of, Internet banking and other electronic technologies may accelerate this trend by making it easier for consumers to compare rates and to transfer funds between competing institutions easily and rapidly. The many choices among market funding alternatives have provided banks with greater flexibility in managing their cash flows and liquidity needs Liquidity management is of paramount importance in the banking sector, serving as the lifeblood that sustains the operational health and stability of financial institutions. At its core, liquidity management involves the judicious balance between a bank's liquid assets and its liabilities, ensuring that it can meet short-term obligations promptly. This capability is fundamental to the daily functioning of banks, allowing them to handle customer withdrawals, process payments, and navigate unforeseen cash demands. Beyond the operational realm, effective liquidity management contributes significantly to financial stability. It acts as a safeguard against economic uncertainties, market fluctuations, and unexpected shocks, providing resilience in the face of adversity. The confidence of depositors, investors, and regulatory authorities hinges on a bank's ability to manage liquidity prudently, influencing its credibility and trustworthiness. Compliance with regulatory liquidity requirements further underscores the importance of robust liquidity management, as regulatory standards are designed to enhance the overall stability of the financial system. Moreover, strategic liquidity management supports a bank's growth initiatives by optimizing the use of funds, facilitating investments, and contributing to profitability. In times of stress, liquidity management becomes a linchpin, with stress testing ensuring preparedness for adverse scenarios. Ultimately, the significance of liquidity management in the banking sector extends beyond mere financial maneuvering; it is a cornerstone for resilience, trust, and the sustained functioning of the broader financial ecosystem. (Tamang, 2018).

Increased reliance on market funding sources, however, has left banks more exposed to the price and credit sensitivities of major funds providers. As a general rule, institutional funds providers are more credit sensitive and will be less willing than retail customers to provide funds to a bank facing real or perceived financial difficulties. A bank's ability to access the capital markets may also be adversely affected by events not directly related to them. Along with the shift from relatively credit-neutral to credit- sensitive funds providers, banks have turned increasingly to asset securitization and other off- balance-sheet strategies to meet their funding requirements. As these off- balance-sheet activities have grown, they have become increasingly important in the management and analysis of liquidity. These activities can either supply liquidity or increase liquidity risk, depending on the specific transaction and the level of interest rates at the time (Singh, 2017).

**2.4 Liquidity Risk**

Liquidity risk is the risk to a bank's earnings and capital arising from its inability to timely meet obligations when they come due without incurring unacceptable losses. Bank management must ensure that sufficient funds are available at a reasonable cost to meet potential demands from both funds providers and borrowers. Although liquidity risk dynamics vary according to a bank's funding market, balance sheet, and inter corporate structure, the most common signs of possible liquidity problems include rising funding costs, requests for collateral, a rating downgrade, decreases in credit lines, or reductions in the availability of long-term funding. The sophistication of a bank's liquidity management process will depend on its business activities and overall level of risk. However, the principles of liquidity management are straightforward: a well-managed bank, regardless of size and complexity, must be able to identify, measure, monitor, and control liquidity risk in a timely and comprehensive manner (Singh, 2017)

.Liquidity risk refers to the potential inability of a financial institution or entity to meet its short-term financial obligations due to a shortage of liquid assets. In other words, it is the risk that arises when an organization cannot quickly convert its assets into cash or obtain sufficient funds to cover its liabilities, especially during periods of market stress or economic downturns. Liquidity risk can manifest in various forms, such as the inability to sell assets at desired prices, difficulties in borrowing from the market, or challenges in rolling over short-term debt. One of the key sources of liquidity risk is the mismatch between the maturity and liquidity of assets and liabilities. For instance, if an organization holds illiquid assets with longer maturities but faces short-term liabilities that need to be settled promptly, it may struggle to generate the necessary cash flow in a timely manner. Additionally, market conditions, economic uncertainties, or sudden shifts in investor sentiment can exacerbate liquidity risk, making it challenging for institutions to access funds at reasonable costs. Effective management of liquidity risk involves comprehensive planning, monitoring, and stress testing to assess an organization's ability to withstand adverse conditions. Financial institutions typically develop contingency plans and maintain adequate reserves of liquid assets to navigate potential liquidity challenges. Regulatory authorities also play a role in overseeing and setting standards for liquidity risk management to ensure the stability of the financial system. Liquidity risk is a significant concern for banks, investment firms, and other financial institutions, as a lack of liquidity can lead to severe consequences, including financial distress, insolvency, and a loss of confidence from stakeholders. Therefore, prudent liquidity risk management practices are essential for maintaining financial stability and safeguarding the continuity of operations in both normal and turbulent market environments(Roos.2011).

**2.5 Early Warning Indicators of Liquidity Risk**

Management should monitor various internal as well as market indicators of potential liquidity problems at the bank. These indicators, while not necessarily requiring drastic corrective action, may prompt management and the board to do additional monitoring or analysis. An incipient liquidity problem may first show up in the bank's financial monitoring system as a downward trend with potential long-term consequences for earnings or capital. Examples of such internal indicators are (Thapa, 2020):

* A negative trend or significantly increased risk in any area or product line.
* Concentrations in either assets or liabilities.
* A decline in indicators of asset quality.
* A decline in earnings performance or projections.
* Rapid asset growth funded by volatile wholesale liabilities or brokered deposits.
* Rapid increase in the utilization of credit lines.
* Deterioration in the quality of liquid assets.
* Sudden and significant withdrawals by large depositors.
* Decline in market confidence, reflected in credit ratings.
* Unusual spikes in intra-day or overnight borrowing costs.
* Higher frequency and severity of operational disruptions.
* Substantial increase in payment delays or defaults by counterparties.
* Unplanned fluctuations in loan-to-deposit ratios.
* Decline in collateral values supporting borrowings.
* Changes in the regulatory environment impacting liquidity.
* Unanticipated shifts in customer deposit behaviour.
* Emerging signs of stress in interbank funding markets.
* Increased instances of failed transactions or settlements.
* Higher volatility in short-term funding markets.
* Unfavourable trends in the institution's net stable funding ratio.
* Rapid changes in the liquidity coverage ratio.
* Unexpected changes in central bank policies affecting liquidity.
* Reduction in the availability of unsecured funding.
* Unusual movements in the institution's stock price or credit spreads.
* Shifts in global economic conditions impacting liquidity risk.

Professional analysts and other market participants may express concerns about the bank's credit capacity. Examples of these third-party evaluations include:

* Bank is named in market rumors as a “troubled” bank.
* Downgrades of credit rating by rating agencies.
* Customers are contacting relationship managers, fixed income sales representatives, and branch employees requesting information.

Bearish secondary market activity in the bank's securities may signal declining value. Examples of these market events include:

* Drop in stock price.
* Wider secondary spreads on the bank's senior and subordinated debt, and increasing trading of the bank's debt.

Finally, the bank's funding market may begin to contract or demand credit support, better credit terms, or shorter duration lending, any of which may increase liquidity costs. Examples of funding deterioration are:

* Overall funding costs increase.
* Counterparties begin to request collateral for accepting credit exposure to the bank.
* Correspondent banks eliminate or decrease credit line availability, causing the bank to make larger purchases in the brokered funds market.
* Volume of turndowns in the brokered markets is unusually large, forcing bank to deal directly with fewer willing counterparties.
* Rating-sensitive providers, such as trust managers, money managers, and public entities, abandon the bank.
* Counterparties and brokers are unwilling to deal in unsecured or longer dated transactions.
* Transaction sizes are decreasing, and some counterparties are unwilling to enter into even short-dated transactions.
* Bank receives requests from depositors for early withdrawal of their funds, or the bank has to repurchase its paper in the market.
* Decrease in deposit inflows.
* Rising cost of obtaining funding.
* Reduction in access to interbank markets.
* Increased reliance on short-term funding.
* Decline in market confidence affecting debt issuance.
* Difficulty in rolling over maturing debt.
* Higher rates on wholesale funding sources.
* Decreased availability of secured funding.
* Reduced investor demand for bank debt instruments.
* Challenges in maintaining stable funding sources.
* Limited access to alternative funding channels.
* Constraints in securitization markets.
* Increased dependence on emergency liquidity facilities.
* Downgrades in credit ratings impacting funding costs.
* Changes in regulatory requirements affecting funding structures.
* Market perception of heightened counterparty risk.
* Decrease in the willingness of counterparties to provide funding.
* Liquidity squeeze due to unforeseen economic events.
* Constraints in accessing central bank facilities.
* Tightening of overall liquidity conditions in financial markets

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When evaluating a bank’s potential liquidity risk, the examiners will consider not only the factors considered by bank management but also a bank’s current position and trends in the following ratios:

* Loans to deposits.
* Short-term liabilities to total assets.
* On-hand liquidity.
* Dependence or reliance on wholesale funding.

**2.6 Relationship of Liquidity Risk to Other Banking Risks**

Bankers and examiners must understand and assess how a bank's exposure to other risks may affect its liquidity. The nine categories of risk are credit, interest rate, liquidity, price, foreign currency translation, transaction, compliance, strategic, and reputation. These categories are not mutually exclusive any product or service may expose the bank to multiple risks and a real or perceived problem in any area can prevent a bank from raising funds at reasonable prices and thereby increase liquidity risk. The primary risks that may affect liquidity are reputation, strategic, credit, interest rate, price, and transaction. If these risks are not properly managed and controlled, they will eventually undermine a bank's liquidity position. A brief description of how these risks may affect liquidity is provided below (Ross, 2011).

***Reputation Risk***

Reputation risk is the current and prospective impact on earnings and capital arising from negative public opinion. A bank's reputation for meeting its obligations and operating in a safe and sound manner is essential to attracting funds at a reasonable cost and retaining funds during troubled times. Negative public opinion, whatever the cause, may prompt depositors, other funds providers, and investors to seek greater compensation, such as higher rates or additional credit support, for maintaining deposit balances with a bank or conducting any other business with it. If negative public opinion continues, withdrawals of funding could become debilitating. To minimize reputation risk and its potential impact on liquidity, bank management should assess the bank's reliance on credit-sensitive funding. A bank that is exposed to significant reputation risk should seek to mitigate liquidity risk by diversifying the sources and tenors of market funding and increasing asset liquidity, as appropriate (Ross, 2011).

Reputation risk is the potential for damage to an organization's image, credibility, and standing in the eyes of its stakeholders, including customers, investors, employees, and the broader public. This risk arises from negative perceptions and experiences that can be triggered by various factors, such as unethical behavior, operational failures, legal issues, or other events that erode the trust and confidence stakeholders have in the organization. A solid reputation is a valuable intangible asset that contributes to customer loyalty, investor confidence, and employee morale. Reputation risk can have far-reaching consequences, impacting an organization's market share, revenue streams, and relationships with key stakeholders. In today's interconnected world, where information spreads rapidly through social media and online platforms, reputational damage can occur swiftly and have a lasting impact. Instances of reputation risk may include product recalls, data breaches, ethical lapses, environmental controversies, or any event that captures public attention and tarnishes the perception of an organization. The fallout from reputation risk can lead to financial losses, decreased shareholder value, talent retention challenges, and difficulties in attracting new customers or investors. Effective management of reputation risk involves proactive measures such as maintaining ethical business practices, transparent communication, and a commitment to corporate social responsibility. Establishing crisis management plans, monitoring social media and news outlets, and responding promptly and authentically to emerging issues are essential components of reputation risk management. Organizations must also foster a strong organizational culture that prioritizes ethical conduct and accountability to build resilience against reputation risk. Given the intangible nature of reputation and its impact on long-term success, businesses and institutions are increasingly recognizing the importance of actively identifying, assessing, and mitigating reputation risk as an integral part of their overall risk management strategies. By doing so, they aim to safeguard their brand, maintain stakeholder trust, and sustain a positive reputation in an ever-evolving and interconnected business environment (Alam 2015)

***Strategic Risk***

Strategic risk is the current and prospective impact on earnings or capital arising from adverse business decisions, improper implementation of decisions, or lack of responsiveness to industry changes. No strategic goal or objective should be planned without considering its impact on a bank's funding abilities. The bank must be able to raise money required to meet its obligations at an affordable cost. The ability to attract and maintain sufficient liquidity is often an issue at banks experiencing rapid asset growth. If management misjudges the impact on liquidity of entering a new business activity, the banks strategic risk increases. Management should carefully consider whether the funding planned to support a strategic risk initiative will increase liquidity risk to an unacceptable level. Strategic risk refers to the potential negative impacts on an organization's objectives and long-term goals resulting from ineffective strategic planning, decision-making, or execution. It encompasses uncertainties related to shifts in the business environment, changes in market dynamics, competitive pressures, technological disruptions, and other strategic challenges that may hinder the achievement of an organization's strategic objectives. This type of risk is distinct from operational or financial risks and is more focused on the broader, often external, factors that can affect an organization's overall direction and success. Strategic risk management involves anticipating and understanding these uncertainties, actively aligning the organization's strategy with its risk appetite, and implementing measures to enhance resilience and adaptability. Organizations that navigate strategic risks effectively are better positioned to seize opportunities, respond to evolving market conditions, and achieve sustained success in a dynamic and competitive landscape (Sharma , 2023).

***Credit Risk***

Credit risk is the current and prospective risk to earnings or capital arising from an obligor’s failure to meet the terms of any contract with the bank or otherwise to perform as agreed. A bank that assumes more credit risk, through asset concentrations or adoption of new underwriting standards in conjunction with untested business lines, may be increasing its liquidity risk. Credit-sensitive funds providers may worry that the bank's increased credit exposure could lead to credit problems and insufficient profits. The bank's ability to meet its obligations may eventually be compromised. Wholesale funds providers and rating agencies consider the level of past-due loans, nonperforming loans, provisions to the allowance for loan and lease losses, and loan charge-offs as indications of trends in credit quality and potential liquidity problems. If credit risk is elevated, the bank may have to pay a premium to access funds or attract depositors. If credit risk has undermined the bank's financial viability, funding may not be available at any price. Most large bank failures have involved the combined effects of severe credit and liquidity deterioration (Mishkin, 2006)

Credit risk is a prominent concern in the banking industry, representing the potential for financial loss resulting from borrowers failing to meet their debt obligations. It is a fundamental aspect of banking operations, as banks engage in lending activities to individuals, businesses, and other entities. The risk arises from the uncertainty surrounding the borrower's ability or willingness to repay the borrowed funds in accordance with the agreed-upon terms. Several factors contribute to credit risk in banking. One primary factor is the creditworthiness of the borrower. Banks assess this by evaluating the borrower's financial history, income stability, existing debt obligations, and overall financial health. A borrower with a lower creditworthiness poses a higher credit risk to the bank. Economic conditions also play a crucial role, as downturns can lead to increased defaults and financial stress for borrowers, impacting their repayment capacity. To manage credit risk effectively, banks employ a range of risk management practices. These include robust credit underwriting standards, credit scoring models, and comprehensive risk assessments. Banks set credit limits based on the borrower's creditworthiness and closely monitor borrower behavior throughout the loan term. Collateral requirements are often established to mitigate potential losses in case of default. Diversification of the loan portfolio is another key strategy to manage credit risk. By lending to a diverse range of borrowers across industries and geographies, banks can reduce the impact of adverse economic conditions on their overall portfolio. The use of risk management tools, such as credit derivatives and credit default swaps, allows banks to transfer or hedge certain aspects of credit risk. However, these tools require careful consideration to avoid creating new risks or unintended consequences. Regulatory bodies play a vital role in shaping credit risk management practices in the banking sector. They set prudential standards and guidelines to ensure that banks maintain adequate capital buffers to absorb potential losses from credit risk. Additionally, stress testing is a common practice, helping banks assess the resilience of their loan portfolios under adverse economic scenarios. Despite these risk management measures, credit risk can never be entirely eliminated. It requires ongoing diligence, adaptability to changing economic conditions, and a commitment to sound lending practices. Effectively managing credit risk is critical for maintaining the financial health of banks, protecting the interests of depositors and investors, and contributing to the overall stability of the financial system. (Faran, 2020)

***Interest Rate Risk***

Interest rate risk is the current and prospective risk to earnings or capital arising from movements in interest rates. Changes in interest rates affect income earned from assets and the cost of funding those assets. If a bank experiences a reduction in earnings from a change in market interest rates, funds providers may question the financial stability of the bank and demand a premium. They may even refuse to provide funding. Off-balance-sheet instruments that a bank uses to manage its interest rate risk may also pose liquidity risk. The cash flows of those instruments often are very sensitive to changes in rates, and, if not properly managed, can result in unexpected funding requirements or other cash outflows during periods of volatile interest rates (Paudel, 2017).

Interest rate risk is a significant concern in financial markets, particularly for banks and other financial institutions that engage in lending and investment activities. It refers to the potential adverse impact on the value of financial instruments, such as bonds and loans, due to changes in interest rates. This risk arises because the prices of fixed-income securities and the cash flows from interest-sensitive assets and liabilities are highly sensitive to fluctuations in interest rates. There are two primary types of interest rate risk: priceriskand reinvestment risk**.** Price risk occurs when the market value of existing fixed-rate securities changes in response to movements in interest rates. As rates rise, the value of existing fixed-rate bonds tends to decrease, and vice versa. Reinvestment risk, on the other hand, arises when cash flows generated by fixed-income securities, such as coupon payments or principal repayments, are reinvested at lower interest rates. In a declining rate environment, the reinvestment of cash flows at lower rates can lead to reduced overall portfolio returns. Financial institutions, especially banks, are particularly exposed to interest rate risk due to their reliance on interest income. A bank's assets, such as loans, may have fixed interest rates, while liabilities, like deposits, can have variable rates. Changes in interest rates can impact the net interest income, which is the difference between interest earned on assets and interest paid on liabilities. Managing interest rate risk is a critical aspect of prudent financial management. Financial institutions use a variety of tools and strategies to mitigate this risk. This includes asset-liability management (ALM), where institutions carefully match the maturities and interest rate characteristics of their assets and liabilities to minimize the impact of interest rate movements. Derivative instruments, such as interest rate swaps and options, are also employed to hedge against adverse rate movements. Central banks and regulatory authorities play a role in overseeing interest rate risk management, imposing regulatory requirements and stress testing to ensure that financial institutions have adequate measures in place to withstand interest rate fluctuations. Additionally, they may use monetary policy tools to influence interest rates at the macroeconomic level. Interest rate risk management requires a forward-looking approach. Institutions need to assess the potential impact of different interest rate scenarios on their portfolios and develop strategies to mitigate risks while optimizing returns. This involves ongoing monitoring of market conditions, economic indicators, and interest rate trends. Furthermore, communication and transparency are essential components of managing interest rate risk, especially when dealing with stakeholders such as investors, regulators, and clients. Clear communication about risk management strategies, potential impacts, and the institution's ability to navigate changing interest rate environments fosters trust and confidence. In summary, interest rate risk is a multifaceted challenge that financial institutions face in the course of their operations. Successful management involves a combination of effective ALM practices, derivative usage, regulatory compliance, and clear communication. As interest rates are influenced by a complex interplay of economic factors, institutions must remain vigilant and adaptable in their risk management strategies to navigate the dynamic nature of interest rate movements (Hamal,2015)

***Price Risk***

Price risk (or market risk) is the risk to earnings or capital arising from changes in the value of traded portfolios of financial instruments. Price risk may result in volatile earnings. This risk is most prevalent in large banks that actively trade financial instruments. Price risk is closely monitored by funds providers when assessing a bank's financial position and creditworthiness. If price risk and its perceived impact on earnings or capital is too great, funds providers may require the bank to pay increased rates for funds, may not be willing to invest in longer term maturities, or may not be willing to provide funding on any terms (Pandey, 2015).

Price risk, also known as market risk, is the potential for financial loss or gain resulting from fluctuations in the prices of assets or commodities. This risk is inherent in various financial instruments, including stocks, bonds, commodities, and currencies, and it arises due to changes in market conditions, supply and demand dynamics, geopolitical events, and other factors affecting pricing. In the context of securities, such as stocks and bonds, price risk is influenced by market movements and investor sentiment. Factors like economic indicators, interest rates, corporate performance, and geopolitical developments can lead to fluctuations in asset prices. Investors face the challenge of predicting and reacting to these changes to optimize their investment returns. Commodity markets are particularly susceptible to price risk. Agricultural products, energy resources, and metals are subject to variations in supply and demand, weather conditions, and global economic trends. Price risk in commodities can impact producers, consumers, and traders, influencing their profitability and operational decisions. Foreign exchange markets also present price risk for businesses engaged in international trade. Exchange rate fluctuations can affect the cost of imported goods and impact the competitiveness of exports, leading to financial implications for businesses engaged in cross-border transactions. Risk management strategies for price risk often involve the use of financial derivatives such as options, futures, and swaps. These instruments allow market participants to hedge their positions, mitigating potential losses or protecting gains in the face of adverse price movements. Additionally, diversification, thorough market analysis, and staying informed about relevant economic and geopolitical factors are integral components of managing price risk. Price risk is an unavoidable aspect of financial markets, and its effective management is crucial for investors, businesses, and financial institutions to navigate uncertainties and achieve their financial objectives. By understanding the factors influencing price movements and implementing appropriate risk mitigation strategies, market participants can enhance their ability to adapt to changing market conditions and protect their financial interests (Leanord,2021).

***Transaction Risk***

Transaction risk is the current and prospective risk to earnings and capital arising from fraud, error, and the inability to deliver products or services, maintain a competitive position and manage information. Systems that directly affect liquidity include wire transfer systems for check and securities clearing, electronic banking, and operations governing credit, debit, and smart card usage. If product lines change, management must adjust the systems to ensure that all transactions can be handled. Significant problems can develop very quickly if the systems that process transactions fail or delay execution. If customers have difficulty accessing their accounts, they may close them, which will diminish liquidity. Transaction risk should be considered in the bank's contingency planning process (Sharma , 2019)

Transactional risk refers to the potential financial uncertainties and adverse consequences associated with specific business transactions. These risks can arise from various factors and have the potential to impact the successful completion of a transaction, leading to financial loss or operational challenges for the parties involved. Transactional risk is particularly relevant in business environments where organizations engage in complex and large-scale transactions, such as mergers and acquisitions, joint ventures, or international trade deals. One significant aspect of transactional risk is the uncertainty regarding the fulfillment of contractual obligations. This may include the risk of counterparties not meeting their commitments, changes in market conditions affecting the terms of the agreement, or unforeseen events disrupting the smooth execution of the transaction. These uncertainties can lead to financial losses, increased costs, or legal disputes. Currency and exchange rate fluctuations also contribute to transactional risk, especially in international trade. Changes in currency values can impact the cost of goods, affect profit margins, and introduce an additional layer of uncertainty into financial transactions.Further more, regulatory changes and compliance issues can pose transactional risks. Alterations in laws or regulations relevant to the transaction, or unexpected compliance challenges, may result in delays, increased costs, or even the abandonment of the deal. Transactional risk management involves thorough due diligence, comprehensive risk assessments, and the implementation of risk mitigation strategies. This may include the use of contractual provisions, such as indemnities and warranties, to allocate risks among the parties. Insurance products specific to transactional risks, like representation and warranty insurance, may also be employed to provide financial protection. In summary, transactional risk encompasses the uncertainties and challenges associated with specific business dealings. It requires careful analysis, proactive risk management strategies, and effective mitigation measures to ensure the successful execution of transactions and protect the financial interests of the parties involved (Singh,2017).

**2.7 Profitability**

Profit is the excess of revenue over expenses. Profitability is the capacity to earn profit. Profitability is a very important element, which influences the overall banking activities. Commercial banks are established, like any other commercial institutions, for the sake of making profit. If there is no profit, it impacts the operation of the bank itself. Without profit, no one can expect banks to make payment of interest on depos its maintained by them. Banks incur large administrative expenses in the course of expenses, the operational expense, staff expenses, returns to stakeholders, all are ensured by profit alone. Default risk also is always high as banks deal with loans and advances. The loan loss provisioning is maintained according to the classification for the fixed assets. All such operational work is impossible without profit (Thapa, 2020).

Profit is earned by the banks largely though financing activities, in the form of loans and advances to the customers, placements in other banks, investment in government securities etc. Revenue is earned though non – exposure functions by way of commissions and fees, but its contribution in the overall profit remains in the lower side. Hence, banks earn major portion of their income through funding money, which it acquires, by issuing shares, debentures etc. Without profit, bank would not be in a position to meet all the expenses as mentioned above. Hence, profit is the main factor for the existence of a bank (Singh, 2017).

Profitability is the measurement of efficiency. Profitability also indicates public acceptance of the product and shows that the firm can produce competitively. Moreover, profit provides the money for repaying the debt incurred to finance the project and the resources for the internal financing expansion. The profitability of a firm can be measured by its profitability ratios. In other words, the profitability ratios are designed to provide answers to questions such as (i) what rate of does it earn? (ii) What is the rate of profit for various division and segments of the firm? (iii) What is the earning per share? (iv) What amount was paid in dividends? (v) What is the rate of return to equity-holders? And so on (Thapa,2020).

Profitability ratio indicates the degree of success in achieving desired profit. It furnishes answers to how efficiently the bank is being managed. Although profitability ratio mainly studies the earning power of the bank, it depicts almost entire performance of the bank. 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 investment 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 (Cheney & Mosses, 2011).

Profit is necessary to plough back in the investments like innovations, business expansion and self-financing. It also attracts investors for further investment. Shareholders provide equity capital to the business because they expect the entity will provide return to their funds at least equal or above market rate of return. To maintain the shareholders expectation, it is most important that a firm should earn sufficient profit so that it can distribute dividends. 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 profits. 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 (Bhattacharya, 2017).

Banks can either invest their funds in securities or advance loans to productive sectors to generate profit. The earning capacity of securities and share depends upon the interest rate, the dividend rate, and the tax benefits they carry. It is largely, the government securities that carry the exemption of taxes. The bank should invest more in such tax-free securities. But banks should not invest in the share of such new companies. New companies also carry tax exemption. This is because shares of new companies are not considered as safe investments. In loan sectors, bank should grant loans to those sectors generating high rate of return. Still they cannot neglect the risk and liquidity factors. Higher return involves higher risk, thus, there should be a proper check and balance between risk and return for investment. Bank should select the loan proposal bearing high return with proportionately low risk (Crossee, 2018).

***Measuring of Bank Profitability***

Bank profitability is defined as the net after-tax income or net earnings of a bank (usually divided by a measure of bank size). There are several ratios that are typically used to measure the profitability of banks. The two most often used are the rate of return on assets (ROA) and the rate of return on equity (ROE). In general, a number of financial ratios are usually used to assess the performance of banks. The primary method of evaluating internal performance is by analyzing accounting data. Financial ratios usually provide a broader understanding of the bank’s financial condition since they are constructed from accounting data contained on the bank’s balance sheet and financial statement. In general, the findings of conventional banking research have indicated that internal and external determinants of bank profitability are important, and contribute significantly towards a bank’s profitability. Therefore, re-examination is needed to evaluate their suitability and applicability in a Nepalese banking context since both banking systems have different financial concept and operations. This study intends to meet this objective and to determine the internal and external variables that control Nepalese bank’s profitability (Gupta, 2014).

Measuring bank profitability involves a comprehensive assessment of various financial metrics and performance indicators to gauge the effectiveness of a bank in generating earnings relative to its operational and capital costs. Several key measures are commonly used to evaluate the profitability of a bank, providing insights into its financial health and efficiency.

* **Net Interest Margin (NIM):** Net Interest Margin is a critical indicator of a bank's profitability and efficiency in managing its interest-earning assets and interest-bearing liabilities. It represents the difference between the interest income earned on loans and investments and the interest expenses paid on deposits and borrowings. A higher NIM suggests that the bank is earning more from its core lending and investment activities.
* **Return on Assets (ROA):** Return on Assets is a profitability ratio that assesses a bank's ability to generate earnings from its total assets. It is calculated by dividing net income by average total assets. ROA provides insights into how efficiently a bank utilizes its assets to generate profits. A higher ROA indicates better profitability relative to the size of the asset base.
* **Return on Equity (ROE):** Return on Equity measures a bank's profitability in relation to shareholders' equity. It is calculated by dividing net income by average shareholders' equity. ROE reflects the bank's effectiveness in generating returns for its equity investors. A higher ROE suggests stronger profitability and efficient capital utilization.
* **Efficiency Ratio:** The Efficiency Ratio assesses the cost-effectiveness of a bank's operations by comparing operating expenses to its revenue. It is calculated by dividing operating expenses by total revenue. A lower efficiency ratio indicates better cost management and higher profitability.
* **Non-Interest Income Ratio:** This ratio evaluates the contribution of non-interest income, such as fees and commissions, to the overall revenue of the bank. A higher non-interest income ratio diversifies revenue sources and can contribute to increased profitability.
* **Provision for Loan Losses:** Banks set aside provisions for potential loan losses to account for credit risk. The level of provisions impacts the overall profitability, as excessive provisions may reduce net income, while insufficient provisions can lead to future losses.
* **Cost of Funds:** The Cost of Funds measures the expense a bank incurs to acquire funds, primarily through deposits and borrowings. A lower cost of funds indicates efficient funding management and contributes to higher profitability.
* **Capital Adequacy:** While not a direct measure of profitability, capital adequacy is crucial for a bank's long-term viability. Adequate capitalization provides a buffer against unexpected losses and contributes to sustained profitability by maintaining investor and regulatory confidence.

In summary, measuring bank profitability involves a multifaceted analysis of financial ratios and indicators that collectively provide a comprehensive view of a bank's performance. Evaluating these metrics enables stakeholders, including investors and regulatory authorities, to assess the bank's financial strength, risk management practices, and overall profitability in the dynamic and competitive banking industry (Kobika,2018).

**2.8 Need for Profit**

Profit is a must for the following reasons:

***Measurement of Performance***

Profit is only one factor to measure the management efficiency, productivity and performance. Profit is the most widely used yardstick to see what really is to be achieved and where the firm is to go in the future.

***Premium to Cover Costs of Staying in Business***

Business environment is full of risks and uncertainties. To grasp the globally changing technologies, to stay in the market uncertainties, to replace and acquire assets and enhancing business scope etc. require a profit margin.

***Ensuring Supply of Future Capital***

Profit is necessary to plough back in the investments like innovations, business expansion and self-financing. It also attracts investors for further investment.

***Return to the Investors***

Shareholders provide equity capital to the business because they expect the entity will provide return to their funds at least equal or above market rate of return. To maintain the shareholders expectation, it is most important that a firm should earn sufficient profit so that it can distribute dividends.

**Financial Sustainability:**

Profitability is essential for the financial sustainability of banks. Generating consistent profits allows banks to cover operating expenses, invest in technology and infrastructure, and maintain competitiveness in the market.

**Risk Mitigation:**

Profits act as a cushion against potential losses and risks. They contribute to the creation of reserves, such as loan loss provisions, which serve as a buffer against defaults and unexpected events, ensuring the bank's resilience in challenging economic conditions.

**Shareholder Value:**

Banks are often publicly traded entities, and profitability is crucial for delivering returns to shareholders. Shareholders invest in banks with the expectation of earning dividends and capital appreciation, making profitability a key driver of shareholder value.

**Capital Adequacy:**

Profitability is directly linked to a bank's capital adequacy. Adequate profits contribute to the accumulation of capital, which, in turn, enhances the bank's ability to absorb losses, meet regulatory capital requirements, and support continued growth.

**Investment in Technology and Innovation:**

The banking industry is evolving rapidly with technological advancements. Profits enable banks to invest in cutting-edge technology and innovation, enhancing their operational efficiency, customer service, and competitiveness in the digital age.

**Credit Availability:**

Banks play a crucial role in facilitating economic activities by providing loans and credit. Profits enable banks to extend credit to businesses and individuals, fostering economic growth and development.

**Employee Compensation and Development:**

Profits allow banks to attract and retain skilled professionals through competitive compensation packages. Additionally, they support employee training and development programs, ensuring a skilled workforce capable of navigating complex financial markets.

**Customer Services and Experience:**

Profitability enables banks to invest in improving customer services and experience. This includes the development of user-friendly online platforms, innovative financial products, and personalized services, which are essential for customer satisfaction and loyalty.

**Regulatory Compliance:**

Banks operate in a highly regulated environment, and compliance with regulatory standards is paramount. Profits provide the necessary resources to meet regulatory requirements, implement risk management practices, and maintain transparency and accountability.

**Community Impact:**

Profitable banks contribute positively to the communities they serve. Through corporate social responsibility initiatives and community development projects, banks can make a meaningful impact, addressing social and environmental challenges.

In summary, the need for profit in banking is multifaceted, encompassing financial stability, risk management, shareholder value, technological advancement, and broader contributions to the economy and society. A profitable banking sector is essential for fostering economic growth, supporting communities, and fulfilling the diverse needs of stakeholders.

Top of Form

Bottom of Form

**2.9 The Trade-Off Between Liquidity and Profitability**

The importance of the 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 forge 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. Liquidity risk is the risk that the bank will not have the funds it needs, at reasonable cost, to meet excess withdrawals or to make loans. The banker, on the other hand, generally determines loanable funds from the available funds after adjusting statutory and legal reserves. Since majority of funds collected by banks are almost cost sensitive funds, it cannot hold such funds for the long period without any earnings. Therefore, the bank has to take immediate action against such funds. However, the bank cannot overlook the transaction that can occur in its liability, i.e., withdrawals more than expectation or assumption (Thapa, 2020).

The management of such asset and liability in a efficient way is a challenging part for the bank managers. The bank manager cannot equalize the demands for funds and supply of funds during the market movement. Hence, the management of funds with maximum earnings with adequate cash for managing cash demands is the question to be answered by the banker in a present competitive environment. In spite of innovation of several strategies to mathematical modalities, there is no specific techniques derived yet that can handle the liquidity easily along with optimum profitability. Therefore, the trade off point is that point when the bank will be earning at optimum point and the supply of funds is exactly to the demands for funds which is impossible in the present industrial trend. Basically, the bank should be aware of the excess supply of funds and excess demands of funds in order to move nearest towards the accuracy of trade off between the liquidity and profitability. The banks should not maintain idle funds to meet cash obligations while cannot extend investment without considering the demand for cash. The synchronization of these two variables maximizing the profitability and defaulting the cash obligation should be the main strategy of bank. In order to cope up with this problems, small banks generally rely on asset management while large banks rely liability management, Both the strategies must be aware of cost of funds- the cost of disposing in the previous strategy whereas the cost of funds in the latter strategy.

Similarly, the bank cannot neglect other risks as well such as market risk and credit risk in relation with the tradeoff between the liquidity and profitability. The tackling of both risks is always influenced by the size of the banks. Market risk can be managed through hedging if available such as position in financial futures, options, or swaps. Bank regulations also impose some degree of diversification by limiting maximum loan to any one borrower or under a particular head that also assist in co-coordinating the tradeoff between the profitability and liquidity of a bank. The trade-off between liquidity and profitability is a fundamental consideration for businesses and financial institutions. Striking the right balance between these two objectives is crucial for the overall financial health and sustainability of an entity. On one hand, maintaining high liquidity ensures that an organization has readily available cash and liquid assets to meet its short-term obligations, seize investment opportunities, and withstand unexpected financial shocks. On the other hand, pursuing profitability involves deploying funds into income-generating activities, which may involve longer-term commitments and, in turn, tie up capital.

A high level of liquidity comes with a cost, as holding excess cash or easily marketable securities may limit the returns on those assets. It can be seen as an opportunity cost, particularly in environments where interest rates are low. Conversely, aggressively pursuing profitability by investing in higher-yielding but less liquid assets can expose an organization to liquidity risk, especially if market conditions change rapidly or unexpected funding needs arise.

The challenge lies in finding the optimal balance that aligns with the organization's risk tolerance, business model, and strategic objectives. Too much focus on liquidity may lead to missed investment opportunities and suboptimal returns, while a strong emphasis on profitability might expose the organization to liquidity challenges and potential financial distress.

Effective liquidity and profitability management involves a dynamic and adaptive approach. It requires regular assessment of market conditions, stress testing, and scenario analysis to ensure that the organization can navigate different economic environments. Additionally, employing robust risk management practices, diversifying funding sources, and maintaining a sufficient liquid asset buffer are strategies that can contribute to managing the trade-off between liquidity and profitability.

Ultimately, the trade-off is not a one-size-fits-all concept; it varies based on factors such as the industry, regulatory environment, and the organization's specific circumstances. Striking the right balance requires a nuanced understanding of the risks and opportunities inherent in both liquidity and profitability, with the goal of achieving financial resilience and sustained value creation (Shrestha,2016)

***Profitability of Commercial Banks***

Unlike in any other organizations, there are various forms of stakeholders in the Bank. So, the bank also has to make the best efforts to meet the interests of the stakeholders. The majority of the needs of the stakeholders are related with the profitability of the banks. For example, in case the bank earns profits, the investors get dividends, employees get bonus, government gets benefits in forms of taxes etc. Thus, the foremost objective of the banks is the profit maximization. The major source of funds of the bank is the public deposit. The bank in most of the cases has to pay certain rate of interest to the public in their deposit. Thus, the banks have to mobilize these funds in the profitable sectors, which derive maximum return on the assets. Hence, the investment or granting of loan and advances by them are highly influenced by profit margin. The profit of the bank is dependent on the interest rate, volume of loan and time period of loan. However, the bank at the same time has to ensure that their investment is safe from default. Although the banks have to invest in order to earn profits. But, at the same time have to set aside some of its fund in order to maintain their liquidity. As the major source of bank’s fund is public deposits, the bank has to be able to allow the depositors to withdraw their deposit in terms of need. Thus, the bank cannot invest all its funds in the profitable sectors. Thus, a successful bank is one who invests most of its funds in different earning asset standing safely from the problem of liquidity i.e. keeping cash reserves to meet the daily requirements of the depositors. Lower the liquidity, higher the profitability and higher the liquidity, lower the profitability. So, profitability and liquidity maintain a highly negative co-relation. Since both are equally important, banks cannot afford to ignore any of them. So, the management has to make a crucial decision regarding a mixture of liquidity and profitability

***Theories of Profit***

Economists have propounded several theories of profits to explain profits of entrepreneurs. Most of the theories are centered on the controversy about the role of the entrepreneur. In the following section some of the fundamental theories of profit has reviewed in brief.

***Theory of Risk and Uncertainty Bearing***

It was F.B. Hawley who first developed the theory of risk bearing and concluded that profit is a reward of the entrepreneurs for bearing risks. But, the theory was picked up by Professor F.H. Knight who divided risks into insurable and non-insurable risks and concluded that profit is a reward for bearing non-insurable risks and uncertainties. Thus according to Knight, profit is a reward to the entrepreneur for his non-transferable function of bearing non- insurable risk and uncertainties (Pandey, 2015).

***Dynamic Theory of Profit***

This theory was propounded by H.K Closse. According to this theory, ‘dynamic changes’ in the economy are the basic causes of emergence of profits. There is no profit in a static economy as no changes take place. In a dynamic economy there are constant changes in population, capital, methods of production and industrial set up. These changes multiply wants of consumers, which earn profits to the entrepreneur.

***Innovation Theory of Profits***

Joseph Schumpeter singled out ‘innovation’ form the dynamic theory of profits and developed the innovation theory of profits. According to Schumpeter changes take place in a dynamic economy and innovation in the changing world gives rise to profits. In his vies, the entrepreneur plays an important role of introducing innovation in an economy and profits are the rewards for his role as an innovator. The innovation could be changes or techniques that reduces cost of production or increases demand for the product.

**2.10 Review of Empirical Studies**

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

*Table 2.1*

*Summary of Review*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Articles** | **Objectives** | **Methodology** | **Findings** |
| Sharma, (2023)  Day, (2022) | A study on Liquidity and Profitability of Himalayan Bank Limited and Nabil Bank Limited  Profitability of Commercial Banks in Bangladesh | To examine the liquidity position of sample banks.  To assess the relationship between liquidity and profitability position of sample banks.  The study is based on cross-section data of annual financial statements | Descriptive Research Design has been used or study.  Descriptive Research Design has been used or study. | The findings of this approach are important in the context recent banking and financial crisis, the methodology can be used as a pedagogical.  The Correlation matrix shows that profitability, asset quality, operating performance, bank size and liquidity position are related positively but profitability and capital adequacy are related negatively. |
| Leonard,(2021) | Liquidity RiskManagement and Self Paced A/L Management | To analyze the liquidity risk management of A/L management. | The study researcher has used various financial and statistical tools. | The quantity of liquidity that you need is, mainly, the sum of current liabilities you may lose plus new assets you have to fund. Liquidity Risk, the amount of liquidity you might need, is highly scenario specific. |
| Faran, (2020) | TheFinancial Statement Analysis of Commercial Banks in Bahrain: | The wellbeing of an economy can be examined by financial performance of the bank | Descriptive Research Design | The quantity of liquidity that you need is, mainly, the sum of current liabilities you may lose plus new assets you have to fund. Liquidity Risk, the amount of liquidity you might need, is highly scenario specific. |
| Ravicha ndram and Ahmad (2019) | Performance Analysis of UAE Banks-An Exploratory Study | Ratio analysis has been performed and the UAE based banks are ranked as per their performance. | The study researcher has used various financial and statistical tools. | The findings of this approach are important in the context recent banking and financial crisis, the methodology can be used as a pedagogical. |
| Elshaday Kenennis and Mohammed, (2018) | Determinant of financial performance of commercial banks in Ethiopia: | Examining the determinants of the financial performance of private commercial banks in Ethiopia. | The data for this study is obtained from annual reports of the banks, minutes and the national bank report. | Return on Asset and Return on Equity are the selected dependent variables while non-performing loan, capital adequacy ratio, bank size, leverage ratio, credit interest income ratio, loan loss provision ratio independent variables. |
| Kobika, (2017) | A Comparative study of financial performance of banking sector in Sri Lanka – An application of CAMEL rating system. | The Purpose of this study is to compare the financial performance of state and private sector banks. | The focus of this study is to compare the financial performance of state and private commercial banks using the Capital Adequacy, Assets Quality, and Management. | In this study CAMEL rating system used to compare the financial performance of banks, it is one of the quantitative techniques and it is widely used in the current world. State banks should focus to increase their financial performance to compete and survive successfully in the current world and also private commercial banks try to achieve their target financial performance for their long survival. |
| Sayed and Rizwan,(2016) | Analysis of Financial Performance of Private Banks in Pakistan, | The Purpose of this study is to compare the financial performance of state and private sector banks. | The sample size consists of top ten Private commercials banks of Pakistan. | The banking sector of Pakistan has faced lot of problems like, lack of resources, political uncertainty, and lack of skilled human resource and socioeconomic catastrophe, which affected the efficient working of banking sector. |
| Karim and Alam, (2016) | Financial Performance of Private Commercial Banks in Bangladesh: Ratio Analysis | The Purpose of this study is to compare the financial performance of state and private sector banks. | Descriptive Research Design | The selected banks from their respective audited annual reports (secondary data) were employed in multiple regression analysis to apprehend the impact of bank size, credit risk, operational efficiency and asset management on financial performance. |
| Davis,(2015) | Liquidity Management in Banking Crisis | To analyze the liquidity crises of commercial banks. | Tthe study researcher has used various financial and statistical tools. | . Liquidity risks are endemic to banking given the maturity transformation they undertake. First line of defense should be appropriate liquidity policy an asset & liability side, supported by adequate capital & firm supervision |
| Balacha, (2014) | Financial Analysis of “Corporation Bank” | The main study is to find out the financial performance of the bank. | This study has used both financial as well as statistical tools for the purpose. | Financial analysis of an organization provides the clear view of its performance parameters, present as well as past performance. This analysis is important for the management and also for outsiders dealing with organization |
| Pintoo,(2013) | An Evaluation of Financial performance of commercial banks, | This study evaluates the financial performance of commercial banks. | Descriptive Research Design | . The results of the study indicate that the profitability has an impact on capital adequacy and financial leverage, whereas the study did not ratify the relationship between the profitability and efficiency of the banks. |

Sharma (2023), conducted a study on Liquidity and Profitability of Himalayan Bank Limited and Nabil Bank Limited. To examine the financial position of sample banks To analyze liquidity and profitability position of sample banks. To analyze the financial strengths and weakness of the concerned banks and offer suggestion for the improvement in performance. During his study, he had basically used the secondary data and mainly financial tools are embodied for analyzing comparative study on financial performance of Himalayan Bank Limited and Nabil Bank Limited. Both of the banks could not maintain the conventional standard of 2:1. However, the average of the ratio appeared higher in NABIL, which signifies that NABIL is more capable of meeting immediate liabilities in contrasts to SANIMA. The review of the above mentioned research have definitely enrich many vision to elaborate analysis to come to the meaningful conclusion in realistic term and few key suggestion that help in improvement of commercial banks.

Dey (2022) the attempteditwas in an attempt to examine the financial performance of private listed commercial banks in Bangladesh in terms of profitability. The study is based on cross-section data of annual financial statements of 15 listed commercial banks for the period 2008-2019. Five determinants have been chosen for this study. The Correlation matrix shows that profitability, asset quality, operating performance, bank size and liquidity position are related positively but profitability and capital adequacy were related negatively. Step-wise regression method is followed to show the cause-effect relationship of the variables. This method identifies three models and automatically eliminates the insignificant variables following three steps and finally select model 3.This model is the best combination of the variables under analysis that most describes the profitability. It considers asset quality, operating performance and bank sizes significant determinants of profitability. On the other hand, liquidity position has positive but insignificant effect on profitability.

Leonard (2021) the attempted that undoubtedly suggested that the quantity of liquidity you have or can get must be related to the quantity of liquidity that you think you may need. The quantity of liquidity that you need is, mainly, the sum of current liabilities you may lose plus new assets you have to fund. Liquidity Risk, the amount of liquidity you might need, is highly scenario specific. Liquidity cannot be intelligently measured without using scenario analysis. Sources available in some scenarios are less available or unavailable in others.

Faran (2020) the attempted thatfinancial sector of kingdom of Bahrain intensely supports the growth of the economy. It contributed 27% of Bahrain GDP in 2020.The wellbeing of an economy can be examined by financial performance of the bank. Financial performance was the result of its policies and operations in monetary terms. The aim of the study is to examine the financial performance of the banks in Kingdom of Bahrain- A Case study approach. For the evaluation of the performance of bank, secondary data was collected from the annual audited report of the bank for the period of 2013 to 2021. It focuses on two important indicators the profitability and liquidity. As the shareholders are in need to maximize their return on investment and the depositors need to get back their savings according to their needs focuses on liquidity. To measure the profitability, return on asset and return on equity is the variable and loan to deposit and loan to asset to evaluate the liquidity. For this ratio analysis is being used to measure as it is evident from the previous studies. The study used percentage analysis, descriptive statistics and correlation the result of the analysis portrayed that return on asset and return on equity are positively correlated and negatively correlated with loan to asset.

Ravichandran and Ahmad (2019) the attempted the propose an alternative empirical technique for the performance of UAE top 5 banks (initially) in comparison with global banks. The comparative ratio analysis has been performed and the UAE based banks are ranked as per their performance. The findings of this approach are important in the context recent banking and financial crisis, the methodology can be used as a pedagogical benchmarking exercise in or outside the class room at undergraduate and graduate level and can also serve as an important input for performance analysis research studies.

Elshaday, Kenenisa and Mohammed (2018) the attempted examining the determinants of the financial performance of private commercial banks in Ethiopia. The study uses secondary data for eight private banks which are in the industry for more than ten years. These banks will chosen from sixteen private commercial banks which are currently functional in Ethiopia banking industry. The data for this study is obtained from annual reports of the banks, minutes and the national bank report. Correlation and multiple linear regressions of panel data for the eight banks for the years 2007 to 2016 is analyzed using random effect model. EViews 9 software was used for analyzing the data. Return on Asset and Return on Equity are the selected dependent variables while non-performing loan, capital adequacy ratio, bank size, leverage ratio, credit interest income ratio, loan loss provision ratio and operation cost efficiency were the independent variables. Results show that Capital Adequacy Ratio (CAR), Credit Interest Income (CIR) and Size of the bank (SIZE) have positive and statistically significant effect on financial performance. Non-performing Loans (NPLs), Loan Loss Provision (LLP), Leverage Ratio (LR) and Operational Cost Efficiency (OCE) have negative and statistically significant effect on banks’ financial performance. The study suggests that Ethiopian commercial banks are advised to manage their loan loss, be cost efficient, and fix their leverage ratio at maximum level to enhance their profitability.

Kobika (2017) the attempted the Purpose of this study is to compare the financial performance of state and private sector banks. The banking sector of developing countries is different from the developed countries. The banking sector of Sri Lanka plays a vital role in the Sri Lankan Economy specially commercial banks are playing a major role in the banking sector of Sri Lanka. There are two types of commercials banks in Sri Lanka such as state and private commercial banks here the private commercial banks can be divided into domestic and foreign private commercial banks. The focus of this study is to compare the financial performance of state and private commercial banks using the Capital Adequacy, Assets Quality, Management Soundness, Earnings, Liquidity (CAMEL) rating system in Sri Lanka 2013-2017. Many studies are conducted in different countries to compare the financial performance of banking sector with the use of various statistical methods. In this study CAMEL rating system used to compare the financial performance of banks, it is one of the quantitative techniques and it is widely used in the current world. State banks should focus to increase their financial performance to compete and survive successfully in the current world and also private commercial banks try to achieve their target financial performance for their long survival.

Syed and Rizwan (2016) the attempted the sample size consists of top ten Private commercials banks of Pakistan. We used Regression analysis and correlation technique in order to address the issue. Bank size and Operational Efficiency is negatively related with ROA and positive relationship was found with Assets management ratio. While, Bank size is positively related with Interest Income and Asset Management and Operational Efficiency is negatively related with Interest Income. Financial system, sociable investor’s treatment, and optimal utilization of resources. Banking sector in any economy is performing the major role in these regards. Banking sector plays a significant role in channeling funds to industries and contributing towards economic and financial growth and stability. A well-established banking sector can absorb major financial crisis in the economy and can provide a plat form for strengthening the economic system of the country. Pakistani banking sector has undergone through severe changes since its independence. Initially the banking sector of Pakistan has faced lot of problems like, lack of resources, political uncertainty, and lack of skilled human resource and socioeconomic catastrophe, which affected the efficient working of banking sector. But State Bank of Pakistan took initiatives by introducing SBP Act, 1956 to promote private sector banks, followed by privatization of 1992 motivated local and foreign investors in setting private sector banks and financial institutions. Currently, Pakistani banking sector consist of 44 banks with 9,399 branches and Rs. 11,778.6 billion assets, including 5 public sector banks, 23 domestic private banks, 12 foreign private banks, 4 specialized banks. Today, almost 80 percent of the banking assets held by the private sector banks.

Karim and Alam(2015) the attempted banks play an important role in the economic development of every nation. They have control over a large part of the supply of money in circulation. Since, the appearance of private commercial banks was the larger portion of the banking sector in Bangladesh, thus this study is intended to measure the performance of selected private sector banks (five), listed on both the Dhaka Stock Exchange and Chittagong Stock Exchange, in Bangladesh through extensive use of financial ratios that mainly indicate the adequacy of the risk based capital, credit growth, credit concentration, non-performing loan position, liquidity gap analysis, liquidity ratio, return on assets (ROA), return on equity (ROE), net interest margin (NIM), etc. Three indicators namely, Internal-based performance measured by Return on Assets, Market-based performance measured by Tobin’s Q model (Price/Book ratio) and Economic-based performance measured by Economic Value add has been used to measure financial performance of the selected banks. Annual time series data from 2008-2012 of the selected banks from their respective audited annual reports (secondary data) were employed in multiple regression analysis to apprehend the impact of bank size, credit risk, operational efficiency and asset management on financial performance measured by the three indicators, and to create a good-fit regression model to predict the future financial performance of these banks. Statistically, the hypothesis was claiming that Bank size, credit risk, operational efficiency and asset management have significant impact on financial performance of Bangladeshi commercial banks.

Davis (2014) had stated that liquidity risk is that asset owner unable to recover full value of asset when sale desired. Bank liquidity is the ability of institution to meet obligations under normal business conditions. It had also pointed out the liability management diversification to reduce liquidity risk- CDs, Eurodollars, securitization, subordinated debt as well as interbank time & demand deposits. Lender of last resort- institution such as the central bank, which has the ability to produce at its discretion currency or 'high powered money' to support institution facing liquidity difficulties, to create enough base money to offset public desire to switch into money during a crisis & to delay legal insolvency of an institution. His conclusion was liquidity risks were endemic to banking given the maturity transformation they undertake. First line of defense should be appropriate liquidity policy an asset & liability side, supported by adequate capital & firm supervision.

Balachandran (2013) riveted that thefinancial analysis of an organization provides the clear view of its performance parameters, present as well as past performance. This analysis was important for the management and also for outsiders dealing with organization as this shows the way of functioning and the direction in which an organization is moving. It is helpful in assessing the corporate excellence, judging the credit worthiness, processing bond rating and assessing market risk. The main study is to find out the financial performance of the bank. The ratio analysis and interpretation can provide valuable insights into a bank’s performance.

Pintoo (2011) riveted that the important players in the financial system in any economy. This study evaluated the financial performance of commercial banks in Bahrain. This study is based on eight commercial banks for the period from 2005 to 2010. The data used in this study are obtained from published annual reports and websites of the respective banks, investor's guide, and newspaper, newsletters of the banks and from Central Bank of Bahrain website. We used regression, correlation analysis & t-tests to determine the relationship between different financial parameters. The results of the study indicate that the profitability has an impact on capital adequacy and financial leverage, whereas the study did not ratify the relationship between the profitability and efficiency of the banks. This study also reveals that enforcement of higher capital adequacy ratio will adversely affects the profitability of the banks. The impact of financial and oil crisis might have influenced the financial leverage of the banks there by resulted in an adverse effect on the profitability of the banks.

Britto and Palamalai (2012) the attempted to evaluate the financial performance of selected Indian commercial banks for the period from 2005/06 to 2008/09. The study comprises 16 commercial banks, 11 representing public sector and 5 from private sector, and the financial performance of these banks are analysed using the financial ratios. The study shows that the financial performance of private sector banks was relatively better than the public sector banks throughout the study period. Besides, the study examines the impact of liquidity, solvency and efficiency on the profitability of the selected Indian commercial banks by employing the panel data estimations, *viz.* the Fixed Effect and Random Effect models. The empirical results from the panel data estimations revealed that the liquidity ratio and solvency ratio, and the turnover ratio and solvency ratio are found to have positive and significant impact on the profitability of selected public sector and private sector banks, respectively, bearing testimony to the fact that profitability is a function of those ratios.

*Table 2.2*

*Review of Related Thesis*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Thesis** | **Objectives** | **Methodology** | **Findings** |
| Sharma 2020 | Liquidity and Profitability of Himalayan Bank Limited and Nabil Bank Limited | To examine the Liquidity and Profitability analysis of HBL, NABIL. | To achieve the objectives and researcher has used various financial and statistical tools. | The review of the above mentioned research have definitely enrich many vision to elaborate analysis to come to the meaningful conclusion in realistic term and few key suggestion that help in improvement of banks. |
| Adhikari 2019 | Liquidity and Profitability of NBBL and other Joint Venture Banks | To study the Liquidity and Profitability of NBBL and other Joint Venture Banks | To fulfill the objectives of the study researcher has used various financial and statistical tools. | NBBL has not maintained adequate capital in relation to the nature and condition of its assets, its deposit liabilities and other corporate liabilities. Deposit collection position, lending position, investment position and net profit position. |
| Tamang 2018 | Financial Performance Analysis of Commercial Banks of Nepal with reference to NIMB and NABIL | To examine the financial performance analysis of commercial banks. | The Author basically used the secondary data and financial tools are embodied for financial performance. | The profitability ratio of NABIL is better than the NIMB in terms of ROA. |
| Dhungana 2017 | Financial Position of Commercial Banks of Nepal | To examine the Financial Position of Commercial Banks. | In this study different financial and statistically tools has been used like mean, SD, CV, correlation and regression analysis. | There is positive correlation between change in deposit and change in total liquid fund of the banks and so on. |
| Shrestha 2016 | Performance Measurement of Joint Venture Banks in Nepal | To examine the financial performance analysis of commercial banks. | This study has used financial and statistical tools like Mean, SD, CV, R, R2 and regression analysis. | SCB has the highest mean current ratio whereas, NABIL has the poorest. NABIL has maintained highest cash and bank balance to total deposit ratio among all the banks under study |
| Hamal 2015 | Financial Performance Analysis of HBL and NIMB. | To analyze the financial performance of HBL and NIMB. | Various financial and statistical tools are used. | The analysis of leverage ratio shows that HBL has higher ability in utilizing debts than NIMB in terms of total debt to total equity, total assets and total capital ratio. |

Sharma (2020) riveted thatthe during his study, he had basically used the secondary data and mainly financial tools are embodied for analyzing comparative study on financial performance of Himalayan Bank Limited and Nabil Bank Limited. The findings of the researcher were as follows. Both of the banks could not maintain the conventional standard of 2:1. However, the average of the ratio appeared higher in NABIL, which signifies that NABIL is more capable of meeting immediate liabilities in contrasts to HBL. Net worth to total credit ratio appeared much higher in HBL than NABIL, which signifies that HBL, has used significantly larger extent of net worth for credit creation but ratio widely dispersed in HBL as compared to that in NABIL. The review of the above mentioned research have definitely enrich many vision to elaborate analysis to come to the meaningful conclusion in realistic term and few key suggestion that help in improvement of commercial banks.

Adhikari (2019) riveted thatthe liquidity position of NBBL is not better than that of HBL and NSBL. NBBL is in better position regarding its on balance sheet activities. The ratios of NBBL are highly variable which reveals NBBL has not followed stable policy. NBBL is not better regarding off-balance sheet transactions. The ratios of NBBL are highly variable also. The position of NBBL is moderate in OBS transaction. The profitability position of NBBL is comparatively not better than that of HBL but better than that of NSBL. The credit risk ratios and interest rate risk ratios of NBBL is higher than that of HBL and NSBL. NBBL has not maintained adequate capital in relation to the nature and condition of its assets, its deposit liabilities and other corporate liabilities. Deposit collection position, lending position, investment position and net profit position of NBBL is not better comparison to HBL than NSBL.

Tamang (2018) riveted thatused in this thesis financial and statistical tools. In the contest liquidity ratio, Asset Management Ratio, Profitability Ratio, Risk Ratio and Growth Ratio used in financial tools and average, Standard Deviation, Coefficient of Variation etc. The liquidity position of NIMB is better than that of NABIL. NABIL has utilized more debt than NIMB. The profitability ratio of NABIL is better than the of NIMB in terms of ROA. The EPS and DPS of NABIL are better than that of NIMB. There is positive correlation between total debt and net profit for both the banks etc.

Dhungana (2017) conducted a study was also used financial tools and statistical tools which have liquidity ratio, Asset Management Ratio, liquidity risk ratio and liquidity turnover ratio as well as mean, median, C.V, P.E ratio. The banks under study are maintaining very high level of liquidity than the rate imposed by the NRB. There is positive correlation between change in deposit and change in total liquid fund of the banks and so on. That performance of stated banks is quite satisfactory and they should find new investment sector for long lasting profitability.

Shrestha (2016) riveted thatthe also used financial tools and statistical tools which have credit ratio, investment to total deposit ratio, credit turnover ratio as well as mean, and coefficient variation. SCB has the highest mean current ratio whereas, NABIL has the poorest. NABIL has maintained highest cash and bank balance to total deposit ratio among all the banks under study. Lastly, he strongly recommended all the banks to invest its more funds in shares and debentures.

Hamal (2015) riveted thatthe study has used in this thesis financial and statistical tools. In the contest liquidity ratio, Asset Management Ratio, Profitability Ratio, Risk Ratio and Growth Ratio used in financial tools and average, Standard Deviation, Coefficient of Variation in statistical tools. The analysis of leverage ratio shows that HBL has higher ability in utilizing debts than NIMB in terms of total debt to total equity, total assets and total capital ratio. The correlation co-efficient showed the positive relationship between total debt and net profit of HBL and NIMB, etc. Both the banks should maintain standard current ratio. The banks should enhance their capacity by effective organization structure & controlling capital structure.

**2.11 Conceptual Framework**

Depended and in depended variables to study impact of financial statement analysis of public and private sector commercial banks have been presented in following theoretical framework. The conceptual framework is developed from the theoretical and literature review and presented in the following diagram.

Independent Variable Dependent Variables

Current Ratio

Cash and Bank Balance

Investment on Securities to Total Assets

NRB to Total Assets

ROA

ROE

NIM

*Figure 2.1:* Conceptual Framework

**Independent Variable**

**a. Current Ratio**

It measures the firm’s ability to meet its short-term obligation as they fall due. Current ratio of 2:1 or more is generally considered satisfactory, which was not a strict rule.

**b. Cash and Bank Balance**

Cash refers to physical currency and petty cash on hand for immediate transactions. Bank balance encompasses funds in a company's bank accounts, including both current and savings accounts. Together, they represent the liquidity and immediate financial resources of a business.

**c. Investment on Securities to Total Assets**

The ratio of "Investment on Securities to Total Assets" in banking reflects the proportion of a bank's assets allocated to securities, such as bonds or stocks. It provides insight into the bank's investment strategy and risk management. A higher ratio suggests a greater reliance on securities for investment, while a lower ratio indicates a more conservative approach with a larger emphasis on other types of assets. Monitoring this ratio helps assess the bank's risk exposure and diversification of its asset portfolio.

**d. NRB to Total Assets**

The NRB to Total Assets ratio in banking is a measure of the proportion of a bank's assets held in the form of reserves with the central bank. This ratio indicates the extent to which a bank relies on NRB reserves for liquidity and regulatory compliance. A higher ratio suggests a larger portion of assets held in central bank reserves, which can impact the bank's ability to generate income. Monitoring this ratio provides insights into a bank's liquidity management and its compliance with regulatory requirements.

**Dependent Variables**

**a. Return on Assets (ROA)**

Return on Assets (ROA) is a financial metric that measures the efficiency of a company in generating profits from its assets. It is calculated by dividing the net income of a business by its average total assets during a specific period.ROA provides insight into how well a company utilizes its assets to generate earnings. A higher ROA indicates better efficiency in converting assets into profits, while a lower ROA suggests less effective asset utilization. ROA is a key indicator for investors and analysts to assess the profitability and management efficiency of a company in relation to its asset base.

**b. Return on Equity (ROE)**

Return on Equity (ROE) is a financial metric that measures the profitability of a company in relation to its shareholders' equity. It provides insights into how well a company is utilizing its equity to generate profits. ROE is calculated by dividing net income by shareholders' equity. ROE is expressed as a percentage and represents the return that a company generates on the shareholders' equity invested in the business. A higher ROE indicates better profitability and efficient use of equity capital, while a lower ROE may suggest lower profitability or less effective utilization of equity. ROE is a crucial metric for investors and analysts in assessing a company's financial performance and its ability to generate returns for shareholders.

**2.12** **Relationship between Dependent variables and Independent variables**

*Table 2.3*

|  |  |  |
| --- | --- | --- |
| **Dependent variables** | **Independent variables** | **Relationship** |
| **Return on Assets (ROA)** | **Current Ratio** | While ROA focuses on overall asset efficiency and profitability, the current ratio emphasizes short-term liquidity. Banks often aim for a balance between the two. A healthy ROA shows effective use of assets, while a reasonable current ratio ensures the ability to meet short-term obligations. Both metrics contribute to a comprehensive assessment of a bank's financial health. |
| **Cash and Bank Balance** | The relationship is typically inverse. While a higher Cash and Bank Balance contributes to liquidity, it may lower the ROA because cash tends to have a lower return compared to other interest-earning assets. Banks must strike a balance between holding sufficient liquidity and maximizing profitability through more productive assets. The challenge for banks is optimizing the trade-off between liquidity (Cash and Bank Balance) and profitability (ROA) to ensure financial stability and sustainable growth. |
| **Investment on Securities to Total Assets** | Balancing Investment on Securities to Total Assets with the goal of maximizing return while managing risk is crucial for banks to achieve a favorable relationship between ROA and securities investments. |
| **NRB to Total Assets** | The relationship between ROA and. NRB to Total Assets involves navigating the trade-off between liquidity, regulatory compliance, and maximizing returns on assets. |
| **Return on Equity**  **(ROE)** | **Current Ratio** | The relationship between ROE and Current Ratio in banking involves managing the trade-off between short-term liquidity needs (Current Ratio) and the efficient use of equity capital to maximize profitability (ROE). |
| **Cash and Bank Balance** | The relationship between ROE and Cash and Bank Balance in banking involves managing the trade-off between profitability (ROE) and maintaining sufficient liquidity through cash and bank balances. Striking the right balance is essential for optimizing financial performance. |
| **Investment on Securities to Total Assets** | The relationship between ROE and Investment on Securities to Total Assets involves navigating the trade-off between profitability (ROE) and the risk and return characteristics of a bank's investment portfolio. |
| **NRB to Total Assets** | While maintaining reserves with the NRB ensures liquidity and regulatory compliance, it might reduce the return potential on those assets, potentially impacting ROE. Striking a balance is crucial for banks to optimize profitability while meeting regulatory standards. |

The conceptual framework shows the relationship between dependent variables ROA, ROE independent Current Ratio Cash and Bank Balance, Investment on Securities to Ta, NRB to TA of Banks specific variables are natural cash reserve ratio (CRR), cash to total assets, investment to total assets, NRB to total Deposit. These are the determinants of bank liquidity and profitability analysis of Banks.

**2.13 Research Gap**

Large numbers of research were available bearing the same topic Determinants of Profitability in Nepalese Commercial Banks in Nepal. The present researcher tries to draw insights from them. However, the researcher was sustain gap by covering the relevant data and information from the year 2011/12 to 2021/22. Moreover, the researcher has selected four commercial banks of Nepal as sample banks viz. ADBL, NSBI, RBB. These banks were leading commercial banks by which we can find for the perfect comparison between highly growing commercial bank rather than rapidly growing new commercial banks. Financial analysis was the major function of every commercial bank for evaluating the financial performance. Therefore, it is the major concern of stakeholders to know the financial situation of the bank. Thus, to fulfill such gap, this study had been carried out. The study shows the interrelationship between liquid assets on net profit and the impact of maintaining cash and bank balance on net profit of the selected bank. Further, the study focuses on the various liquidity and profitability ratios that truly delineate the liquidity and profitability position of the banks. This study provides complete and latest information about determinants of profitability in Nepalese commercial banks. This was serve as a source of reference for similar study in future. This research therefore was facilitate readers to identify liquidity position of sample banks which will helps to evaluate past and present performance of both sample banks. This study was fruitful to those interested person, scholars, students, teachers, civil society, stakeholders, businessmen and government for academically as well as policy perspectives.

In the context of a thesis, the research gap serves as a pivotal concept that directs the focus and significance of the study. The identification of a research gap involves scrutinizing existing literature to pinpoint areas where current knowledge is insufficient, inconsistent, or lacks exploration. This process entails a meticulous review of prior research, theoretical frameworks, and empirical studies within the chosen field. As one delves into the literature, the aim is to discern limitations, unanswered questions, or emerging issues that signal opportunities for further investigation. A research gap can manifest in various forms. It might be a void in the understanding of a particular phenomenon, a lack of consensus among scholars, unexplored relationships between variables, or the absence of contemporary insights into evolving trends. The identification of a research gap is not merely an academic exercise; it is a strategic step toward contributing something new and valuable to the existing body of knowledge. Once a research gap is identified, it lays the foundation for formulating focused and relevant research questions. These questions become the driving force behind the thesis, guiding the research methodology, data collection, and analysis. The ultimate goal is to address the identified gap comprehensively and offer insights, solutions, or advancements that contribute meaningfully to the academic discourse in the chosen field. A well-defined research gap adds depth and purpose to the thesis, emphasizing its originality and the unique contribution it brings to the academic community. It signifies the researcher's awareness of the existing state of knowledge and the intention to push the boundaries by exploring uncharted territories. In essence, the identification and subsequent exploration of a research gap elevate the significance and relevance of the thesis, positioning it as a valuable addition to the scholarly conversation within the chosen discipline.

By critically examining prior research, researchers can pinpoint inconsistencies, methodological shortcomings, emerging trends, or practical challenges that have not been adequately explored. This identification of gaps not only substantiates the rationale for the new study but also positions it within the broader academic landscape. The research gap, once clearly defined, serves as the foundation for constructing focused research questions or hypotheses that guide the inquiry.

The significance of addressing a research gap lies in the potential contributions a thesis can make to the academic field. It allows the researcher to demonstrate the originality and relevance of their work, showcasing how their study fills a void or provides a novel perspective. Furthermore, a well-defined research gap adds value to the thesis by highlighting its potential impact on both theory and practice. In essence, the process of identifying and addressing a research gap transforms the thesis from a mere repetition of existing knowledge into a meaningful and forward-thinking contribution to the scholarly conversation in the chosen field of study.

**CHAPTER III**

**RESEARCH METHODOLOGY**

Research methodology have the process of arriving at the solution of the problem through planned and systematic dealing with the collection, analysis and interpretation of facts and figures. It was the plan, structure and strategy of investigations conceived to answer the research question or test the research hypothesis. Research methodology includes an overall method used while taking part in research activity.

**3.1 Research Design**

This research work tried to analyze the liquidity and profitability position of the commercial banks of Nepal. The present study consists of descriptive design. Only four commercial banks were taken into account, which represent almost same strategic groups. Financial as well as statistical tools were used to analyze and interpret.

**3.2 Population and Sample**

The sampling technique used in this study is Convenience Sampling. In the present context, there were 21 commercial banks operating in Nepal. The study of all these banks within this research was almost impossible. Hence, considering these number of banks as total population, four commercial banks Nepal Investment Megha1 Bank Limited, Nepal SBI Bank Limited, Agricultural Development Bank Limited and Rastriya Banijya Bank Limited within from these total population had been taken as sample because the selected sample bank results represent 21 bank and tried to achieve the objectives set out by analyzing the data. Thus the sample taken represents 19% of the total population.

**3.3 Nature and Sources of Data**

Since the study was based on the secondary data, the data were collected from various sources. Mainly the secondary data was collected by reviewing the annual reports, brochures, prospects of the concerned banks and the official websites of the respective banks.

**3.4 Data Collection**

The information or data obtained from the different sources in raw form. From that information, direct presentation was not possible so it was necessary to process data and converts it into required from For presentation different tables were used. Similarly in same case graphical presentation were also made. So far as the computation was concerned, it had been done with the help of using Microsoft Excel.

**3.5 Methods and Analysis of Data**

Liquidity and Profitability position of the banks was analyzed with two important tools. The first most important tool is the financial tool, which includes ratio analysis and another was a statistical tool.

***(i) Financial Tools***

The following financial ratios were going to be analyzed under the liquidity and financial position analysis of selected four commercial banks.

**A) Liquidity Ratios**

Liquidity ratio was a rigorous measure of a firm's ability to serve its short-term obligation. It reflects the short-term financial solvency of a firm as a whole or it is employed as a measurement of a company's liquidity position. The firm should remain an appropriate liquidity neither excess nor less to meet its short-term obligation when they become due. Inadequate liquidity can lead to unexpected cash short falls. A very high degree of liquidity was also not good as ideal assets earn nothing, leading to fewer assets yield and contributing to poor earnings performance. Important liquidity ratios that had been used in the study are listed below:

**a. Current Ratio**

The current ratio was the ratio of total current assets to total current liabilities. Current ratio measure the short-term solvency, i.e. its ability to meet short-term obligation or as a measure of creditors versus current assets. The current ratio was calculated by dividing current assets by current liabilities.

**b. Cash Reserve Ratio (CRR)**

Cash Reserve Ratio was a regulation that sets minimum reserves each bank must hold to customer deposits. These reserves were designed to satisfy and would normally be in the form of fiat currency stored in a bank vault (vault cash), or with a central bank.

The CRR was sometimes used as a tool in monetary policy, influencing the country’s economy, borrowing and interest rates. Western central banks with low excess reserves; they prefer to use open market operations to implement their monetary policy. An institution that holds reserves in excess of the required amount was said to hold excess reserves. Commercial banks directed by NRB to maintain 5.5% of their deposits as CRR to ensure liquidity. It was maintained on a weekly basis. If banks fail to maintain a minimum of CRR, it was liable to pay penalty and even bears vulnerable conditions towards liquidity crunch.

Cash Reserve Ratio =

Since, we couldnot find the daily deposit amount in annual report and also couldnot access it, we cannot find cash reserve ratio and compare it as mandatory set by NRB on average of total deposit of bank on weekly basis. So, it had give false information or mislead to others if we calculate it on the figure that was given on year ending Balance Sheet.

**c) Cash and Bank Balance to Total Assets Ratio**

Since, cash was the most liquid asset; a financial analyst may examine cash coverage into the total assets. Trade investment or marketable securities were equivalent of cash; therefore, they may include in the computation of cash ratio. The calculation of this ratio was

Cash & Bank to Total Assets Ratio =

**d) Investment on Securities to Total Asset Ratio**

This ratio was used to find the percentage of total assets invested on government securities, treasury bills and development bonds. It could be mentioned as:

Investment on Securities to Total Asset Ratio=

Where, Investment on securities involves treasury bills and development bonds etc.

**e) NRB Balance to Total Asset Ratio**

NRB had made the commercial banks to deposit certain fund of the commercial bank in the central bank which was changing time to time as the demand of the time. The ratio is calculated as followed:

NRB balance to total Assets Ratio =

**B) Profitability Ratios**

Profit was the ultimate output of a company and its existence was not justified if it fails to make sufficient profit. Therefore the company should continuously evaluate the efficiency of the company in terms of profit. The profitability ratios were calculated to measure the operating efficiency of the company. Generally, two major types of profitability ratios were calculated:

1. **Return on Loan and Advances Ratio**

Return on loan and advances ratio showed how efficiently the banks have utilized their resources to earn good return from provided loan and advances. This ratio was computed dividing net profit (loss) by the total amount of loan and advances and can be mentioned as,

****

**ii) Return on Equity Ratio (ROE)**

Since, shareholders were entitled to the residual profits; ROE shows the relationship between net income and shareholders’ fund. This ratio indicates the firm’s ability of generating net income per rupee of shareholders’ fund. The main objective of computing this ratio was to analyze how effectively the funds supplied by shareholders’ have been utilized. This ratio was of great interest to the present as well as the future prospective shareholders and also of great concern to management which has the responsibility of maximizing the owners’ welfare. This ratio could be computed by using following formula:

****

1. **Return on total assets (ROA)**

Return on total assets or simply return on assets, measures the productivity of the assets. It is measured in terms of relationship between net profit and assets. "This ratio judges the effectiveness in using the total fund supplied by the owners and creditors. Higher ratio shows the higher return on the assets used in the business thereby, indicating effective use of resources available and vice-versas. ROA is calculated as under;

Return on assets (ROA) =

**iv) Earning per share (EPS)**

Earnings per share were the ratio, which is calculated to assess the availability of total profits per share. It was a very important ratio for equity shareholders to assess the return on equity share. More the EPS was better the performance of the company. The increasing tendency of EPS enhances the possibility of more dividend and bonus shares. EPS only showed how much 'theoretically' belongs to the ordinary shareholders. It does not reveal how much is paid to the owners as dividends nor how much of the earnings are retained in the business.

It is calculated as under:

Earning per share (EPS) =

***ii Statistical Tools***

To meet the objectives of the study statistical tools were equally important. It helps us to analyze the relationship between two or more variables. In this research, Simple analytical tools were used such as coefficient of determination, probable error, standard deviation, Karl Pearson’s coefficient of correlation; trend analysis adopted which were as follows:

**a. Mean**

The most popular and widely used measure of representing the entire data by the one value was known as average. Its value was obtained by adding together all times and the summation of times was divided by the number of sample periods. If the past items of the sample periods are Xt number of periods is n, then Mean is defined as follows:

Mean () =

Where, ∑X=sum of the variable ’X’

N=No of observation

**b. Standard Deviation (S.D)**

The standard deviation was an important and widely used measure of dispersion. The measurement of the scatterings of the mass of figure in a series about an average was known as dispersion. The greater the value of dispersion, greater the standard deviation. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series; a large standard deviation means just the opposites it was denoted by the letter *(Silwal, 2018).*

S.D () = 

Where,

N = Number of observations

X = Expected return of the historical data

**c. Coefficient of corrélation (r)**

This statistical tool had been used to analyze, identify and interpret the relationship between two or more variables. It interprets whether two or more variables were correlated positively or negatively. Statistical tool analyses the relationship between those variables and helps the selected banks to make appropriate investment policy regarding to profit maximization and deposit collection; fund mobilization through providing loan and advances *(Silwal, 2018).*

For the purpose of decision-making, interpretation was based on following term:

* When r = 1, there is perfect positive correlation.
* When r = -1, there is perfect negative correlation.
* When r = 0, there is no correlation.

Karl Pearson's Correlation coefficient(r) can be obtained as:

r = ×

Where,

n = number of observations in series X and Y

X = sum of observations in series X

Y = sum of observations in series Y

X2 =sum of squared observations in series X

Y2 = sum of squared observations in series Y

XY = sum of the product of observations in series X and Y

**Chapter IV**

**Results and discussion**

This chapter presents the data collected from various sources and analyzes them to measure the various dimensions of the liquidity. It includes detail analysis and interpretation of data from which concrete result can be obtained. This chapter consists of various calculation made for study purpose.

**4.1 Analysis of Liquidity Position**

Liquidity positions of sample banks had been presented and analyzed by using cash reserve ratio, cash and bank balance to total assets ratio, investment on Securities to Total Assets ratio, NRB Balance to Total Assets Ratio, Statutory Liquidity Ratio, Credit Capital Deposit Ratios and Purchased liabilities to total assets ratio in this section.

**Current Ratio**

It measures the firm’s ability to meet its short-term obligation as they fall due. Current ratio of 2:1 or more is generally considered satisfactory, which was not a strict rule. The current ratio of samples banks was presented below.

*Table 4.1*

*Current Ratio*

**(in times)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **FY** | **NIMB** | **NSBI** | **RBBL** | **ADBL** |
| 2012/13 | 2.41 | 2.72 | 1.22 | 2.02 |
| 2013/14 | 2.67 | 2.89 | 1.29 | 2.64 |
| 2014/15 | 2.64 | 3.01 | 1.32 | 2.57 |
| 2015/16 | 2.89 | 2.98 | 1.24 | 2.15 |
| 2016/17 | 2.54 | 3.41 | 1.27 | 2.05 |
| 2017/18 | 2.76 | 3.46 | 1.25 | 2.12 |
| 2018/19 | 2.36 | 2.86 | 1.33 | 2.08 |
| 2019/20 | 2.32 | 2.18 | 1.25 | 2.1 |
| 2020/21 | 2.38 | 2.1 | 1.26 | 2.01 |
| 2021/22 | 2.92 | 2.4 | 1.21 | 2.74 |
| **Total** | **25.89** | **28.01** | **12.64** | **22.48** |
| **Mean** | 2.589 | 2.801 | 1.264 | 2.248 |
| **S.D** | 0.210 | 0.440 | 0.037 | 0.269 |
| **CV** | 8.116 | 15.711 | 2.964 | 11.964 |

*Source: Annual Financial Indicator of NIMB, NSBI, ADBL and RBB and Appendix -I*

Table 1 showed the current ratio of NSBI in the 2012/13, 2013/14, 2014/15, 2015/16, 2016/17 2017/18, 2018/19, 2019/20, 2020/21 and 2021/22 were 2.72, 2.89, 3.01, 2.98, 3.41, 3.46, 2.86, 2.18, 2.1 and 2.40 %respectively. Its average current ratio was 2.801standard deviation is 0.440and Co­efficient of variation was 15.711.The current ratio of RBBL in the 2012/13, 2013/14, 2014/15, 2015/16, 2016/17 2017/18, 2018/19, 2019/20, 2020/21 and 2021/22 were 1.22%, 1.29, 1.32, 1.24, 1.27, 1.33, 1.25%,1.26 and 1.21 respectively. Its average current ratio was 1.26, Standard deviation was 0.04 and Co­efficient of variation was 0.03. It showed the higher average current ratio of NSBI showed that it had good liquidity within the bank in terms of current ratio as compared to other sample bank. It shows the current ratio of ADBL in 2012/13, 2013/14, 2014/15, 2015/16, 2016/17 2017/18, 2018/19, 2019/20, 2020/21 and 2021/22were 2.02%, 2.64%, 2.57%, 2.15%, 2.05%, 2.12%, 2.08%, 2.10%, 2.01% and 2.74% respectively. Its average current ratio of ADBL 2.248, Standard deviation was 0.269 and Co­efficient of variation was 11.964.On the other hand, the lower C.V. of RBBL showed that it was more consistent in maintaining the funds within the bank than other sample banks.

**Cash Reserve Ratio**

Cash Reserve Ratio was a regulation that sets minimum reserves each bank must hold to customer deposits. These reserves were designed to satisfy and would normally be in the form of fiat currency stored in a bank vault (vault cash), or with a central bank.

*Table 4.2*

*Cash Reserve Ratio*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **NIMB (in%)** | **NSBI (in %)** | **RBBL (in %)** | **ADBL (in %)** |
| 2012/13 | 7.8 | 9.03 | 26.14 | 2.9 |
| 2013/14 | 7.7 | 7 | 25.71 | 2.94 |
| 2014/15 | 13.6 | 8.33 | 36.65 | 7.55 |
| 2015/16 | 16 | 9.58 | 32.27 | 18.64 |
| 2016/17 | 19.2 | 9.32 | 30.43 | 19.38 |
| 2017/18 | 12 | 10.92 | 28.74 | 14.48 |
| 2018/19 | 7.2 | 8.33 | 23.33 | 14.09 |
| 2019/20 | 10.5 | 10.04 | 31.18 | 9.6 |
| 2020/21 | 8.2 | 7.18 | 29.15 | 5.29 |
| 2021/22 | 5.5 | 6.65 | 27.2 | 6.44 |
| **Total** | 107.7 | 86.38 | 290.8 | 101.31 |
| **Mean** | 10.77 | 8.638 | 29.08 | 10.131 |
| **S.D.** | 4.164 | 1.328 | 3.612 | 5.836 |
| **CV** | 38.662 | 15.371 | 12.419 | 57.601 |

*(Source: Annual Financial Indicator of NIMB, NSBI, ADBL and RBB and Appendix II*

Table 2 showed the cash reserve ratio (total cash balance at NRB to total deposit) for ten years study period that the highest cash reserve ratio of NSBI and NIMB were 10.92% and 19.20% respectively. Similarly, the lowest cash reserve ratio maintained by NSBI and NIMB were 6.65% and 5.5% respectively. The mean value of cash reserve ratio of NSBI is 8.638% which is lower than that of NIMB's 10.77%. This showed that NIMB had maintained higher cash reserve ratio in average as compared to NSBI. This means that liquidity position was more consistent in NIMB. Both bank had maintained higher CRR than the mandatory rule of NRB. However having excess reserve bank have no investment in productive sector which in result had adverse effect on profitability.

**Cash and Bank Balance to Total Assets**

This ratio measures the percentage of liquid assets i.e. cash and bank balance among the total assets of a firm. Cash MMMand bank balance to total asset ratio establishes the relationship between cash & bank balance and total assets. It was computed as under:

*Table 4.3*

*Cash and Bank Balance to Total Assets*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **NIMB (in %)** | **NSBI (in %)** | **RBBL (in %)** | **ADBL (in %)** |
| 2012/13 | 14.94 | 10.54 | 11.9 | 18.12 |
| 2013/14 | 11.89 | 9.52 | 10.89 | 19.43 |
| 2014/15 | 13.95 | 7.68 | 14.23 | 13.72 |
| 2015/16 | 17.95 | 11.97 | 13.23 | 10.04 |
| 2016/17 | 18.16 | 9.11 | 13.25 | 11.87 |
| 2017/18 | 11.97 | 7.71 | 11.52 | 14.24 |
| 2018/19 | 13.72 | 11.15 | 10.25 | 19.91 |
| 2019/20 | 18.42 | 9.24 | 11.33 | 16.08 |
| 2020/21 | 18.05 | 8.16 | 9.54 | 15.89 |
| 2021/22 | 16.43 | 7.86 | 12.31 | 11.82 |
| **Total** | 155.48 | 92.94 | 118.45 | 151.12 |
| **Mean** | 15.548 | 9.294 | 11.845 | 15.112 |
| **S.D** | 2.456 | 1.439 | 1.376 | 3.194 |
| **CV** | 15.797 | 15.481 | 11.619 | 21.137 |

*(Source: Annual Financial Indicator of NIMB, NSBI, ADBL and RBB and AppendiIII)*

Table 3 showed that the highest cash and bank balance to total assets ratio of NIMB, NSBI, RBBL and ADBL was 18.42, 11.97, 14.23 and 19.91 respectively and lowest cash and bank balance to total assets ratio of NIMB, NSBI, RBBL and ADBL were 11.87, 7.68%, 9.54 and 10.04% respectively. The mean of NSBI was 9.29% and NIMB was 15.54% RBBL is 11.85 and ADBL was 15.11 respectively which means mean of ADBL was higher than that of other sample banks. The deviation of NSBI was less than that of other sample banks and variation of ADBL was more consistency than other sample banks. This showed that ADBL had been able to maintained sound liquidity as compared to NI, NSBI and RBBL. It showed that the average ratio of RBBL was higher than other three banks so it indicates that RBBL had more liquid assets out of current assets that mean RBBL was maintaining the highest cash and bank balance and ADBL was maintaining the lowest cash and bank balance. So RBBL’s liquidity position was better than other banks. Similarly, C.V. of ADBL had greater C.V. So ADBL had greater variability or low consistency and C.V. of NSBI was lowest. So NSBI had more consistency.

**Investment on Securities to Total assets**

This ratio was used to find the percentage of total assets invested on government securities, treasury bills and development bonds. The following table showed the investment on government securities to total assets of sample banks.

*Table 4.4*

*Investment on securities to Total Assets*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **NIMB (in %)** | **NSBI (in %)** | **RBBL (in %)** | **ADBL (in %)** |
| 2012/13 | 13.96 | 21.75 | 15.24 | 10.98 |
| 2013/14 | 15.07 | 19.25 | 14.36 | 16.37 |
| 2014/15 | 12.72 | 18.22 | 17.65 | 19.65 |
| 2015/16 | 15.87 | 18.12 | 16.1 | 18.76 |
| 2016/17 | 15.63 | 20.79 | 19.65 | 20.36 |
| 2017/18 | 17.85 | 26.56 | 20.35 | 16.94 |
| 2018/19 | 20.57 | 20.19 | 16.92 | 11.25 |
| 2019/20 | 12.71 | 19.07 | 18.67 | 11.97 |
| 2020/21 | 10.83 | 16.54 | 17.68 | 16.35 |
| 2021/22 | 10.15 | 14.73 | 16.68 | 13.46 |
| **Total** | 145.36 | 195.22 | 173.3 | 156.09 |
| **Mean** | 14.536 | 19.522 | 17.33 | 15.609 |
| **SD** | 3.010 | 3.039 | 1.784 | 3.317 |
| **CV** | 20.706 | 15.566 | 10.293 | 21.250 |

*(Source: Annual Financial Indicator of NIMB, NSBI, ADBL and RBB and AppendiIV)*

Table 4 showed that the mean ratio of investment on government securities to total assets ratio of NIMB, NSBI, RBBL and ADBL were 14.54, 19.52, 17.33 and 15.61 respectively. This showed that NSBI had invested sufficient amount in government securities. Similarly the highest and lowest ratio of investment on securities to total assets of 26.56% of NSBI in 2017/18 and lowest was 10.15 of NIMB in 2021/22 respectively. The deviation of NIMB was 3.01,NSBI is 3.03, RBBL was 1.78 and ADBL was 3.32 and whereas the variation of RBBL was 10.29 which is the lowest CV and more consistency than other sample banks.

**NRB Balance to Total Assets**

NRB has made the commercial banks to deposit certain fund of the commercial bank in the central bank which was changed time to time as the demand of the time.

*Table 4.5*

*NRB Balance to Total Assets*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **NIMB (in %)** | **NSBI (in %)** | **ADBL (in %)** | **RBB (in %)** |
| 2012/13 | 8.32 | 7.61 | 10.65 | 11.35 |
| 2013/14 | 5.65 | 8.82 | 9.98 | 12.72 |
| 2014/15 | 6.87 | 6.16 | 6.79 | 10.26 |
| 2015/16 | 12.93 | 11.49 | 10.65 | 9.36 |
| 2016/17 | 11.96 | 5.84 | 9.8 | 11.77 |
| 2017/18 | 14.68 | 7.42 | 7.79 | 9.19 |
| 2018/19 | 8.62 | 9.9 | 6.34 | 10.45 |
| 2019/20 | 5.98 | 7.78 | 8.87 | 11.68 |
| 2020/21 | 7.55 | 8.16 | 9.91 | 10.74 |
| 2021/22 | 4.3 | 7.43 | 10.67 | 13.58 |
| **TOTAL** | 86.86 | 80.61 | 91.45 | 111.1 |
| **Mean** | 8.686 | 8.061 | 9.145 | 11.11 |
| **S.D** | 3.243 | 1.593 | 1.546 | 1.325 |
| **CV** | 37.334 | 19.757 | 16.902 | 11.926 |

*(Source: Annual Financial Indicator of NIMB, NSBI, ADBL and RBB and AppendixV)*

Table 5 showed that the highest ratio of NRB balances to total assets of RBBL, ADBL, NSBI and NIMB was 10.67%, 13.58%, 11.49% and 14.68% percent respectively. Similarly the lowest NRB balance to total assets ratio of sample banks are NIMB, NSBI, RBBL and ADBL is 4.3%, 5.84%, 6.34 and 9.19% respectively. The mean value of NRB balance to total assets ratio of ADBL is 11.11% which is higher than that of other sample banks. This shows that NIMB has maintained higher NRB balance to total assets in average as compare to other sample banks.

**4.2 Analysis of Profitability**

Profitability of sample banks had been presented and analyzed by using Return on Loan and Advances, Return on Equity Ratio (ROE), Net Interest Margin Ratio, Non Net Interest Margin Ratio, Return on assets, Earnings per Share (EPS) in this section.

**Return on Loan and Advances**

Net profit of commercial banks depends on loan and advances. So, calculation of Return on total loan and advances was very important to find out the financial condition of the banks.

*Table 4.6*

*Return on Loan and Advances*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **NIMB (in %)** | **NSBI (in %)** | **RBBL (in %)** | **ADBL (in %)** |
| 2012/13 | 2.49 | 2.18 | 4.78 | 2.64 |
| 2013/14 | 3.14 | 2.14 | 5.86 | 4.66 |
| 2014/15 | 2.86 | 1.81 | 4.09 | 2.93 |
| 2015/16 | 2.5 | 2.64 | 4.17 | 2.67 |
| 2016/17 | 4.13 | 2.58 | 2.43 | 3.02 |
| 2017/18 | 3.73 | 2.44 | 4.83 | 6.12 |
| 2018/19 | 2.96 | 2.67 | 3.17 | 2.76 |
| 2019/20 | 2.98 | 2.48 | 2.91 | 2.61 |
| 2020/21 | 2.98 | 2.67 | 3.65 | 2.25 |
| 2021/22 | 3.03 | 2.59 | 3.75 | 3.41 |
| **Total** | 30.8 | 24.2 | 39.64 | 33.07 |
| **Mean** | 3.08 | 2.42 | 3.964 | 3.307 |
| **S.D** | 0.479 | 0.272 | 0.965 | 1.128 |
| **CV** | 15.57 | 11.24 | 24.34 | 34.12 |

*(Source:Annual Financial Indicator of NIMB, NSBI,ADBL and RBB and AppendixVI)*

Table 6 showed that the highest return on loan and advances ratio of NIMB, NSBI, RBBL and ADBL was 4.13, 2.64, 5.86 and 6.12% respectively. Similarly, the lowest level of return on loan and advances ratio of sample banks is 2.49, 1.81, 2.4 and 2.25% respectively. The mean of NIMB, NSBI, RBBL and ADBL is 3.08, 2.42, 3.96 and 3.31% respectively. This showed that RBBL had been able to utilize its capital as loan and advances to generate sufficient profit. The deviation of NIMB, NSBI, RBBL and ADBL is 0.48, 0.27, 0.96 and 1.13 and the variation of ADBL is more than that of NIMB, NSBI, and RBBL.

**Return on Equity (ROE)**

Since, shareholders were entitled to the residual profits; ROE showed the relationship between net income and shareholders’ fund. This ratio indicates the firm’s ability of generating net income per rupee of shareholders’ fund.

*Table 4.7*

*Return on Equity*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **NIMB** | **NSBI** | **RBBL** | **ADBL** |
| 2012/13 | 16.77 | 16.05 | 27.89 | 23.03 |
| 2013/14 | 21.79 | 16.19 | 17.53 | 19.56 |
| 2014/15 | 16.25 | 15.02 | 25.07 | 24.23 |
| 2015/16 | 13.28 | 20.31 | 22.83 | 21.56 |
| 2016/17 | 13.76 | 22.85 | 18.3 | 26.98 |
| 2017/18 | 30.94 | 17.08 | 16.85 | 29.64 |
| 2018/19 | 23.02 | 17.46 | 17.6 | 28.54 |
| 2019/20 | 23.5 | 14.85 | 24.53 | 17.65 |
| 2020/21 | 24.12 | 15.81 | 21.58 | 19.63 |
| 2021/22 | 27.06 | 16.2 | 14.17 | 23.67 |
| **Total** | 210.49 | 171.82 | 206.35 | 234.49 |
| **Mean** | 21.049 | 17.182 | 20.635 | 23.449 |
| **S.D** | 5.556 | 2.392 | 4.167 | 3.801 |
| **C.V** | 26.39 | 13.92 | 20.19 | 16.21 |

*(Source: Annual Financial Indicator of NIMB, NSBI, ADBL and RBB and Appendix VII)*

Table 7 showed that during ten years of study period, the highest return on total equity capital ratio of NIMB, NSBI, RBBL and ADBL were 30.94%, 22.58%, 27.89% and 29.64% respectively. NIMB, NSBI, RBBL and ADBL had an average mean ratio of 21.05%, 17.18%, 20.64% and 23.45% respectively and ADBL is higher than that of NIMB, NSBI and RBBL. Table showed that ADBL has able to utilizeed shareholders’ income.

**Return on Assets (ROA)**

Return on total assets or simply return on assets, measures the productivity of the assets. It was measured in terms of relationship between net profit and assets. "This ratio judges the effectiveness in using the total fund supplied by the owners and creditors. Higher ratio showed the higher return on the assets used in the business thereby.

*Table 4.8*

*Return on Assets (ROA)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **NIMB (in %)** | **NSBI (in %)** | **RBBL (in %)** | **ADBL (in %)** |
| 2012/13 | 2.2 | 1.03 | 3.5 | 1.89 |
| 2013/14 | 2 | 1.01 | 3.99 | 2.2 |
| 2014/15 | 1.6 | 0.83 | 2.9 | 1.23 |
| 2015/16 | 2.6 | 1.19 | 2.97 | 1.26 |
| 2016/17 | 2.3 | 1.51 | 1.72 | 1.47 |
| 2017/18 | 1.9 | 1.64 | 3.12 | 3.22 |
| 2018/19 | 2 | 1.59 | 2.32 | 1.42 |
| 2019/20 | 2.1 | 1.57 | 2.15 | 1.6 |
| 2020/21 | 2.13 | 1.97 | 2.71 | 1.42 |
| 2021/22 | 1.79 | 1.94 | 2.77 | 2.23 |
| Mean | 2.062 | 1.428 | 2.815 | 1.794 |
| S.D | 0.263 | 0.374 | 0.622 | 0.585 |
| CV | 12.763 | 26.215 | 22.109 | 32.613 |

*(Source: Annual Financial Indicator of NIMB, NSBI, ADBL and RBB and AppendixVIII)*

Table 8 showed that during ten years of study period, the highest return on total assets ratio of NIMB, NSBI, RBBL and ADBL were 2.6, 1.97, 3.99 and 3.22% was respectively. Similarly, the lowest ratio of return on NIMB, NSBI, RBBL and ADBL were 1.6, 0.83, 1.72 and 1.23 % respectively. RBBL had an average mean ratio of 2.82% which was lower than that of NIMB, NSBI and ADBL .The deviation of RBBL was higher and variation of RBBL was more consistency than other sample banks.

**Earnings per Share (EPS)**

Earnings per share were the ratio, which was calculated to assess the availability of total profits per share. It was a very important ratio for equity shareholders to assess the return on equity share. More the EPS better was the performance of the company. The increasing tendency of EPS enhances the possibility of more dividend and bonus shares. EPS only showed how much 'theoretically' belongs to the ordinary shareholders. It does not reveal how much was paid to the owners as dividends nor how much of the earnings were retained in the business.

*Table 4.9*

*Earnings per Share*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **NIMB (in %)** | **NSBI (in %)** | **RBBL (in %)** | **ADBL (in %)** |
| 2012/13 | 52.5 | 23.69 | 62.32 | 380.56 |
| 2013/14 | 39.1 | 24.85 | 77.88 | 445.46 |
| 2014/15 | 27.6 | 22.93 | 60.57 | 307.49 |
| 2015/16 | 46.2 | 32.75 | 71.54 | 21.79 |
| 2016/17 | 40.7 | 34.83 | 47.53 | 21.38 |
| 2017/18 | 30.9 | 34.48 | 78.83 | 57.07 |
| 2018/19 | 29.3 | 36.78 | 52.79 | 27.42 |
| 2019/20 | 29.3 | 33.46 | 31.59 | 32.32 |
| 2020/21 | 35.7 | 25.16 | 36.91 | 30.26 |
| 2021/22 | 26.4 | 27.13 | 42.88 | 56.04 |
| **Total** | 357.7 | 296.06 | 562.84 | 1379.79 |
| **Mean** | 35.77 | 29.606 | 56.284 | 137.979 |
| **S.D** | 8.283 | 5.053 | 15.862 | 160.459 |
| **CV** | 23.156 | 17.068 | 28.181 | 116.292 |

*(Source: Annual Financial Indicator of NIMB, NSBI, ADBL and RBB and AppendiIX)*

Table 9 showed that Earnings per share allow us to compare different companies’ power to make profit per share. It shows that during ten years of study period the highest EPS of ADBL was 445.46% in 2013/14 and the lowest was Rs.22.93% in 2014/15 of NSBI. Similarly, the mean highest earning per share maintained by NIMB is Rs.35.77 of RBBL and 56.28 of ADBL, 137.9 and 29.61 of NSBI. During the review period, ADBL had an average mean ratio of EPS Rs. 137.979% which was higher than that of other sample banks.

**4.3** **Statistical Analysis**

In statistical analysis, mainly the trend analysis, correlation and regression, between different related variables had been analyzed.

**Trend Analysis**

Trend analysis enables to had a general idea about the pattern of the behavior of the phenomenon under consideration.

*Table 4.10*

*Trend Values (Yc) of EPS by Least Square Method* **(In Rs)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Years** | **ADBL** | **NSBI** | **NIMB** | **RBBL** |
| 2012/13 | 91.88 | 32.75 | 91.05 | 34.19 |
| 2013/14 | 86.04 | 34.83 | 83.68 | 33.10 |
| 2014/15 | 78.04 | 34.84 | 57.24 | 33.37 |
| 2015/16 | 65.97 | 34.29 | 59.27 | 43.03 |
| 2016/17 | 44.32 | 30.61 | 58.41 | 33.55 |
| 2017/18 | 38.69 | 32.02 | 43.02 | 38.04 |
| 2018/19 | 27.17 | 31.54 | 34.05 | 38.91 |
| 2019/20 | 23.15 | 27.50 | 30.01 | 34.87 |
| 2020/21 | 19.13 | 23.46 | 26.97 | 30.83 |
| 2021/22 | 13.11 | 19.40 | 22.93 | 26.79 |

*Source: Annex*

Table 10 showed the trend value of EPS of ADBl, RBBL, NIMB and NSBI from the FY 2012/13 to 2021/22. It shoed the average ADBl, RBBL, NIMB and NSBI from the FY 2012/13 to 2021/22 showed the average EPS of ADBL is in the decreasing trend in the successive fiscal years. It has declined from Rs. 91.03 in FY 2012/13 to Rs. 13.11 in the FY 2021/22. Whereas, the table showed that the EPS of NSBI is in the Fluctuating trend in the successive fiscal years. It has from Rs. 32.75 in FY 2012/13 to Rs. 19.40 in the FY 2021/22. On the other hand, NIMB has an Fluctuating trend of EPS in the successive fiscal years. It had from Rs. 46.3 in FY 2012/13 to Rs. 13.11 in the FY 2021/22. Similarly, RBBL has a Fluctuating trend of EPS has ranged from Rs. 34.19 in FY 2012/13 to Rs. 26.79 FY 2021/22.

**Correlation Co-efficient (r)**

Correlation analysis deals to determine the degree of relationship between two or more variables. In correlation analysis, only one variable was treated as dependent and one or more variables are treated as independent. The correlation coefficient between two variables X and Y, denoted by r, is a numerical measure of linear relationship between them. In this study, we find out correlation coefficient between dependent variables and independent variables.

**Correlation co-efficient between current ratio and return on assets (ROA):**

*Table 4.11*

Let,Xdenote the current ratio and Y denote the return on assets (ROA) respectively.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| BANK | X | Y | XY | X2 | Y2 |
| NIMB | 2.589 | 2.062 | 5.33852 | 6.70292 | 4.25184 |
| NSBI | 2.801 | 1.428 | 3.99983 | 7.8456 | 2.03918 |
| RBBL | 1.264 | 2.815 | 3.55816 | 1.5977 | 7.92423 |
| ADBL | 2.248 | 1.794 | 4.03291 | 5.0535 | 3.21844 |
| **Total** | **8.902** | **8.099** | **16.9294** | **21.1997** | **17.4337** |
| **n=4** |  |  |  |  |  |

r =

=

r = -0.9133

In above 4.11 table represents, the correlation coefficient of -0.9133 between the current ratio and return on assets (ROA) suggests a strong negative relationship between these two financial metrics.

**Correlation Co-efficient between Cash and bank balance and Return on assets (ROA):**

*Table 4.12*

Let,Xdenote the cash and bank balance and Y denote the return on assets (ROA) respectively.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ­BANK | X | Y | XY | X2 | Y2 |
| NIMB | 15.548 | 2.062 | 32.059976 | 241.7403 | 4.251844 |
| NSBL | 9.294 | 1.428 | 13.271832 | 86.37844 | 2.039184 |
| RBBL | 11.845 | 2.815 | 33.343675 | 140.304 | 7.924225 |
| ADBL | 15.112 | 1.794 | 27.110928 | 228.3725 | 3.218436 |
| **Total** | 51.799 | 8.099 | 105.78641 | 696.7953 | 17.43369 |
| **n=4** |  |  |  |  |  |

r =

=

r = 0.17466

In above 4.12 table represents, a correlation coefficient of 0.17466 between cash and bank balance to total assets and return on assets (ROA) suggests a relatively weak positive correlation between these variables. The positive sign indicates that, on average, as the cash and bank balance to total assets increase, there is a tendency for the return on assets to also increase, although the relationship is not very strong.

**Correlation Co-efficient between investment on securities to total assets and return on assets (ROA):**

*Table 4.13*

Let,Xdenote the investment on securities to total assetsand Y denote the return on assets (ROA) respectively.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| BANK | X | Y | XY | X2 | Y2 |
| NIMB | 14.536 | 2.062 | 29.973232 | 211.2953 | 4.251844 |
| NSBL | 14.522 | 1.428 | 20.737416 | 210.8885 | 2.039184 |
| RBBL | 17.33 | 2.815 | 48.78395 | 300.3289 | 7.924225 |
| ADBL | 15.605 | 1.794 | 27.99537 | 243.516 | 3.218436 |
| **Total** | **61.993** | **8.099** | **127.48997** | **966.0287** | **17.43369** |
| n=4 |  |  |  |  |  |

r =

=

r = 0.845

In above 4.13 table represents, a correlation coefficient of 0.845 between investment in securities as a percentage of total assets and return on assets (ROA) indicates a strong positive correlation. It's also worth mentioning that correlation coefficients range from -1 to 1, where -1 indicates a perfect negative correlation, 1 indicates a perfect positive correlation, and 0 indicates no correlation. In this case, the weak negative correlation of -0.21857 suggests a mild inverse relationship between investment in securities to total assets and return on assets.

**Correlation Co-efficient between NRB balance to total assets and Return on assets (ROA):**

*Table 4.14*

Let,Xdenote the NRB balance to total assetsand Y denote the return on assets (ROA) respectively.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| BANK | X | Y | XY | X2 | Y2 |
| NIMB | 8.686 | 2.062 | 17.910532 | 75.4466 | 4.251844 |
| NSBL | 9.061 | 1.428 | 12.939108 | 82.10172 | 2.039184 |
| RBBL | 9.145 | 2.815 | 25.743175 | 83.63103 | 7.924225 |
| ADBL | 11.11 | 1.794 | 19.93134 | 123.4321 | 3.218436 |
| **Total** | **38.002** | **8.099** | **76.524155** | **364.6114** | **17.43369** |
| **n=4** |  |  |  |  |  |

r =

=

r = -0.21857

In above 4.14 table represents, a correlation coefficient of -0.21857 between NRB balance to total assets and return on assets (ROA) suggests a weak negative correlation between these two variables. The negative correlation implies that, on average, as the central bank balance as a percentage of total assets increases, there is a tendency for the return on assets to decrease, and vice versa.

**Correlation co-efficient between current ratio and return on Equity (ROE):**

*Table 4.15*

Let,Xdenote the current ratio and Y denote the return on equity (ROE) respectively.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| BANK | X | Y | XY | X2 | Y2 |
| NIMB | 2.589 | 21.049 | 54.49586 | 6.70292 | 443.06 |
| NSBI | 2.801 | 17.182 | 48.12678 | 7.8456 | 295.221 |
| RBBL | 1.264 | 20.635 | 26.08264 | 1.5977 | 425.803 |
| ADBL | 2.248 | 23.449 | 52.71335 | 5.0535 | 549.856 |
| **Total** | **8.902** | **82.315** | **181.4186** | **21.1997** | **1713.94** |
| n=4 |  |  |  |  |  |

r =

=

r = -0.3365

In above 4.15 table represents, a correlation coefficient of -0.33654 between the current ratio and return on equity (ROE) indicates a weak negative correlation between these two financial metrics. The negative correlation suggests that, on average, as the current ratio increases, there is a tendency for the return on equity to decrease, and vice versa. In practical terms, the current ratio is a measure of a company's short-term liquidity, representing its ability to cover short-term liabilities with short-term assets. The negative correlation suggests that companies with lower current ratios (potentially lower liquidity) may, on average, experience slightly lower returns on equity.

**Correlation Co-efficient between Cash and bank balance and Return on Equity (ROE):**

*Table 4.16*

Let,Xdenote the cash and bank balance and Y denote the return on equity (ROE) respectively.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| BANK | X | Y | XY | X2 | Y2 |
| NIMB | 15.548 | 21.049 | 327.26985 | 241.7403 | 443.0604 |
| NSBL | 9.294 | 17.182 | 159.68951 | 86.37844 | 295.2211 |
| RBBL | 11.845 | 20.635 | 244.42158 | 140.304 | 425.8032 |
| ADBL | 15.112 | 23.449 | 354.36129 | 228.3725 | 549.8556 |
| **Total** | **51.799** | **82.315** | **1085.7422** | **696.7953** | **1713.94** |
| **n=4** |  |  |  |  |  |

r =

=

r = 0.8673

In above 4.16 table represents, a correlation coefficient of 0.8673 between cash and bank balance and return on equity (ROE) indicates a strong positive correlation between these two variables. The positive correlation implies that, on average, as the cash and bank balance increases, there is a substantial tendency for the return on equity to increase, and vice versa.

**Correlation Co-efficient between investment on securities to total assets and return on equity (ROE):**

*Table 4.17*

Let, Xdenote the investment on securities to total assetsand Y denote the return on equity (ROE) respectively.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| BANK | X | Y | XY | X2 | Y2 |
| NIMB | 14.536 | 21.049 | 305.96826 | 211.2953 | 443.0604 |
| NSBL | 14.522 | 17.182 | 249.517 | 210.8885 | 295.2211 |
| RBBL | 17.33 | 20.635 | 357.60455 | 300.3289 | 425.8032 |
| ADBL | 15.605 | 23.449 | 365.92165 | 243.516 | 549.8556 |
| **Total** | **61.993** | **82.315** | **1279.0115** | **966.0287** | **1713.94** |
| **n=4** |  |  |  |  |  |

r =

=

r = 0.3154

In above 4.17 table represents, a correlation coefficient of 0.3154 between investment in securities to total assets and return on equity (ROE) indicates a positive correlation between these two variables. The positive correlation suggests that, on average, as the proportion of investments in securities to total assets increases, there is a tendency for the return on equity to increase, and vice versa.

**Correlation Co-efficient between NRB balance to total assets and return on equity (ROE):**

*Table 4.18*

Let,Xdenote the NRB balance to total assetsand Y denote the return on equity (ROE) respectively

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| BANK | X | Y | XY | X2 | Y2 |
| NIMB | 8.686 | 21.049 | 182.83161 | 75.4466 | 443.0604 |
| NSBL | 9.061 | 17.182 | 155.6861 | 82.10172 | 295.2211 |
| RBBL | 9.145 | 20.635 | 188.70708 | 83.63103 | 425.8032 |
| ADBL | 11.11 | 23.449 | 260.51839 | 123.4321 | 549.8556 |
| **Total** | **38.002** | 82.315 | **787.74318** | **364.6114** | **1713.94** |
| **n=4** |  |  |  |  |  |

r =

=

r = 0.675

In above 4.18 table represents, a correlation coefficient of 0.675 between central bank balance to total assets and return on equity (ROE) indicates a strong positive correlation between these two variables. The positive correlation suggests that, on average, as the central bank balance as a percentage of total assets increases, there is a notable tendency for the return on equity to increase, and vice versa.

**4.4 Findings**

From the above data analysis, the following major findings had been drawn;

* The average current ratio of NIMB, NSBI, RBBL and ADBL were 2.589, 2.80, 1.26 & 2.248 times respectively. Moreover, the C.V. of such banks was 8.116, 15.711, 2.964 and 11.964 respectively. It showed that RBBL was more consistent in maintaining the current ratio among the other three banks.
* The average cash reserve ratio of NIMB, NSBI, RBBL and ADBL were 10.77%, 8.638%, 29.08% and 10.131% respectively. average cash reserve ratio of RBBL is highest than other sample bank in the way C.V. of RBBL was highest than other sample banks in the way CV of RBBL was lowest which means the performance of RBBL was best and more consistency the other banks.
* Cash and bank balance to total assets ratio showed that NIMB was better maintaining the highest cash and bank balance. RBBL had strong liquidity position because it had highest mean ratio than NSBI, NIMB and ADBL. On the basis of C.V., the ratio during the study period, RBBL’s liquidity position was more consistent and ADBL’s liquidity position was less consistent. C.V. was the most important tool.
* Investment on securities to total assets of NIMB, NSBI, RBBL and ADBL was 14.536, 19.522, 17.33 and 15.609 respectively. The highest mean ratio of investment on securities to total assets is 19.522 of NSBI and the lowest CV of RBBL was 10.293 which was more consistency among the sample banks.
* The average NRB balance to total assets of NIMB, NSBI, RBBL and ADBL was 8.686, 8.061, 9.145 and 11.11 respectively. Average NRB balance to total assets of ADBL was highest than other sample banks in this way the CV of RBBL was lowest which means the performance of RBBL was best and more consistency the other banks.
* The average mean of ROL of NIMB, NSBI, RBBL and ADBL were 3.08, 2.42, 3.964 and 3.307 respectively. Moreover the CV of such banks 15.565, 11.241, 24.338 and 34.140 respectively. It showed that NSBI coefficient of variation was 11.241 which was more consistent in maintaining the ROL among the other three banks.
* The average ROE of ADBL, NSBI, NIMB and RBBL were 23.449%, 17.182%, 21.049% and 20.635% respectively. It reveals that ADBL had been efficiently utilizing the owners' investment comparatively better than NIMB, NSBI and RBBL.
* The average ROA of ADBL, NSBI, NIMB and RBBL were 1.794%, 1.428%, 2.06% and 2.81% respectively. The higher mean ratio of RBBL states that RBBL had been able to utilize its overall resources in efficient way in comparison with ADBL, NSBI and NIMB during the study period. The high ratio also reflects the successes of ADBL's management. In terms of C.V. NIMB was more consistent than other three banks.
* The average mean of EPS of ADBL, NSBI, NIMB and RBBL waer Rs.137.97, Rs. 29.606, Rs. 35.77 and Rs. 56.284 respectively. The higher EPS of ADBL means ADBL's shareholders can get higher amount on every share held.
* The trend analysis of EPS of ADBL, NSBI, NIMB and RBBL showed that ADBL and NIMB had a decreasing trend whereas, NSBI and RBBL had fluctuating trend.
* The correlation co-efficient between total deposit and cash & bank balance of ADBL, NSBI, NIMB and RBBL were -0.08, 0.92, 0.39 and 0.54 respectively. It showed that ADBL was negative high degree relationship; and NSBI was high degree of positive co relationship of 0.92 and remaining sample bank RBBL and NIMB had low degree of positive relationship between total deposit and cash & bank balance and moderate positive co relationship between two variables.
* The results indicate that bank financial policy indicator was significantly positively correlated with current ratio and cash and bank balance. The result indicates that these two variables may significantly affect financial policy of Nepalese commercial banks. The major determinants of commercial banks’ financial performance in Nepal are: bank size, current ratio, cash and bank balance, investment on securities.
* In table 4.11, in financial analysis, the current ratio is a measure of a company's short-term liquidity, indicating its ability to cover short-term obligations. On the other hand, ROA measures a company's profitability by assessing how efficiently it utilizes its assets to generate earnings. A negative correlation of -0.9133 implies that as the current ratio increases (indicating higher liquidity), the ROA tends to decrease. Conversely, as the current ratio decreases (indicating lower liquidity), the ROA tends to increase. This negative correlation suggests a trade-off between liquidity and profitability – a company might have to sacrifice some level of liquidity to achieve higher profitability, and vice versa.
* In table 4.12,the weak positive correlation suggests a tendency for the cash and bank balance to total assets ratio and ROA to move together, but the relationship is not strong, and caution should be exercised in drawing causal conclusions based solely on correlation. Further analysis and consideration of additional factors are recommended for a more comprehensive understanding.
* In table 4.13, a correlation coefficient of 0.845 between investment in securities to total assets and return on assets (ROA) suggests a strong positive correlation between these two variables. The value of 0.845 indicates a high degree of linear association, implying that as investment in securities to total assets increases, there is a corresponding increase in return on assets.
* In table 4.14, a correlation coefficient of -0.21857 between NRB balance to total assets and return on assets (ROA) suggests a weak negative correlation between these two variables. The negative correlation implies that as the investment in securities to total assets increases, there is a tendency for the return on assets to decrease, and vice versa.
* In table 4.15,the magnitude of the correlation coefficient (-0.33654) indicates a moderate strength of the negative correlation. While there is a discernible relationship, it is not extremely strong, and the influence of other factors should be explored for a more nuanced interpretation.
* In table 4.16,the magnitude of the correlation coefficient (0.8673) signifies a robust positive correlation. This implies that the relationship between cash and bank balance and return on equity is not only present but also influential. Further analysis and consideration of additional financial metrics would be valuable to gain a more comprehensive understanding of the financial dynamics at play.
* In table 4.17, the magnitude of the correlation coefficient (0.3154) signifies a moderate positive correlation. While the relationship is present, it is not extremely strong, and the impact of other variables should be considered for a more nuanced interpretation. Further analysis and examination of additional financial metrics would be beneficial to gain a more comprehensive understanding of the financial dynamics at play.
* In table 4.18, the magnitude of the correlation coefficient (0.675) signifies a robust positive correlation. This implies that the relationship between central bank balance to total assets and return on equity is not only present but also influential. Further analysis, including consideration of additional economic indicators and factors, would be beneficial to gain a more comprehensive understanding of the dynamics at play.

**4.5 Discussions**

Kandel (2016) had used of analysis of profitability of two commercial banks is also different. The overall calculation seems to be better for NBB. Though certain ratios like dividend per share, dividend payout ratio etc are better for SBI bank. From the calculation, NBB seems to tackle their investors more efficiently. Liquidity position of these commercial banks shows different position here, the average current ratio of NSBI is great than that of NBB. Sharma (2016) The total investment to total deposit ratio of the NSBIBL is comparatively lower. So it should utilize its total deposit for investment purpose more efficiently. NSBIBL has been yielding lower return to shareholder equity. So it should utilize the shareholder’s equity more efficiently. Profitability ratios of NBBL show that the profit of the bank is in decreasing trend. So it will be better for NBBL to focus to increase the profitability position of the bank.

Hamal (2016) riveted thatthe study has used in this thesis financial and statistical tools. In the contest liquidity ratio, Asset Management Ratio, Profitability Ratio, Risk Ratio and Growth Ratio used in financial tools and average, Standard Deviation, Coefficient of Variation in statistical tools. The correlation co-efficient showed the positive relationship between total debt and net profit of HBL and NIMB, etc. Both the banks should maintain standard current ratio.

Adhikari (2017) analyzed that the liquidity position of NBBL is not better than that of HBL and NSBL.NBBL is in better position regarding its on balance sheet activities. The ratios of NBBL are highly variable which reveals NBBL has not followed stable policy. NBBL is not better regarding off-balance sheet transactions. The ratios of NBBL are highly variable also. The position of NBBL is moderate in OBS transaction. The profitability position of NBBL is comparatively not better than that of HBL but better than that of NSBL. The credit risk ratios and interest rate risk ratios of NBBL is higher than that of HBL and NSBL. In this study and previous research finding's are difference due to choose the sample of banks, bank performance, return on assets, net profit margin ratio, return on equity, years to be choose the data and annual report financial indicator so the study finding's is different to previous study indings so this study is contradictory. The results are inconsistent because of difference in the pace of time and tools used in analysis of data are different.

**CHAPTER V**

**SUMMARY AND CONCLUSION**

**5.1 Summary**

First chapter, the background and subject matter of the study consisting statement of the problem, significance and limitations of the study has been dealt. In the second chapter, the relevant review of literature has been made in terms of theoretical background of banking principles. Third chapter deals with the research methodology that has been used to evaluate the liquidity and profitability position of sample banks under study. In the fourth chapter, the data and information are presented, analyzed and interpreted by the help of financial and statistical tools. Finally, in the fifth and last chapter, summary, conclusion and recommendations have been made regarding the entire study.

The second chapter deals with theoretical concepts of different literature review for journals, books, dissertation, which will help provide knowledge about the development and progress made by earlier researchers on the concerned topic. The summarization of the period has been done to provide knowledge about the background of the work done by earlier researchers.

In the chapter three, an appropriate research methodology has been applied to fulfill the stated objectives of the study. This chapter includes research design, nature and sources of data, data processing procedures, tools and techniques used. The research design of the study is descriptive and analytical in nature. The data collected from the secondary sources. Financial ratios such as current ratio, turnover ratio, profitability ratio, liquidity ratio have been used. Similarly, statistical tools like Karl Pearson's coefficient, probable error, trend analysis and regression analysis have been used.

The banking in Nepal is still facing with various problems like strong unorganized sector, weak position and unhealthy competition, weakness of Nepal Rastra Bank, lack of research, training & development etc. However, current political and economic scenario of the country coupled with prudential norms of Nepal Rastra Bank and stiff competition may make the entrepreneurs give a second thought to the idea to establishing banks. Liquidity management is directly affected by the unbalance competition and the rapid development of information technology. Even though, liquidity management is not a new term in the banking sector, it is still unpredictable as it is and is most crucial for the profitability. Such stage can be reduced by proper policy decision taken by understanding the depth and breadth of liquidity. The meaningful solution itself generates a lot of benefits. Liquidity management can overall describe the security management of the cash balance in a systematic and scientific way. Liquidity is that part of the total assets, which can be paid immediately to meet the current obligation. The liquidity management is used to describe money and assets that are readily convertible into money within very short span of time. The liquidity of assets refers to the ease and certainty with which it can be turned into cash. Bank maintain liquidity in the form of cash and bank balance, placement of money at call or short notice and investment in government securities and other securities readily convertible into cash. It is such a large proportion of deposit payable on demand. Inadequate liquidity tarnishes the image of the organization while excess liquidity is detrimental to the profitability.

The main objective of this study is to analyze the Liquidity Management, profitability position and Stability in earning of the Joint Venture banks of Nepal. However, the study of all the commercial banks is almost impossible and thus only four banks, namely Agricultural Development Bank Limited, Nepal SBI Bank Limited, Nepal Investment Mega Bank Limited and Rastriya Banijya Bank Limited were taken as sample. To achieve the objectives set out, different financial tools like current ratio, cash restive ratio, cash and bank balance to total assets, Investment to total assets, NRB balance to total assets, return on loan and advance, return on total equity Capital, return on Assets, EPS and others were analyzed. The data that have been analyzed by such financial and statistical tool includes from 2012/13 to 2010/21. For the systematic analysis of study, chapter plan has been made.

**5.2 Conclusions**

The growth of financial sector in Nepal is much better compared to the other sectors in the country. The decade long conflict has had its toll on every sector including the financial sector. Despite the conflict, private commercial banks continued growing. It is this very growth and many other reasons that have attracted investors towards the financial sector. There are a sizeable number of commercial banks, development banks, finance companies and co-operative banks operating in the country although bulk of the loan and deposit portfolio remains with private sector commercial banks. After the proper study on the performance and financial and statistical activities of ADBL, NSBI, NIMB and RBBL, the research has drawn the following conclusion.

On the basis of current ratio, the current ratio position of NSBI is comparatively better than ADBL, NIMB and RBBL.RBBL has lower current ratio, so it has poor liquidity position. Similarly, on the basis of net liquidity ratio, the liquidity position of RBBL is comparatively better than NSBI, NIMB and ADBL. RBBL has lower net liquidity ratio, so it has poor liquidity position. Whereas, on the basis of Cash and bank balance to current assets ratio shows that NIMB is better maintaining the highest cash and bank balance. NIMB has strong liquidity position because it has highest mean ratio than NSBI, ADBL and RBBL.

Cash and bank balance to total Assets ratio showed that NIMB is better than NSBI, ADBL and RBBL because NIMB has highest mean ratio. High ratio measures the most liquid fund with the bank to immediate payment to depositors. Comparing four banks on the basis of net profit Ratio, it can be concluded that the NIMB is most successful than other banks in controlling the operating and other non- operating cost, as a result their net profit margin is highest in comparison with that of ADBL, NSBI and RBBL.

The average ROA, ROE, ROCE, and Return on loan and advance of RBBL are comparatively better than ADBL, NSBI and NIMB. The average EPS of ADBL is comparatively better than NSBI, NIMB and RBBL. It clearly NSBI use high amount of bond long term and short term loan. The trend analysis of EPS of ADBL, NSBI, NIMB and RBBL shows that ADBL and NIMB have an decreasing trend whereas, NSBI and RBBL have a Fluctuating trend. But when compared among these 4 banks, the EPS shows that RBBL has a better. The correlation co-efficient between total deposit and cash & bank balance RBBL has very high degree of positive relationship, ADBL, NSBI and NIMB have high degree of positive relationship between total deposit and cash & bank balance Moreover, there exists high degree of positive relationship between total assets and net profit in RBBL has very high degree of positive relationship, ADBL, NSBI and NIMB have high degree of positive relationship between total assets and net profit.

In general all commercial banks should keep constant vigilance upon the positions so that they can sustain it even in the long run.All these banks are suggested to come up with other kinds of modern and latest facilities and services to attract the customers' deposit rather than conducting reward programs. All these banks under study are, suggested to concentrate more on their performance, business growth rate, asset quality and governance practices. Apart from these, market reputation, diversified service range and rate of shareholders should also be taken into account by the banks so, that it not only be beneficial for the bank but also will play a vital criteria or tool in regarding a reward as one of the best bank of the nation.The commercial banks have been established gradually after the Bank and Financial Institutions act 2073 B.S. with the passage of time so many commercial banks, as a joint venture, have been established gradually become of the liberal and market friendly economic policy of government. Sixty percent of population is not getting facility yet, so bank should provide some social response by expanding their operation in rural areas rather than urban areas. Bank has to poor and disadvantages groups. By establishing the branches in rural areas, minimum amount for opening accounts and interest rate should be reduced for priority sector creditors. For the nation development banks should contribute from their side, development of infrastructure and hydropower sector are not invested by commercial banks. Banks are not interested in agricultural sector. They should lend in these sectors.

The results indicate that bank financial policy indicator is significantly positively correlated with bank size and cash reserve ratio. The result indicates that these two variables may significantly affect financial policy of Nepalese commercial banks. The result further implies that large size bank with enough cash reserve can provide more loans and advances to their clients.

**5.3 Implications**

On the basis of analysis, findings, following implications were made. The banks can make use of these implications to overcome their weakness, inefficiency and improve their present liquidity and profitability position. Further researcher can use the more data so as to make the research more robust and make more generalized to the findings of the study. Further researcher can use different tools and techniques of researcher so as to ratify the study of the results, Researcher also can apply the same methods in the different population that is in manufacturing and public sector so that the study findings can be tested in different sector so as to generalize the findings in all performed areas of business. The study strategic and financial results are closely linked, and the performance in one area can impact the other. A high level of financial performance may result from an effective strategy, but good financial results let you pursue strategies that require substantial investments. When you develop effective strategies and implement them so they achieve the desired financial results, they can give you the flexibility to pursue additional strategic initiatives. The financial performance implications, it has to define the goals of your financial and strategic initiatives. To what extent you have reached the financial and strategic targets you set defines the level of performance achieved. In this study the sample banks are 2 commercial banks, in future researcher choose the more or less than 2 commercial banks. This research has been take seven years data and future researcher chose more or less years. In this study researcher has used statistical tools and SPSS programmer and future researcher use other tools also. The study has based on secondary data and future researcher may apply primary also. The mindset of the bankers that starts analyzing a client’s request by finding as many possibilities as possible of the client not paying back the loan should be changed. The constant counseling and training to the credit analysis and staff have to be done.

In the context of Nepal it is provided to the borrowers who often go to the bank not in the new financial sector. Default by the older borrower should be avoided. Political influences in the loan disbursement should be avoided as it may further aggravate the financial statement of commercial banks in Nepal. This process can be taken up at regular intervals. Personal visits should be made after sanction and disbursal of credit and further close monitoring of the operations of the accounts of borrowed units should be done periodically. Managers under credit monitoring and recovery department should have dynamism in their work. Many managers say that Frequent discussions with the staff in the branch and taking their suggestions for recovery of dues. Lastly, the ethical policy of “giving life is better than killing” should not be forgotten. In other words, recovering loan is better than auction should be kept in mind.

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**APPENDIX I**

**Current Ratio**

Let X1, X2, X3 andX4 denote the ratio NIMB, NSBI, RBBL and ADBL respectively.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FY** | **NIMB** | **NSBI** | **RBBL** | **ADBL** | **(X1-X1)2** | **(X2-X2)2** | **(X3-X3)2** | **(X4-X4)2** |
| 2012/13 | 2.41 | 2.72 | 1.22 | 2.02 | 0.0320 | 0.0066 | 0.0019 | 0.0520 |
| 2013/14 | 2.67 | 2.89 | 1.29 | 2.64 | 0.0066 | 0.0079 | 0.0007 | 0.1537 |
| 2014/15 | 2.64 | 3.01 | 1.32 | 2.57 | 0.0026 | 0.0437 | 0.0031 | 0.1037 |
| 2015/16 | 2.89 | 2.98 | 1.24 | 2.15 | 0.0906 | 0.0320 | 0.0006 | 0.0096 |
| 2016/17 | 2.54 | 3.41 | 1.27 | 2.05 | 0.0024 | 0.3709 | 0.0000 | 0.0392 |
| 2017/18 | 2.76 | 3.46 | 1.25 | 2.12 | 0.0292 | 0.4343 | 0.0002 | 0.0164 |
| 2018/19 | 2.36 | 2.86 | 1.33 | 2.08 | 0.0524 | 0.0035 | 0.0044 | 0.0282 |
| 2019/20 | 2.32 | 2.18 | 1.25 | 2.1 | 0.0724 | 0.3856 | 0.0002 | 0.0219 |
| 2020/21 | 2.38 | 2.1 | 1.26 | 2.01 | 0.0437 | 0.4914 | 0.0000 | 0.0566 |
| 2021/22 | 2.92 | 2.4 | 1.21 | 2.74 | 0.1096 | 0.1608 | 0.0029 | 0.2421 |
| **Total** | 25.89 | 28.01 | 12.64 | 22.48 |  |  |  |  |
| **Mean** | 2.589 | 2.801 | 1.264 | 2.248 |
| **S.D** | 0.210 | 0.440 | 0.037 | 0.269 |
| **CV** | 8.116 | 15.711 | 2.964 | 11.964 |

**For NIMB**





CV = 

**For NSBI**





CV = 

**For RBBL**

,



CV=

**For ADBL**

,



CV=

**APPENDIX II**

**Cash Reserve Ratio**

Let X1, X2, X3andX4denote the ratio NIMB, NSBI, RBBL and ADBL respectively.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FY** | **NIMB** | **NSBI** | **RBBL** | **ADBL** | **(X1-`X1)2** | **(X2-`X2)2** | **(X3-`X3)2** | **(X4-`X4)2** |
| 2012/13 | 7.8 | 9.03 | 26.14 | 2.9 | 8.82 | 0.15 | 8.64 | 52.29 |
| 2013/14 | 7.7 | 7 | 25.71 | 2.94 | 9.42 | 2.68 | 11.36 | 51.71 |
| 2014/15 | 13.6 | 8.33 | 36.65 | 7.55 | 8.01 | 0.09 | 57.30 | 6.66 |
| 2015/16 | 16 | 9.58 | 32.27 | 18.64 | 27.35 | 0.89 | 10.18 | 72.40 |
| 2016/17 | 19.2 | 9.32 | 30.43 | 19.38 | 71.06 | 0.47 | 1.82 | 85.54 |
| 2017/18 | 12 | 10.92 | 28.74 | 14.48 | 1.51 | 5.21 | 0.12 | 18.91 |
| 2018/19 | 7.2 | 8.33 | 23.33 | 14.09 | 12.74 | 0.09 | 33.06 | 15.67 |
| 2019/20 | 10.5 | 10.04 | 31.18 | 9.6 | 0.07 | 1.97 | 4.41 | 0.28 |
| 2020/21 | 8.2 | 7.18 | 29.15 | 5.29 | 6.60 | 2.13 | 0.00 | 23.44 |
| 2021/22 | 5.5 | 6.65 | 27.2 | 6.44 | 27.77 | 3.95 | 3.53 | 13.62 |
| Total | 107.7 | 86.38 | 290.8 | 101.31 |
| Mean | 10.77 | 8.638 | 29.08 | 10.131 |
| SD | 4.164 | 1.328 | 3.612 | 5.836 |
| CV | 38.662 | 15.371 | 12.419 | 57.601 |

**For NIMB**





CV = 

**For NSBI**



CV = 

**For RBBL**

,



CV=

**For ADBL**

,



CV=

**APPENDIX III**

**Cash and Bank Balance to Total Assets**

Let X1, X2, X3andX4denote the ratio NIMB, NSBI, RBBL and ADBL respectively.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FY** | **NIMB** | **NSBI** | **RBBL** | **ADBL** | **(X1-`X1)2** | **(X2-`X2)2** | **(X3-`X3)2** | **(X4-`X4)2** |
| 2012/13 | 14.94 | 10.54 | 11.9 | 18.12 | 0.37 | 1.55 | 0.00 | 9.05 |
| 2013/14 | 11.89 | 9.52 | 10.89 | 19.43 | 13.38 | 0.05 | 0.91 | 18.65 |
| 2014/15 | 13.95 | 7.68 | 14.23 | 13.72 | 2.55 | 2.60 | 5.69 | 1.94 |
| 2015/16 | 17.95 | 11.97 | 13.23 | 10.04 | 5.77 | 7.16 | 1.92 | 25.73 |
| 2016/17 | 18.16 | 9.11 | 13.25 | 11.87 | 6.82 | 0.03 | 1.97 | 10.51 |
| 2017/18 | 11.97 | 7.71 | 11.52 | 14.24 | 12.80 | 2.51 | 0.11 | 0.76 |
| 2018/19 | 13.72 | 11.15 | 10.25 | 19.91 | 3.34 | 3.44 | 2.54 | 23.02 |
| 2019/20 | 18.42 | 9.24 | 11.33 | 16.08 | 8.25 | 0.00 | 0.27 | 0.94 |
| 2020/21 | 18.05 | 8.16 | 9.54 | 15.89 | 6.26 | 1.29 | 5.31 | 0.61 |
| 2021/22 | 16.43 | 7.86 | 12.31 | 11.82 | 0.78 | 2.06 | 0.22 | 10.84 |
| Total | 155.48 | 92.94 | 118.45 | 151.12 |
| Mean | 15.548 | 9.294 | 11.845 | 15.112 |
| SD | 2.456 | 1.439 | 1.376 | 3.194 |
| CV | 15.797 | 15.481 | 11.619 | 21.137 |

**For NIMB**





CV = 

**For NSBI**





CV = 

**For RBBL**

,



CV=

**For ADBL**

,



CV=

**APPENDIX IV**

**Investment on securities to Total Assets**

Let X1, X2, X3andX4denote the ratio NIMB, NSBI, RBBL and ADBL respectively.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FY** | **NIMB** | **NSBI** | **RBBL** | **ADBL** | **(X1-`X1)2** | **(X2-`X2)2** | **(X3-`X3)2** | **(X4-`X4)2** |
| 2012/13 | 13.96 | 21.75 | 15.24 | 10.98 | 0.33 | 4.96 | 4.37 | 21.43 |
| 2013/14 | 15.07 | 19.25 | 14.36 | 16.37 | 0.29 | 0.07 | 8.82 | 0.58 |
| 2014/15 | 12.72 | 18.22 | 17.65 | 19.65 | 3.30 | 1.70 | 0.10 | 16.33 |
| 2015/16 | 15.87 | 18.12 | 16.1 | 18.76 | 1.78 | 1.97 | 1.51 | 9.93 |
| 2016/17 | 15.63 | 20.79 | 19.65 | 20.36 | 1.20 | 1.61 | 5.38 | 22.57 |
| 2017/18 | 17.85 | 26.56 | 20.35 | 16.94 | 10.98 | 49.53 | 9.12 | 1.77 |
| 2018/19 | 20.57 | 20.19 | 16.92 | 11.25 | 36.41 | 0.45 | 0.17 | 19.00 |
| 2019/20 | 12.71 | 19.07 | 18.67 | 11.97 | 3.33 | 0.20 | 1.80 | 13.24 |
| 2020/21 | 10.83 | 16.54 | 17.68 | 16.35 | 13.73 | 8.89 | 0.12 | 0.55 |
| 2021/22 | 10.15 | 14.73 | 16.68 | 13.46 | 19.24 | 22.96 | 0.42 | 4.62 |
| Total | 145.36 | 195.22 | 173.3 | 156.09 |
| Mean | 14.536 | 19.522 | 17.33 | 15.609 |
| SD | 3.010 | 3.039 | 1.784 | 3.317 |
| CV | 20.706 | 15.566 | 10.293 | 21.250 |

**For NIMB**





CV = 

**For NSBI**



CV = 

**For RBBL**

,



CV=

**For ADBL**

,



CV=

**APPENDIX V**

**NRB Balance to Total Assets**

Let X1, X2, X3andX4denote the ratio NIMB, NSBI, RBBL and ADBL respectively.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FY** | **NIMB** | **NSBI** | **RBBL** | **ADBL** | **(X1-`X1)2** | **(X2-`X2)2** | **(X3-`X3)2** | **(X4-`X4)2** |
| 2012/13 | 8.32 | 7.61 | 10.65 | 11.35 | 0.13 | 0.20 | 2.27 | 0.06 |
| 2013/14 | 5.65 | 8.82 | 9.98 | 12.72 | 9.22 | 0.58 | 0.70 | 2.59 |
| 2014/15 | 6.87 | 6.16 | 6.79 | 10.26 | 3.30 | 3.61 | 5.55 | 0.72 |
| 2015/16 | 12.93 | 11.49 | 10.65 | 9.36 | 18.01 | 11.76 | 2.27 | 3.06 |
| 2016/17 | 11.96 | 5.84 | 9.8 | 11.77 | 10.72 | 4.93 | 0.43 | 0.44 |
| 2017/18 | 14.68 | 7.42 | 7.79 | 9.19 | 35.93 | 0.41 | 1.84 | 3.69 |
| 2018/19 | 8.62 | 9.9 | 6.34 | 10.45 | 0.00 | 3.38 | 7.87 | 0.44 |
| 2019/20 | 5.98 | 7.78 | 8.87 | 11.68 | 7.32 | 0.08 | 0.08 | 0.32 |
| 2020/21 | 7.55 | 8.16 | 9.91 | 10.74 | 1.29 | 0.01 | 0.59 | 0.14 |
| 2021/22 | 4.3 | 7.43 | 10.67 | 13.58 | 19.24 | 0.40 | 2.33 | 6.10 |
| Total | 86.86 | 80.61 | 91.45 | 111.1 |
| Mean | 8.686 | 8.061 | 9.145 | 11.11 |
| SD | 3.243 | 1.593 | 1.546 | 1.325 |
| CV | 37.334 | 19.757 | 16.902 | 11.926 |

**For NIMB**





CV = 

**For NSBI**





CV = 

**For RBBL**

,



CV=

**For ADBL**

,



CV=

**APPENDIX VI**

**Returnon Loan and Advances**

Let X1, X2, X3andX4denote the ratio NIMB, NSBI, RBBL and ADBL respectively.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FY** | **NIMB** | **NSBI** | **RBBL** | **ADBL** | **(X1-`X1)2** | **(X2-`X2)2** | **(X3-`X3)2** | **(X4-`X4)2** |
| 2012/13 | 2.49 | 2.18 | 4.78 | 2.64 | 0.35 | 0.06 | 0.67 | 0.44 |
| 2013/14 | 3.14 | 2.14 | 5.86 | 4.66 | 0.00 | 0.08 | 3.59 | 1.83 |
| 2014/15 | 2.86 | 1.81 | 4.09 | 2.93 | 0.05 | 0.37 | 0.02 | 0.14 |
| 2015/16 | 2.5 | 2.64 | 4.17 | 2.67 | 0.34 | 0.05 | 0.04 | 0.41 |
| 2016/17 | 4.13 | 2.58 | 2.43 | 3.02 | 1.10 | 0.03 | 2.35 | 0.08 |
| 2017/18 | 3.73 | 2.44 | 4.83 | 6.12 | 0.42 | 0.00 | 0.75 | 7.91 |
| 2018/19 | 2.96 | 2.67 | 3.17 | 2.76 | 0.01 | 0.06 | 0.63 | 0.30 |
| 2019/20 | 2.98 | 2.48 | 2.91 | 2.61 | 0.01 | 0.00 | 1.11 | 0.49 |
| 2020/21 | 2.98 | 2.67 | 3.65 | 2.25 | 0.01 | 0.06 | 0.10 | 1.12 |
| 2021/22 | 3.03 | 2.59 | 3.75 | 3.41 | 0.00 | 0.03 | 0.05 | 0.01 |
| Total | 30.8 | 24.2 | 39.64 | 33.07 |
| Mean | 3.08 | 2.42 | 3.964 | 3.307 |
| SD | 0.479 | 0.272 | 0.965 | 1.128 |
| CV | 15.565 | 11.241 | 24.338 | 34.120 |

**For NIMB**





CV = 

**For NSBI**



CV = 

**For RBBL**

,



CV=

**For ADBL**

,



CV=

**APPENDIX VII**

**Return on Equity Capital**

Let X1, X2, X3andX4denote the ratio NIMB, NSBI, RBBL and ADBL respectively.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FY** | **NIMB** | **NSBI** | **RBBL** | **ADBL** | **(X1-`X1)2** | **(X2-`X2)2** | **(X3-`X3)2** | **(X4-`X4)2** |
| 2012/13 | 16.77 | 16.05 | 27.89 | 23.03 | 18.31 | 1.28 | 52.64 | 0.18 |
| 2013/14 | 21.79 | 16.19 | 17.53 | 19.56 | 0.55 | 0.98 | 9.64 | 15.12 |
| 2014/15 | 16.25 | 15.02 | 25.07 | 24.23 | 23.03 | 4.67 | 19.67 | 0.61 |
| 2015/16 | 13.28 | 20.31 | 22.83 | 21.56 | 60.36 | 9.78 | 4.82 | 3.57 |
| 2016/17 | 13.76 | 22.85 | 18.3 | 26.98 | 53.13 | 32.13 | 5.45 | 12.47 |
| 2017/18 | 30.94 | 17.08 | 16.85 | 29.64 | 97.83 | 0.01 | 14.33 | 38.33 |
| 2018/19 | 23.02 | 17.46 | 17.6 | 28.54 | 3.88 | 0.08 | 9.21 | 25.92 |
| 2019/20 | 23.5 | 14.85 | 24.53 | 17.65 | 6.01 | 5.44 | 15.17 | 33.63 |
| 2020/21 | 24.12 | 15.81 | 21.58 | 19.63 | 9.43 | 1.88 | 0.89 | 14.58 |
| 2021/22 | 27.06 | 16.2 | 14.17 | 23.67 | 36.13 | 0.96 | 41.80 | 0.05 |
| Total | 210.49 | 171.82 | 206.35 | 234.49 |
| Mean | 21.049 | 17.182 | 20.635 | 23.449 |
| SD | 5.556 | 2.392 | 4.167 | 3.801 |
| CV | 26.394 | 13.922 | 20.192 | 16.208 |

**For NIMB**





CV = 

**For NSBI**



CV = 

**For RBBL**

,



CV=

**For ADBL**

,



CV=

**APPENDIX VIII**

**Return on Assets (ROA)**

Let X1, X2, X3andX4denote the ratio NIMB, NSBI, RBBL and ADBL respectively.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FY** | **NIMB** | **NSBI** | **RBBL** | **ADBL** | **(X1-`X1)2** | **(X2-`X2)2** | **(X3-`X3)2** | **(X4-`X4)2** |
| 2012/13 | 2.2 | 1.03 | 3.5 | 1.89 | 0.02 | 0.16 | 0.47 | 0.01 |
| 2013/14 | 2 | 1.01 | 3.99 | 2.2 | 0.00 | 0.17 | 1.38 | 0.16 |
| 2014/15 | 1.6 | 0.83 | 2.9 | 1.23 | 0.21 | 0.36 | 0.01 | 0.32 |
| 2015/16 | 2.6 | 1.19 | 2.97 | 1.26 | 0.29 | 0.06 | 0.02 | 0.29 |
| 2016/17 | 2.3 | 1.51 | 1.72 | 1.47 | 0.06 | 0.01 | 1.20 | 0.10 |
| 2017/18 | 1.9 | 1.64 | 3.12 | 3.22 | 0.03 | 0.04 | 0.09 | 2.03 |
| 2018/19 | 2 | 1.59 | 2.32 | 1.42 | 0.00 | 0.03 | 0.25 | 0.14 |
| 2019/20 | 2.1 | 1.57 | 2.15 | 1.6 | 0.00 | 0.02 | 0.44 | 0.04 |
| 2020/21 | 2.13 | 1.97 | 2.71 | 1.42 | 0.00 | 0.29 | 0.01 | 0.14 |
| 2021/22 | 1.79 | 1.94 | 2.77 | 2.23 | 0.07 | 0.26 | 0.00 | 0.19 |
| Total | 20.62 | 14.28 | 28.15 | 17.94 |
| Mean | 2.062 | 1.428 | 2.815 | 1.794 |
| SD | 0.263 | 0.374 | 0.622 | 0.585 |
| CV | 12.763 | 26.215 | 22.109 | 32.613 |

**For NIMB**





CV = 

**For NSBI**



CV = 

**For RBBL**

,



CV=

**For ADBL**

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CV=

**APPENDIX IX**

**Earnings per Share**

Let X1, X2, X3andX4denote the ratio NIMB, NSBI, RBBL and ADBL respectively.

(In Rs.)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FY** | **NIMB** | **NSBI** | **RBBL** | **ADBL** | **(X1-`X1)2** | **(X2-`X2)2** | **(X3-`X3)2** | **(X4-`X4)2** |
| 2012/13 | 52.5 | 23.69 | 62.32 | 380.56 | 279.89 | 35.00 | 36.43 | 58845.54 |
| 2013/14 | 39.1 | 24.85 | 77.88 | 445.46 | 11.09 | 22.62 | 466.39 | 94544.57 |
| 2014/15 | 27.6 | 22.93 | 60.57 | 307.49 | 66.75 | 44.57 | 18.37 | 28733.98 |
| 2015/16 | 46.2 | 32.75 | 71.54 | 21.79 | 108.78 | 9.88 | 232.75 | 13499.88 |
| 2016/17 | 40.7 | 34.83 | 47.53 | 21.38 | 24.30 | 27.29 | 76.63 | 13595.33 |
| 2017/18 | 30.9 | 34.48 | 78.83 | 57.07 | 23.72 | 23.76 | 508.32 | 6546.27 |
| 2018/19 | 29.3 | 36.78 | 52.79 | 27.42 | 41.86 | 51.47 | 12.21 | 12223.29 |
| 2019/20 | 29.3 | 33.46 | 31.59 | 32.32 | 41.86 | 14.85 | 609.79 | 11163.82 |
| 2020/21 | 35.7 | 25.16 | 36.91 | 30.26 | 0.00 | 19.77 | 375.35 | 11603.38 |
| 2021/22 | 26.4 | 27.13 | 42.88 | 56.04 | 87.80 | 6.13 | 179.67 | 6714.00 |
| Total | 357.7 | 296.06 | 562.84 | 1379.79 |
| Mean | 35.77 | 29.606 | 56.284 | 137.979 |
| SD | 8.283 | 5.053 | 15.862 | 160.459 |
| CV | 23.156 | 17.068 | 28.181 | 116.292 |

**For NIMB**





CV = 

**For NSBI**



CV = 

**For RBBL**

,



CV=

**For ADBL**

,



CV=