CHAPTER ONE
Introduction

1.1 Background

Nepalese banking and financial system is going through a crisis phase. The central bank has liquidated a number of banks while urging others to merge. Although Nepal receives remittance money equivalent to almost 30 percent of its GDP, our banks seem to be running out of cash. Our banking and financial system is under a liquidity crisis. During normal conditions, the NRB's monetary policy is effective in tackling liquidity problems. Some of the solutions that the NRB has been pursuing are: bank mergers, lowering the CRR, lowering the interbank lending rate, and liquidity injection. Although manipulating the interest rate is also a viable solution, the NRB has been unable to pursue this option aggressively. Maybe NRB's reluctance in committing itself to lowering the interest rates has something to do with the fact that inflation, which is already very high in Nepal, can spiral out of control if interest rates are too low.
(Mukesh Khanal, 2010)

It is difficult to convince the market that lower interest rates are being pursued without affecting NRB's anti-inflationary stance. Low interest rates can be damaging to Nepal and turn the liquidity crunch into a liquidity trap. Also, low interest rate in Nepal would mean that there will be capital flight out of Nepal due to reasons like the pegging, easiness in converting NRs to IRs, and the open border between India and Nepal that facilitates illegal currency trade.

A monetary policy should be pursued only if a financial disturbance has the potential to affect inflation or the real economy. It should not be pursued to solve a financial distress. A viable solution to the liquidity crisis is that our government should buy the banks, with discretion and proper audit to determine which one are good bets. The bad ones that seem like they will not survive even with a government buyout should be allowed to go bankrupt and exit the market. This would be a win-win situation. The

good banks would survive, and the government would make some money during the process.

If we do nothing, and hope the free market fixes the problem sooner or later, we risk aggravating the situation. The recent US debt crisis was a product of the liquidity crunch that started in and around 2007 after the collapse of the real estate housing and land market. Like the US, our liquidity crisis has also occurred due to the slowdown of our real estate market. We could also face a debt crisis very soon if we do not solve this crisis.
(ibid)

To monitor liquidity and funding, financial institutions need to have the capability and knowledge for regular liquidity risk management and reporting that measure the potential impact of moderate risk and crisis situations, and project sources and uses of funds. Sound short-term and long-term liquidity risk management is an integral component of a bank's contingency funding plan, to prepare a bank for any significant funding crisis that could arise. Liquidity management is part of the larger risk management framework of the financial services industry, which concerns all financial institutions whether they are conventional or Nepalese. Studying liquidity management issues is a critical but complex subject. Failure to address the issue may lead to dire consequences, including banking collapse, and by extension, the stability of the financial system.

In fact, most bank failures are due to difficulties managing their liquidity problems. This is also the reason why regulators are very concerned with the liquidity position of financial institutions and current thinking of regulators centre around the strengthening of liquidity framework. For Nepalese financial institutions, liquidity management is more unique due to the fact that most available conventional instruments used for liquidity management are interest-based. The money market is an important component of the liquidity management framework as it is the first avenue to place or borrow short term funds. This gives more reason why addressing liquidity management is very

critical to Nepalese. Through studying the liquidity profiles of banks with credit risk, market risk and operational risk, the program will also help you identify banks with weak liquidity and contingency planning, evaluating various types of contingency funding plans, and anticipate the capital implications of evolving regulatory supervision guidelines of bank liquidity management.

(ibid)

1.1.1 Liquidity Crisis

In macroeconomics, the definition of liquidity goes beyond simple coins and notes. It includes broader credit instruments that grease the wheels of the economy. In strictly technical terms, coins and notes are also liabilities but of the Central Bank. Shortage of currency alone does not bring about liquidity crisis. For liquidity crisis to occur, credit system of the country must be broken because of mis-trust amongst counter-parties. It happened in the US and Europe in late 2008 following the collapse of Lehman Brothers and AIG which led to an explosion in Euro Dollar spread, the global benchmark of credit risk. A corporate analogy might make it clearer. Just because a business does not have cash to pay for employees or vendors does not mean that it has liquidity problem; the owner of the business can go to a bank or to another creditor to get the money, or he/she might just issue IOUs to his/her employees and vendors. That is only possible if the business is trusted by its counter- parties. If not, it will face liquidity crisis and go into bankruptcy.

(Allen and Gale, 1999)

Nepal is not experiencing liquidity crisis. Credit is still flowing through the system. Moreover banks are doing brisk business. There are no stories of a bank run in Nepal.

1.1.2 Shortage of Currency

The amount of currency (coins and notes) needed in an economy depends on three factors; economic activity, price levels and velocity (how fast currency is re-cycled through the system). A rise in economic activity or price levels requires more currency. On the other hand, rise in velocity requires less. A sudden jump in economic activity or

price levels or a sudden fall in velocity could cause currency demand to go up.

In most countries including Nepal, economic activity and price levels do not change suddenly or unexpectedly. Comments made about hoarding of currency because of Voluntary Disclosure of Income Scheme (VDIS) or to speculate on real estate suggest that velocity might have unexpectedly gone down but I doubt that to be the case for several reasons,

(a) it does not make economic sense in Nepal to hoard currency because of high inflation - cash under mattress is losing more than 10 percent of value every year.

(b) In financially under-developed country like Nepal, currency not credit is the main means of business transaction. As such, most of the currency in circulation in Nepal is already in the hands of public – Rs. 125 billion or almost 90 percent compared to less than 25 percent in the US.

(c) Currency held by public has grown at a fairly steady rate since 2004. Although there have been intermittent jumps and falls they are nothing out of the ordinary.

(d) When NRB injected Rs 20-25 billion into the banking system, it did not put that amount of coins and notes into banks' vaults; instead it just credited banks' accounts at NRB - it is an accounting exercise. Moreover, NRB does not have coins and notes in its vaults because all the notes and coins outstanding in the country belong to NRB. To say NRB's interventions helped deal with currency shortage makes absolutely no sense. (Amihud and Mendelson, 2001)

1.1.3 **Balance of Payment Crisis (BoP)**

Balance of Payment (BoP) tracks the amount of money going out of the country called "debit" (paying for imports of goods and services, repatriation of income by foreigners and purchase of foreign assets) and coming into the country called "credit" (getting paid for exports of goods and services, income from foreign assets, foreign aid, remittances

and selling of foreign assets or domestic assets to foreigners). In economic parlance, debit must equal credit *or Balance of Payment must balance* but how it does is the more important question.

To answer the "how question", it is better to look at BoP from "flow" and "stock" prospective. The flow part of BoP is called Current Account (CuA). It includes money flows due to trade, income from foreign assets and unilateral transfers (remittances and foreign aid). The "stock" part of BoP is called Capital Account (CaA). It includes transfer of money due purchases and sales of assets which can be divided into financial and non-financial assets, and government and non-government assets.

Nepal must run CuA surplus because it does not have the wherewithal or the resources to finance deficit either through attracting foreign investment (FDI or portfolio investment) or through borrowing in the international debt market. Fortunately for Nepal, it has been running CuA surplus on the back of strong remittances. The latest data from NRB website for Q3 2008-09 (Jan'09-Mar'09) shows Rs 18 billion CuA surplus made up of Rs 50 billion trade deficit, Rs 4 billion net foreign income (from foreign assets) and Rs 64 billion transfer of which Rs 56 billion was remittances. But apparently that surplus has turned into deficit in the first 4 months of this fiscal year (Jul'09-Sep'09) in the tune of Rs 20 billion on the back of slowing remittances and rising trade deficit.

Remittances come to Nepal in foreign currencies and NRB converts them to NRs. Foreign currency earned this way is used to pay for imports of goods and services, and the surplus accumulates in NRB's balance sheet. Foreign currency in NRB's coffer has been growing steadily in tune of Rs 219 billion by Q3 2008-09. Remittance money converted to NRs goes into the banking system (as deposits) and increases the general money supply UNLESS NRB STERILIZES it but NRB does not seem to have done that. As such, money stock as measured by M1/M2 has been growing rapidly, at 20%+ since July 2008.

CuA surplus turned to deficit in Q1 2009-10 (Jul'09 - Sep'09). This meant deposit growth stopped suddenly but banks were still making loans especially in the real estate sector resulting in an imbalance in money coming in (deposits) and going out (investments). The problem was further exasperated by NRB's directives to banks and cooperative late in 2009 to (a) increase deposits ratio (b) lower loan-to-value ratio on real estate lending. Banks faced serious mis-match in assets (investments) and liabilities (deposits) side of their balance sheets which forced them to (a) raise interest rates on deposits to attract and retain them (b) turn to NRB, the lender of last resort.

NRB was happy to oblige because it can create money out of thin air; it has the legal monopoly to do so. A person or a business can only write checks (debit) against their deposits (credit) at a bank. Even a bank can only write checks against its reserve balance at NRB but NRB can write checks to itself. In doing so, it creates money. NRB has injected Rs. 20-25 billion into the banking system. Incidentally, this amount equaled the amount of CuA deficit. News reports are not clear about how NRB did it, but going by conventional Central Bank practices, NRB likely increased banks' reserves at NRB (debit) - which banks can withdraw to fund deposits - and offset that with the creation of Treasuries (credit) (reports in the media about Treasury auctions and repos do not make sense because those activities withdraw NOT provide liquidity).

Interest rates (inter-bank and on deposits) rose to record heights in Nepal but that is not a reflection of liquidity crisis or shortage of currency. Rather it is a result of sudden increase in demand for deposits due to mis-match in assets and liabilities at financial institutions. The prescription for the problem is quite simple. Nepal Rastra Bank (NRB) must pressure banks to reduce their enlarged balance sheets before assets/liabilities mis-match turns into a genuine liquidity crisis.

This paper will try to address the above issues, the major impacts of liquidity crisis in Nepalese banks since July 2009. The conclusion will elaborate on some issues and finally give an answer as to how can the crisis and Nepalese finance can come together. (NRB, 2008/2009)

1.2 Statement of the Problem

Liquidity, the ease of converting assets to cash, is perhaps one of the most mysterious terms in both finance and macroeconomics. In economic booms the world is abundant with liquidity, but when crisis hits liquidity drains out immediately as if it didn't exist at all.

Unfortunately, the subprime crisis that erupted in 2007 turns out to be a nightmare in nirvana, once again showing how imperfect the financial world can be. In existing banking literature many works focus on the consequences of liquidity crises and liquidity shocks are thus often assumed to be exogenous, which lack the explanation why systemic liquidity shortages come into being. Instead, this monograph, which has been started developing before the crisis, presents a compact model showing how liquidity shortages emerge as endogenous systemic risks, driven by the free-riding incentives of rational agents even if there are only illiquidity shocks.

The government's decision to constitute a high-level committee to probe into deepening liquidity crisis and furnish a long-term solution is a welcome step. It's been almost two months that Nepal's banking system is facing a cash shortage (fund available with the banks for immediate investment). Despite repeated attempts of the central bank, it is worrisome that the shortage is worsening, fueling the interbank lending rate to a record 13 percent. As a result, banks have started raising both lending as well as borrowing rates.

There can be measures to control unnatural surge in imports of certain goods like gold. But beware, any step taken to curb blanket consumption will further weaken the already frail growth and promote cross-border smuggling. We think the best short-term monetary treatment will be for the central bank to inject more liquidity against the government bills worth billions being held by the banks. It is good to hear that the central bank is thinking on that line

Under the prevalence of these situations, this study attempts to deal with the following problems:

1. What is the relation of internal debt and liquidity management?

2. Does commercial banks and Development banks follow NRB (Nepal Rastra Bank) directive in terms of lending and in liquidity management?
3. What are the issues in internal debt and liquidity management?
4. Are the practices followed accordingly as guided by NRB?
5. How the banking regulations affect the internal economy?
6. What are the major impacts of liquidity crisis?
7. What are the measurements or tools that banks took during crisis?

1.3 Objective of the Study

The general objective of the study is to pinpoint the major impact of the liquidity crisis in Nepalese financial System. There will be two banks such as Nabil Bank Ltd. (NBL) and Ace Development Bank for references purpose of the whole study. The thesis would get conclusion based on the relevant data taken from the Nabil bank and Ace Development bank. Moreover, the objective of this study is to understand or figure out the liquidity position of these two banks. But the specific objectives of the study are as follows

1. To figure out causes and Consequences of the Liquidity Crisis.
2. To have a comparative analysis of the liquidity position, Profitability status, leverage standing and activity of the bank during the crisis.
3. To find the impact on current ratio.
4. To find the impact on Loan and Advance to Total Working Fund ratio.
5. To find the impact on Loan and Advance to Fixed Deposit Ratio.
6. To find the impact on Bank Balance to Current Assets Ratio.
7. To find the impact on Balance with N.R.B to Total Deposit
8. To find the impact on Loans and Advances to Total deposit
9. To find the impact on Investment to Total Deposit.
10. To find the impact on Return on Assets.
11. To find the impact on Return on Investment.
12. To find the impact on Net Income to Loan and Advances
13. To find the impact on Return on Assets.

1.4 Importance of the Study

The present study is about the major impact of liquidity crisis, internal debt and liquidity position of the bank. So, this report will be helpful for pinpointing various problems relating to the bank, causes of liquidity crisis, consequences of crisis, liquidity Management of the Bank. The following are the points which throw light on the significance of this thesis:

1. This thesis is prepared for the partial fulfillment of the requirement for the master's degree in business administration.
2. This thesis may be useful for the library purpose so that only student wishing to prepare a report can use as reference purpose.
3. This thesis can be used as guidelines while preparing a small project report.
4. The thesis may be useful for the organization to improve their performance on the various works, as the suggestion and recommendation have been provided.

1.5 Limitation of the Study

The so-called "liquidity crisis" in Nepal has been hogging news headlines since last summer (2009) and the situation seems to be getting worse. Several policymakers and commentators have lent their opinion on the issue, but in my view, they seem to engender more confusion than clarity. The reason being that discrete economic concepts are used inter-changeably. Is Nepal suffering from liquidity crisis or from shortage of currency or from balance of payment crisis? They are all NOT the same. Commercial banks render various services to its customers. One of the main services of the bank is to accept deposit and advance loans. The research is limited to credit aspect mainly with loans and advances only.

This study is limited by following factors:-

1. Secondary data are used to analyze for result interpretations, so the accuracy of the findings depends on the reliability of the available information.

2. Due to time and resource factor only one Commercial bank and one Development bank are taken for the study. The banks selected for the study is mainly concerned with Nabil Bank ltd. and Ace Development Bank Ltd.

3. The study covers only a period of three years from and conclusion drawn confines only the above period.

4. This study will be done for the partial fulfillment of Masters of Business Studites program of Tribhuvan University.

1.6 Organization of the Study

This study has been divided into five chapters and is organized as follows:

Chapter 1: Introduction

The first chapter is the introduction chapter, which consists of background of the study, statement of the problem, objectives of the study, importance of the study, limitations of the study and organization of the study.

Chapter 2: Review of Literature

The second chapter deals with the review of literature with concept of some terminologies of debt and liquidity. The second part of this chapter consists of review of books, journals, previous study, research papers and review of unpublished thesis of various research students.

Chapter 3: Research Methodology

The third chapter deals with the research methodology used on this study. It consists of introduction, research design, and sources of data, population and sample, data gathering procedure and analysis of data.

Chapter 4: Presentation and Analysis of Data

Fourth chapter is the analytical presentation of the study. This chapter consists of analysis, interpretation and major findings of the study. This is the most important part of the study.

Chapter 5: Summary, Conclusion and Recommendations

Fifth chapter deals with the summary, conclusion and recommendations of the study. The bibliography and appendices is also included in the chapter.

1.7 Introduction of the Banks under study area

1.7.1 Nabil Bank ltd.

1.7.1.1 Overview

Nabil Bank Ltd. is the first commercial Joint Venture bank in Nepal, which was established in 1984 under the Company Act 1964. Dubai Bank Ltd. was the initial foreign joint venture partners with 50% equity share investment. The shares owned by Dubai Bank Ltd. (DBL) were transferred to Emirates Bank International Ltd., Dubai by virtue of its annexation with the later. Later on Emirates Bank International Ltd. Dubai sold its entire 50% equity holding to National Bank Ltd., Bangladesh. Out of the 50% shares, NIDC has taken 10%, Rastriya Beema Sansthan and Nepal Stock Exchange Center has taken 9.66% and 0.33% shares respectively and remaining 30% shares were issued to general public of Nepal.

Nabil Bank Ltd. (Nabil) commenced its operation on 12 July 1984 as the first joint venture bank in Nepal. Dubai Bank Ltd., Dubai (later acquired by Emirates Bank International Ltd, Dubai) was the first joint venture partner of Nabil. Currently, NB (International) Limited, Ireland is the foreign partner. Nabil Bank Ltd. had the official name Nepal Arab Bank Limited till 31st December 2001. Nabil is the pioneer in introducing many innovative products and marketing concept in banking sector of Nepal with 16 branches and 2 counter in all major cities. It is the only Bank having its presence at Tribhuvan International Airport, only international airport of Nepal. Also, the number of outlets in the country is the highest among the joint venture and private banks operating in Nepal. Success of Nabil is milestone in the banking history of Nepal. It paved the way for the establishment of many commercial banks and financial institutions. Nabil provides a full range of commercial banking services through its outlets spread across the nation and reputed correspondent banks across the globe. Moreover, Nabil has a good name in the market for its highly personalized services to the customers.

1.7.1.2Capital Structure

The share holding of Nabil Bank Ltd. is as follows:

N.B. (International) Limited, Ireland	50%
Nepalese Public	30%
Nepal Industrial Development Corporation	10%
Rastriya Beema Sansthan	9.67%
Nepal Stock Exchange Limited	0.33%

[Sources: Nabil Center, Head Office Beena Marga, Durbar Marg]   Table no: 1

[Sources: Nabil Center, Head Office Beena Marga, Durbar Marg]

Authorized Capital	:	Rs.500 Million
Issued Capital	:	Rs. 492 Million
Paid Up Capital	:	Rs. 492 Million

(4,916,544 shares of Rs. 100 each)

1.7.1.3   Branches and Location

The number of outlets in the country is highest among the joint venture and private banks operating in Nepal. Success of Nabil is a milestone in the banking history of Nepal. It paved the way for the established of many commercial banks and financial institutions. Altogether

there are 17 branches of Nabil Bank which has been providing their best   services and facilities to their customer.

1.7.1.4 **Performance of Bank**

Nabil Bank Limited had the official name Nepal Arab Bank Limited till 31st December 2001. Nabil is the pioneer in introducing many innovative products and marketing concept in banking sector of Nepal with 17 branches and 1 counter in all major cities. It is the only Bank having its presence at Tribhuvan International Airport, only international airport of Nepal. Also, the number of outlets in the country is the highest among the joint venture and private banks operating in Nepal. Success of Nabil is a milestone in the banking history of Nepal. It paved the way for the establishment of many commercial banks and financial institutions. Nabil provides a full range of commercial banking services through its outlets spread across the nation and reputed correspondent banks across the globe. Moreover, Nabil has good name in the market for its highly personalized services to the customers.

1.7.2 Ace Development Bank Ltd.

1.7.2.1 Overview

Ace Development Bank is a well known name in the financial field of Nepal. It was established in the year 1995 as Ace Finance Ltd. and it was upgraded as a Development bank in the year 2007. Ace is one of the leading players in financial markets of Nepal. It is considered one of the highest profits making institution in financial market of Nepal. Ace provides wide range of banking services except Letter of Credit. Besides general services, Ace is a merchant banker which provides IPO (issue management), Registrar, and Issuance of debt securities, Portfolio management, and many more.

Over the years, customers and regulators have been in appreciation of the many financial products and innovations developed by Ace. Their diversified risk asset portfolio has served the economy in every sector as have the wide choices of deposit account schemes. Their wholesale banking initiatives have assisted numerous commercial banks and private enterprises with risk management concerns such as debentures and rights.

The Institute of Chartered Accountants of Nepal has Awarded Ace "Best Presented Accountants Award" for four in a row for accuracy and transparency in the book of Accounts. (Ace Development Bank Limited, Naxal, Kathmandu)

1.7.2.2 Mission:

With its establishment till today Ace Development Bank has become a leading player in financial market of Nepal due to its clear Mission and Vision. The mission is "BANKING ON INNOVATION AND INTEGRITY".

1.7.2.3 Vision

Ace Development Bank holds of a vision to become a Leading Bank of the country by providing premium Products and services to the customers, thus ensuring attractive and substantial returns to the stakeholders of the Bank.

1.7.2.4 Ace as a Merchant Banker:

In banking, a Merchant Bank is a financial institution primarily engaged in offering financial services and advice to corporations and to wealthy individuals. With providing the regular Banking service Ace is also providing the Merchant banking service in Nepalese Financial Market. It is contributing as a merchant bank from the work like Issue manager to the Financial Advisory, Portfolio Management service. Public issue management is the key task that is done to other financial institutions. It collects huge amount of money as issue manager and takes certain commission for managing the IPO of other institutions. Ace has always a positive balance of cash for liquidity management and doesn't have to face liquidity problem.

CHAPTER TWO
REVIEW OF LITERATURE

2.0 Overview

This chapter is focused on the theoretical concepts of the liquidity and relation with other subject matter in relation to banks. This chapter is further divided into different parts as follows:

1. Theoretical Framework
2. Review of Journals/Magazines/Newspaper/Books
3. Review of previous research

These parts are to be considered as very important phase of the study. It is explained in detail follows

2.1 Theoretical Framework

2.1.0 Introduction:

Liquidity management is part of the larger risk management framework of the financial services industry, which concerns all financial institutions whether they are conventional or Nepalese. Studying liquidity management issues is a critical but complex subject. Failure to address the issue may lead to dire consequences, including banking collapse, and by extension, the stability of the financial system. In fact, most bank failures are due to difficulties managing their liquidity problems. This is also the reason why regulators are very concerned with the liquidity position of financial institutions and current thinking of regulators centre around the strengthening of liquidity framework.

For Nepalese financial institutions, liquidity management is more unique due to the fact that most available conventional instruments used for liquidity management are interest-based. The money market is an important component of the liquidity management framework as it is the first avenue to place or borrow short term funds. This gives more reason why addressing liquidity

management is very critical to Nepalese banks since NFI faces bigger challenges due to NRB's considerations and the nature of their operations.

Liquidity Crisis has been a topic of gossip, topic of huge discussion in the board rooms of Banks and Financial Institutions (BFIs) and big corporate houses, and also topic of news and views in the news papers and journals across the country. It is very common to listen that "BFIs do not have money". Nepalese financial sector is fighting against the severe liquidity problem since last 9 months. Initially, when the crisis started, non release of budgetary fund for FY 2066/67 was taken as the one of the main reasons for liquidity problem. However, even after release of budgetary fund, though late, the problem remained as it is and conditions worsen more.

Liquidity crisis is a negative financial situation characterized by a lack of cash flow. For a single business, a liquidity crisis occurs when the otherwise solvent business does not have the liquid assets (i.e., cash) necessary to meet its short-term obligations, such as repaying its loans, paying its bills and paying its employees. If the liquidity crisis is not solved, the company must declare bankruptcy. An insolvent business can also have a liquidity crisis, but in this case, restoring cash flow will not prevent the business's ultimate bankruptcy. It is the financial manager's job to ensure that this never happens. But it happens and all interests involved start to scramble to protect their positions.

2.1.1 Defining Liquidity: Meaning and Concept

"First we describe assets as liquid if they can be easily converted into consumption without loss of value. Second, we describe individuals as having a preference for liquidity if they are uncertain about the timing of their consumption and hence desire to hold liquid assets". This definition contains three traits that constitute liquidity that is thought to be a characteristic of an asset, i.e.:

1. Easy convertibility into cash;
2. No transaction costs;

3. The preferred choice of rational investors;

Amihud and Mendelson (2001) provided the following definition for a liquid asset: "An asset is liquid if it can be bought or sold at the current market price quickly and at low cost. Illiq- uidity is thus related to the costs of executing a transaction in the capital markets".

Liquidity, while it is the characteristic of an asset, is nevertheless defined as the ability to sell the respective asset at low cost in the market. Hence, liquidity seems to be something that goes beyond assets, i.e. something provided by a market. Accordingly, O'Hara starts with the statement that "liquidity relates to the ability to buy and sell assets easily" and goes on to elaborate further that "a liquid market is one in which buyers and sellers can trade into and out of positions quickly and without large price effects".25 This view relates liquidity to the size of a market, the more buyers and sellers meet in a market and the more funds the respective buyers and sellers have at their disposal the better liquidity seems to be. Consequently, Benic and Franic depict that the "fundamental assumptions of a liquid market are the existence of significant number of buyers and sellers at all times, the ability to execute the next transaction at the same price as the previous one and market capacity to absorb large transactions without significant price impact".26 This statement is based on the assumption that liquidity is the characteristic of an asset that guarantees its transferability into legal tender without loss in value.27 However, almost unnoticed, the perspective on liquidity as a characteristic of assets has been confused with the perspective on liquidity as a characteristic of markets.

Accordingly, Schmukler, Yeyati and Van Horen (2007) define a liquid market as "one where market participants can promptly execute large volume transactions without significant price impact". Virtually unnoticed, not only did the perspective on liquidity shift to a certain degree across the definitions mentioned as well, but the content grew as well. While liquidity started of as the characteristic of an asset that allowed its conversion into, e.g., legal tender it

evolved into a characteristic that allowed this conversion at low-price as well. Hence, the definition of liquidity, without sharing the premises of classical economy held by Allen and Gale (1999) resembles the definition provided by these authors fairly close. The pinnacle being the lack of any kind of premise about preferences held by buyers and sellers. However, what characterized much of the literature surveyed for this thesis with respect to a definition of liquidity is the confusion when it comes to the relation between the liquid asset and the liquid market. This confusion is reaches almost perfection in Wuyts article: "An earlier definition of liquidity can be found in Keynes (1930), who considers an asset as more liquid if it is more certainly realizable at short notice without loss.

Within the context of this paper, I start from the following definition, which goes along the same lines: 'a market is liquid if traders can quickly buy or sell large numbers of shares without large price effects", it refers to the willingness of a market participant, a liquidity supplier, to take the opposite side in a transaction initiated by another trader, the liquidity demander". To disentangle this liquidity-blend one first has to differentiate liquidity as a trait of an asset from liquidity as a trait of markets, while liquidity in the former sense refers to the ease of getting rid an asset, liquidity in the latter sense refers to the structure of a market that facilitates getting rid of assets for a number of asset holders.

While a liquid asset is an asset that is easily convertible into legal tender, a liquid market is a structure that provides this opportunity. So market liquidity can be seen as enabling asset liquidity. In order to get sold, there must be a certain demand for gold bars. The more demand for gold bars (presuming that there is supply), the easier it is to convert a gold bar into another asset, say a legal tender, hence, the more liquid a gold bar is. A place where one can find buyers and sellers of gold bars alike, an exchange, is a facilitator of exchange of buying and selling and, hence, is in itself not liquid, but a provider of liquidity in that it enables and fosters exchange between buyers and sellers. Hence, a market does not have a certain property called liquidity. Rather, the liquidity of a

market is the result of the trading of "liquid assets". Since this conceptualization of liquidity is of some importance to this paper, because it forms the base of subsequent analyses, I have tried to capture these characteristics of liquidity in figure 1.

Figure 1: Conceptual framework of liquidity
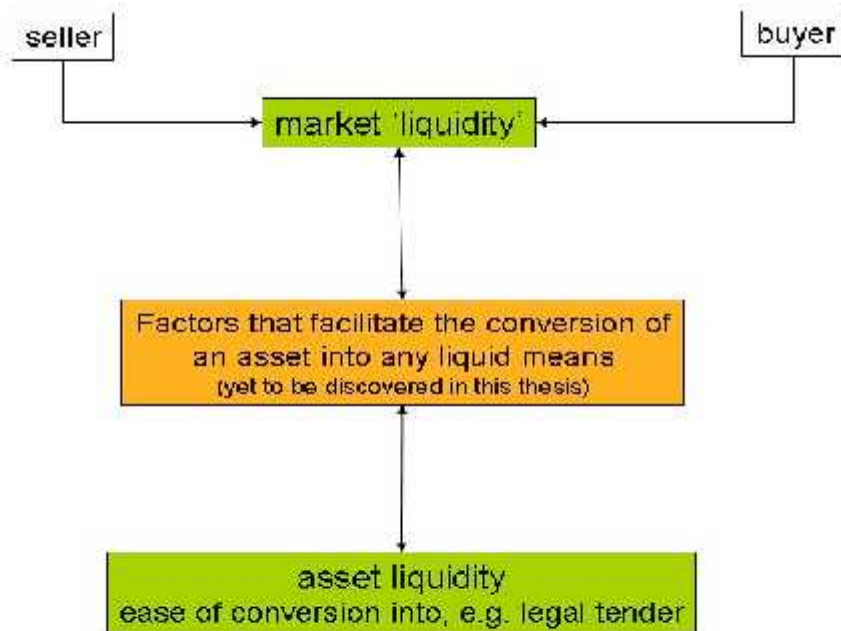
Researchers trying to measure the liquidity of an asset or the liquidity-facilitating structure of a market have to find the factors that influence the conversion of an asset into another asset, i.e. that influence the amount of trade in an asset. It is in this context that the dimensionality of market liquidity comes into play, with dimensions of market liquidity being nothing more as descriptive measures for the facilitating trading-function of a market. Hence, the dimensionality of market liquidity is closely linked to the measurement of liquidity.

(Schmukler, Yeyati and Van Horen, 2007)

According to Sayers (1968), "Liquidity is the word that the bankers use to describe his ability to satisfy demand for cash, in exchange of deposits."

According to Nepal Commercial Bank Act 2031, section 1(f), "Liquidity is supposed to include bank cash in vault, amount deposited in current account, amount deposited in Nepal Rastra Bank and those assets which are specified as liquid."

Liquidity is the availability of cash at the time needed at a reasonable cost. The capacity of banks to exchange cash for deposit is the liquidity. Liquidity is that part of the total assets, which can be paid immediately to meet the current obligation. The commercial banks need a high degree of liquidity in its assets. Banks must hold sufficient liquidity in the form of cash and liquid assets such as government securities CRR in central bank. So those banks never fail to meet daily cash demand.

Liquidity simply means money ness. It is characterized by the use of converting an asset into money at a little cost. In the assets side of the balance sheet of the commercial bank there will be liquid assets, which can be easily converted into cash- such assets are called liquid assets. In another words, a liquid assets is one which is easily expendable, marketable (transferable) and has capital certainty. Hence, managing and maintaining sufficient degree of liquid assets is termed as liquidity. Liquidity can also be defined as the bank ability to meet immediate maturing liabilities. Liquid assets mainly include:-

a. Cash with other banks
b. Balance with other bank
c. Money at call and short deposit
d. Investment in government securities such as treasury bills, development bonds, saving bonds etc.

Among these, first two are the most liquid assets and next two are termed as near-liquid assets. But both of these assets are maintained to meet the liquidity

needs of the bank. But, however, one difference among these is that, the most liquid assets don't earn same returns whereas the near-liquid asset does.

Lack of adequate liquidity is often one of the first signs that a bank is in serious financial trouble. The troubled bank usually begins to lose deposits. This erodes its supply of cash and forces the bank to dispose is more liquid assets. In this situation, other banks become increasingly reluctant to lend the trouble bank any fund without additional security or a higher rate of interest. This will further reduce the earnings of the problem of bank and threatens it with failure.
(Allen and Gale, 1999)

2.1.2 Role and Importance:

In order to earn profit all the bankers must maintain confidence and to maintain confidence it must maintain adequate degree of liquidity in his assets. The main purpose of holding liquid assets is to meet normal banking transaction and make scheduled payments. The purpose of managing liquid assets is to minimize the opportunity cost of holding. The main role or importance of liquidity as follows:

To meet the demand of depositors:
The main obligation of bankers is to repay the fund to his depositors as and when they demand. If the bank could not make the payment on time it may loose public confidence. The ultimate outcome of this may be the failure of bank. Hence, the bank must safeguard its position by maintaining sufficient liquidity.

To meet the loan demand:
To earn profit, the bank should have liquidity to meet the demand of good rating borrowers. If the demand for loan by excellent borrowers could not be fulfilled, the bank may loose good lending business with such excellent borrowers, which may decrease the profit of the bank.

To maintain cash reserve ratio (CRR):

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In order to meet the sudden withdrawal of deposits, which varies with the composition of total deposits, the commercial bank must maintain sufficient cash reserve ratio. Every commercial bank must maintain minimum cash reserve ratio as prescribed by the central bank.

To meet administrative expenses:

For meeting the daily administrative expenses including the personal expenses for smooth operation of banking business also liquidity is essential.

For contingencies:

Certain portion of liquidity should be maintained for contingencies or for precautionary motive by the bank. It may be required to save from risk and instability.

Finally, the motive of managing liquid assets is to minimize the opportunity cost of holding cash and maximize the returns on the portion of the funds that is not required immediately.

(Ibid)

2.1.3 Demand and Supply of Bank Liquidity:

Banks liquidity is essential to meet various cash demands. The bank liquidity is demanded under various headings such as by cheques payment, loan advancement, administrative expenses and meet contingencies. In addition to this, bank liquidity is essential to satisfy the interest of shareholders.

Demand for Liquidity:

Demand for liquidity generally arises from transaction motive, speculative motive and percolation motive. Moreover, the main demand for liquidity arises from the following two sectors:

1. **To meet the demand of deposits:**

In order to operate banking business, sufficient cash balance of liquid assets must be maintained by all banks. Since the deposits may be withdrawn with or without prior notice, all commercial banks must meet the demand and maintain its liquidation position.

2. To meet cash reserve ratio (CRR):

Each commercial bank must maintain cash reserve ratio as prescribed by the central bank. So, in case the CRR prescribed by the commercial bank is higher, then higher liquidity must be maintain and vice versa. Cash reserve ratio is the minimum percentage of total deposit, which must maintained by each bank within its assets plus minimum cash reserve with the central bank. Sometimes, central bank may issue directions to maintain statutory liquidity ratio (SLR).

Statutory liquidity ratio means to maintain CRR plus to invest certain percentage of deposits in government securities. In Nepal, as regard to CRR, each commercial bank must maintain at least 3% of total deposits in its vault plus 7% of total deposit of current and saving account and 4.5% of total fixed deposits. This must be maintained as reserve with Nepal Rastra Bank.

Supply of Liquidity:
The bank should manage the forgoing demand for liquidity through several potential sources of the supply of liquidity, mainly; the supply of liquidity of commercial banks will arise from the following heading of its assets:

1. Cash in hand:
The main supply of liquidity of bank comes from the cash balance hold by itself. So, cash balance is the main sources of liquidity which also called the first line of defiance.

2. Balance with other banks:

Commercial banks will be required to maintain current account with total and foreign banks for transaction purpose in addition to CRR, the banks may maintain more balance with central bank. Such surplus balance with other banks will be the sources of supply of liquidity.

3. Money at call and short notice:

Bank utilize some portion of funds, in inter banks call money of overwrite plowmen or a advancing credit for very short period which can be called bank short notice. That is why it is called as second line of defense. But inter bank loan can be used for very short-term liquidity need or for maintaining CRR.

4. Investment on Government securities:

Surplus funds may be invested by the bank in government securities, which in itself is a liquid asset. So, the investment in government securities is also good sources of supply of liquidity because refinance facility from central bank can be received for arrangement of liquidity.

2.1.4 Predicting Bank Liquidity Needs:

Banks liquidity needs can be predicted from the following factors:

1. Growth of banking habits:

The amount of liquidity need of commercial banks depends on the banking habits of the people. On the other hand, if also most of the payment is made on cash, maintaining of more liquidity will be needed with the same ratio.

2. Existence of clearing house:

Banker's clearinghouse means providing the sufficient of the payment of cheques drawn by each other member banks through account books entries only. If there is clearing house arrangements the bank will not need to handle cash because the settlement of giving and giving of payments will be done through the debit and credit

entries in the account books the transaction house. Thus the liquidity needs of the bank will decline on same ratio more clearing houses will be managed.

3. The type size of deposit:

The type size of deposits also determines the liquidity needs of the bank. Since the amount of deposits matures only after the expired date banks need less liquidity. Similarly, if there is high amount of current deposits than withdrawals, more liquidity needs of the bank is credited.

4. Nature of advance and facility of refinance:

As central bank is the lender of last resort of commercial bank, the liquidity needs of the commercial bank depend upon the credit policy of central bank for securing facility or the already granted by commercial bank and discounting of bills.

5. Occasion and festival period:

At the tie of occasion and national festivals like Dashain, Tihar, New Year day etc large volume of cash transaction is done by most people. At that time more liquidity need to be predicted in accordance with the previous payment transaction and past experiences (Schmukler, Yeyati and Van Horen (2007)

2.2 Review of Books/journals/Magazines/Newspaper

2.2.0 Criteria of Measuring Bank Liquidity:

Many banks estimate their liquidity on the basis of experience and economic movement. The liquidity need of bank is also measured by the position of a bank in an industry. There is no specific method that gives an exact figure of liquidity but is influenced by the discipline of the financial market place. The various criteria of measuring bank liquidity are as follows:

a. Public confidence

It is the basic indicator that the bank is losing deposits and borrower funds believe that there are some danger signals by which the bank is likely to fail to fulfill its financial

obligation in time. Such indicators are the fall of stock market, the degradation by rating agencies.

b. Sell of assets in loss

When the bank sells its assets in hurry with significant losses in order to cover the liquidity demands, such frequent occurrences also demands more liquidity in the bank. This is also a criterion for measuring liquidity needs.

c. Meeting commitments to good credit customers

If the bank is committed to honor all reasonable and potentially profitable projects of good customers or demanding loan for such, in such circumstances the management of bank is pressured for liquidity needs. In this case, either the bank has to turn down the loan request or search for cash from alternative resources.

d. Borrowing from the central bank or regulatory authority

The frequent borrowing from regulatory authority may also raise question in the financial status of the bank. In order to avoid such confusion in the eyes of regulatory, authority, it may also force to arrange adequate cash reserve for contingency. This is also one of the indicators of liquidity requirement of the bank.

2.2.1 Strategies for Liquidity Management:

Strategy refers to a detail plan for achieving success in different situations. Therefore, strategy for liquidity management is related to the skills of planning for achieving success in banking business through proper managing the liquid assets and maintaining optimum level of liquidity. Here the bank's strategy of managing liquidity through assets and liability management is discussed.

a. Experience strategy:

The experience method of assets-liability management is the least in terms of both analysis and cost. Under this, bank managers use common sense apart from the study and market condition and industry trend.

b. Assets allocation strategy

It is also one of the strategies followed by the bank manager to adequate liquidity level. After allocating sufficient capital for the fixed assets necessary to support a banking operation, the manager then sets aside funds to meets the legal reserve requirements. The manager is also concerned to provide for the liquidity needed to respond to the variability of loan demand and deposits levels. This is done by forecasting the future amounts of these variables and then allocating sufficient funds into various short-term marketable securities.

c. Conversion of funds strategy

Under this strategy, the conversion funds strategy attempts to match long term assets to as stable liabilities and stable loan demands and short term assets to volatile liabilities and volatile loan demand in order to keep update of liquidity are used. Assets are adjusted according to bank's position.

d. Liability management strategy

It allows for the aggressive management of a significant portion of a bank's balance sheet previously though untouchable. Since the strategy is painful, it is consider as emergency method of raising funds for liquidity management.

e. Gap management strategy

Gap management is a strategy of managing of rate sensitive assets and rate sensitive liability to find out the rate sensitive funds gap. It tells us the required funds as liquidity to avoid undesirable circumstances.
(Schmukler, Yeyati and Van Horen, 2007)

2.2.2 Liquidity Management Approach:-

The banks should manage their liquidity in such a way that they will be able to insure the availability of funds to meet all normal business commitments. The main approach of liquidity is as follows:

Shift ability or Asses Conversion Approach:

According to traditional approach liquidity management is to be store liquidity in bank investment or to use central bank funds as temporary source of fund. This idea is to shift liquidity assets into cash to meet the need of the bank like increased loan demands and deposit withdrawn.

This approach of liquidity is based on safety at the expenses of profitability. Under this approach, storing of liquidity can be classified into 4 types.

a. **Primary Reserve:** Primary reserve is that post of bank cash reserve, which is more than required cash reserve ratio. The excess cash reserve can be used for working to avoid embarrassing cash storage.

b. **Secondary Reserve:** Secondary reserve includes strong of liquidity in short term government securities like bills. It also includes high quality security with very low default risk short maturity i.e. less than one year easy marketable securities.

c. **Tertiary Reserve:** Tertiary reserve is arranged to provide liquidity protection against long term requirements like increase loan demand or reduces deposit inflows, government securities with maturity of one or two years are included in tertiary reserve.

d. **Investment Reserve:** In investment reserve, the security with maturity period of more than two years is included in it. Therefore, this reserve is arranged for long term liquidity management.

2.3 Review of Past research related with the study:

2.3.0 The Liquidity of Banks:

Bank needs liquidity to meet loan demand, deposit withdrawals and for maintaining CRR or SLR requirement as prescribed by the central bank.

The liquidity need of Banks: -

The liquidity of a bank may be affected by external and internal factors.

The external factor includes: -

a. Primary Interest Rate

b. Supply and Demand Position of loans, saving and investment situation.

c. Central bank requirements.

d. The growth and position of financial market.

The interest factor includes:-

a. Lending policy

b. Management capacity

c. Strategic planning

d. Funds flow situation

2.3.1 Dimensions of liquidity

It has been argued that dimensions of market liquidity are nothing more than descriptive entities, i.e. factors that describe a market. A look at the dimensions of market liquidity provides evidence for this argument. Harris distinguishes four dimensions of (stock) market liquidity:

1. Width, i.e., the bid-ask spread for a given number of shares;
2. Depth, i.e., the number of shares traded at given bid and ask prices;
3. Immediacy, i.e., the elapsing time between bid and ask;
4. Resiliency, i.e. the speed of recovery of a particular share to a particular level after a price-blow dealt by a large trade;

A closer look at the dimensions gathered by Harris reveals them as being the result of pure observation, i.e. they are descriptive dimensions that stem from inductive methods, hence they are not based in theoretical grounds, rather they are the result of the frame in mind of
the researchers who collected or observed them. This inductive trait of the above mentioned dimensions becomes obvious, when one exchanges the view reported by Harris with the influential view of Sarr and Lybek33 published in an IMF [International Monetary Fund] Working Paper. Here we find five dimensions of liquidity:

1. Tightness, i.e., the transaction costs attached to a deal; transactions costs become
2. obvious in the bid-ask spread or in fees, commission payments and the like
3. Immediacy, i.e., the speed with which orders can be executed (or settled);
4. Depth, i.e. the abundance of orders, be it either buying or selling orders;
5. Breath, i.e., orders are not only large in volume, but in prices as well, which leads
6. to little or no price impact for large orders;
7. Resiliency, i.e., the ability of a market to remove price imbalances;

Comparing the dimensions listed by Harris to the dimensions differentiated by Sarr and Lybek shows discrepancies and commonalities. Width in the spelling of Harris is to be found as tightness in the notation of Sarr and Lybek. Immediacy, depth and resilience are shared dimensions, while breath, i.e. accounting for volume in price is exclusive to the dimensionality proposed by Sarr and Lybek. A more systematic look at the presented dimensions shows that all describe liquidity as a function of

1. The frequency of trades in a market;
2. The volume of trades in a market;
3. The costs attached to trades in a market;
4. The impact of trades in a market;
5. The time elapsed between bid and ask or the time it takes for a market to rebalance after large trades have been made;

Liquidity is assumed to be the higher the more frequent trades are, the higher they are in volume, the less costs are attached to a trade, the smaller the impact large volume trades exert on prices is, and the less time elapses between bid and ask or vice versa. So in order to measure liquidity one can look after the frequency of trades in a market, one can analyze the volume of trades in a market, one can examine the costs attached to the trades and investigate impacts of large orders in a market. Accordingly, and related to this possibilities, a number of measures has been developed in order to catch

1. The frequency of trades, e.g., by using the turnover rate (TR);
2. The volume of trades, e.g. by using the Market-Efficiency-Coefficient (MEC);
3. The bid-ask-spread as a measure for transaction costs;
4. The market impact of high-volume trades, e.g. by using market-adjusted liquidity;
5. The time elapsed between bid and ask and vice versa, i.e. the time it takes to match opposite parties in the market;

(Schmukler, Yeyati and Van Horen (2007)

2.3.2 Turnover Rate:

The Turnover Rate is a simple measure that measures how many times the outstanding volume of an asset changes hands in a certain period. It consequently builds on the price and trading frequency of a share, the outstanding stock of assets and the average price of a trade. To restrict the calculation on outstanding stocks is a logical consequence of the fact that liquidity can only be assumed to exist for tradable stock. Sarr and Lybek in their notation treat Turnover Rate as a volume based measure that gives some account of the breath of a market. However, in their description of Turnover Rate they not only argue with volume, but (in my notation) with frequency as well: "Large numbers of trades are a valuable source of information for transactors and particularly for dealers. They obtain information from order flows, and imbalances in this order flow give them information about the accuracy of their quoted prices".45 The argument has two parts, first, there is the assumption of a relationship between trading-volume and price and second, there is the assumption that the relationship is established by traders or transactors that orient themselves on exchanged volumes. Accordingly, Turnover Rate (TR) incorporates price and trading volume:

$$TR = P_iQ_i/SP$$

where P_i indicates the price of the i-th share, while Q_i indicates the trading volume, while S refers to the outstanding stock and P indicates the average price of i trades. So the numerator provides a simple account of the volume of trades, while the denominator provides a measure for the market capitalization. The rationale behind the Turnover

Rate is that the rate increases with liquidity and, hence, that a high Turnover Rate indicates high liquidity. (Quey-Jen Yeh , 1996)

2.3.3 Liquidity and price

The bid-ask spread as a measure for liquidity rests on a number of assumptions: "The bid ask spread reflects the difference between what active buyers must pay and what active sellers receive. It is an indicator of the cost of trading and the illiquidity of a market". Accordingly, the bid-ask spread consists of costs other than pure selling costs. This, however, contradicts most models of classic economic theory that assume transaction costs to be non-existent. Hence, to establish a price can be done by the simple technique deployed by the Walrasian auctioneer. The process starts with each trader submitting his demand to an auctioneer who after receiving all demands announces a price.

This is followed by each trader's revision of his demand. Trade only does take place after each trader had the opportunity to revise his demand. Based on the revised demand the auctioneer announces another price which again is followed by a revision of demand made by traders. The equilibrium price is found when no further revision is made and trading can take place. However, the Walrasian auctioneer acts in an ideal world where equilibrium prices can be reach at no cost. The bid-ask spread is an indicator that in real world there are transaction cost and, hence, the question arises, what accounts for these costs and, given these costs, how asset prices are established. This question is of some importance to this thesis that investigates the impact of a financial shock, which can be seen as a systematic risk that affects each participant of the market on liquidity. As liquidity is expected to vary with asset prices, i.e. with increasing liquidity, asset prices go down due to the lesser risk.
(Quey-Jen Yeh , 1996)

2.3.4 Past Research on Related Issues:

Taylor (2009) made an empirical investigation on the role of government actions and interventions in the financial crisis that flared up in August 2007 in his book named

"The financial crisis and the policy responses: An empirical analysis of what went wrong". It integrates and summarizes several ongoing empirical research projects with the aim of learning from past policy. The classic explanation of financial crises, going back hundreds of years, is that they are caused by excesses—frequently monetary excesses—which lead to a boom and an inevitable bust. In the recent crisis we had a housing boom and bust which in turn led to financial turmoil in the United States and other countries. He summarizes that monetary excesses were the main cause of that boom and the resulting bust.

Bordo (2008) provides an historical perspective on the current crisis contrasts the old with the modern and offers some lessons for policy. The current international financial crisis is part of a perennial pattern. Today's events have echoes in earlier big international financial crises which were triggered by events in the U.S. financial system. Examples include the crises of 1857,1893, 1907 and 1929-1933. The crisis occurred following two years of rising policy interest rates. Its causes include: major changes in regulation, lax regulatory oversight, a relaxation of normal standards of prudent lending and a period of abnormally low interest rates. The default on a significant fraction of subprime mortgages produced spillover effects around the world via the securitized mortgage derivatives into which these mortgages were bundled, to the balance sheets of investment banks, hedge funds and conduits(which are bank-owned but off their balance sheets) which intermediate between mortgage and other asset backed commercial paper and long-term securities. The uncertainty about the value of the securities collateralized by these mortgages spread uncertainty about the soundness of loans for leveraged buyouts. All of this led to the freezing of the interbank lending market in August 2007 and substantial liquidity injections subsequently by the Federal Reserve and other central banks. Since then the Fed both extended and expanded its discount window facilities and cut the funds rate by 300 basis points. The crisis worsened in March 2008 with the rescue of the Investment bank, Bear Stearns, by JP Morgan backstopped by funds from the Federal Reserve. The rescue was justified on the grounds that Bear Stearns exposure to counterparties was so extensive that a worse crisis would follow if it were not bailed out.

Majid (2003) studied about liquidity position of the Islamic Financial Institutions in his working paper "Devlopment of liquidity management instruments".

Despite the fact that several successful attempts have been made so far to address the problem of liquidity in Islamic banks much need to be done for an effective way in solving the liquidity issues in Islamic banks. Reinforcing cooperation among Muslim countries supportive of Islamic banking can help in solving the problem. This is better done through the existing institutions such as the IIFM. At the same time there is a need of close cooperation between IIFM and Central Banks especially those of member countries. One proposal is to make it mandatory for all market issue in member countries to carry IIFM Sharia'a endorsement. Another proposal is for Central banks to make IIFM endorsed instruments eligible instruments for Islamic banks' reserve requirement. Additionally, Central banks may also hold certain eligible sukuks as part of their reserve management portfolio. From these initial initiatives, the demand for Sharia'a compatible products among all financial intermediaries will grow, thereby creating an active Islamic capital market that can provide a viable alternative to conventional market.

Diamond (1996) emphasizes the role of liquidity on the financial development on his book named "Effects of liquidity on Financial Development". Financial markets and financial institutions compete to and banks make fewer long-term loans. Moreover, they provide investors with liquidity. Diamond examines the banking sector's ability to subsidize those with immediate roles of banks and markets when both are active, liquidity need is reduced. characterizing how development of the financial markets More liquid markets also lead to physical investment affects the structure of and market share of banks. With longer maturity, a smaller gap between the maturity Banks create liquidity by offering claims with a higher of financial assets and the maturity of physical short-term return than exist without a banking system. investments. Financial assets have a shorter maturity than The amount of liquidity that banks offer depends on the physical investments, but this gap approaches zero as the degree of direct participation in financial markets - that market approaches full liquidity. is, on the liquidity of financial markets. Conversely, Diamond provides an analytical basis for developing

banks influence the amount of liquidity offered by short-term markets as a way to stimulate the supply of financial markets. long-term finance and supports the practitioner's view As more investors participate in financial markets, that short-term financial markets are a prerequisite for allowing markets to provide more liquidity, banks shrink the development of viable long-term finance.

Diamond, Rajan (2002) has elaborated that bank failures can themselves cause liquidity shortages on their book "Liquidity shortages and banking crises". Banks can fail either because they are insolvent or because an aggregate shortage of liquidity can render them insolvent. The failure of some banks can then lead to a cascade of failures and a possible total meltdown of the system. Contagion here is not caused by contractual or informational links between banks but because bank failure could lead to a contraction in the common pool of liquidity. There is a possible role for government intervention. Unfortunately, liquidity problems and solvency problems interact, and can each cause the other. It is therefore hard to determine the root cause of a crisis from observable factors. The practical difficulty of determining the most appropriate intervention, as well as the costs of the wrong kind of intervention (such as infusing capital when the need is for liquidity) have to be traded off against the costs of a meltdown, which can be substantial. We propose a robust sequence of intervention.

Wang (2009) attempted to make the clear distinction between asset and market liquidity and the definition of asset liquidity as property enabling an asset to be quickly sold and bought without incurring high transaction costs. Based on this definition the hemisphere of liquidity-measures was scrutinized. This effort yielded a number of measures that measured different aspects of liquidity without being particular about which aspect they measure. Furthermore, it emerged that attempts to transform liquidity from a one-dimensional into a multi-dimensional concept, collapsed, i.e. were not able to find the latent variable common to all different measures of liquidity. What emerged, however, was that liquidity measures can be divided into trade-based and order-based measures. Between them they have not too much in common. Because liquidity is a function of price-movements, the thesis provided theoretical backing for the empirical part by

relying on market micro structural research. It emerged that stock markets are a complex entity with transaction costs accounting for a good deal of nonsystematic liquidity. However, the main task of this thesis was to analyze the impact the Sub-prime Mortgage Crisis had on different stock markets. All stock exchanges in some way or other react to the Sub-prime Mortgage Crisis. The findings were that Amihud's Illiquidity Ratio shows this reaction to increase illiquidity and Turnover Rates, however, show increasing liquidity in the UK and the United States after the Subprime Mortgage Crisis took place, while showing decreasing liquidity for the remaining stock exchanges;

Kim, Anderson, Zitzler (2011) investigated the use of interest rate swaps in post-liquidity crisis in their book "Hedging Instrument in Post Liquidity Crisis: A Case of Interest Rate Swaps" . Using Fortune 50 company financial statements data they investigate the use of interest rate swaps in post-liquidity crisis, and find that top 50 US firms use this derivative mainly for hedging purpose. This is consistent with the prediction that facing unprecedented level of economic uncertainty sample firms employ this instrument mainly to hedge against interest rate fluctuations, thus reducing their vulnerability in the credit market. This finding is somewhat different from prior swap literature which also report speculative motivation of swaps from fixed to variable interest payments. They do not find speculative motivation of swappers from our sample firms after the 2008 liquidity crises. They used published financial statements to collect the data. Top Fortune 50 companies data were hand-collected and computed. They employ a simple univariate test to find out the difference among many test groups; VF(firms changing variable payment to fixed) or FV (from fixed to variable), etc.

Findings - Based on our limited sample of Fortune 50 companies they find that these firms engage interest rate swaps transaction mainly to hedge their assets and liabilities after the liquidity crises of 2008. They don't find any evidence of speculative motives for interest rate swaps transaction, which were reported in the prior literature. They attribute this finding to US companies' reaction to an unprecedented liquidity crisis by covering their assets and liabilities from market fluctuation. They performed sensitivity analysis by removing 4 swap market makers (dealers), and found even stronger results

for hedging motivation. A caveat is that one should be careful in generalizing the results due to a small sample size of big-sized firms and an univariate approach to test our hypotheses.

Aguiar, Gopinath (2007) has associated a liquidity crisis with low foreign investment and the exit of investors from the crisis economy on their theoretical literature "Fire-sale foreign direct investment and liquid crises". However, a liquidity crisis is equally consistent with an inflow of foreign capital in the form of mergers and acquisitions (M&A). To support this hypothesis, we use a firm-level data set to show that foreign acquisitions increased by 91% in East Asia between 1996 and 1998, while intranational merger activity declined. Firm liquidity plays a significant and sizable role in explaining both the increase in foreign acquisitions and the decline in the price of acquisitions during the crisis. This contrasts with the role of liquidity in non crisis years and in noncrisis economies in the region. This effect is also most prominent in the tradable sector. Quantitatively, the observed decline in liquidity can explain 25% of the increase in foreign acquisition activity in the tradable sectors. The nature of M&A activity supports liquidity-based explanations of the East Asian crisis and provides an explanation for the puzzling stability of FDI inflows during the crises.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

Research is the process of a systematic and in-depth study or search of any particular topic, subject or area of ingestion backed by collection, completion, presentation and interpretation of the relevant details or data. It is a careful search or inquiry into any subject matter, which is an endeavor to discover or find out valuable facts, which will be usefull for future application or utilization. The research that involves is in the discovery of new techniques, a modification of old concepts or a knowing off an existing theory, concept or techniques. It may develop a hypothesis and test it by establishing relationship between different variables and identify the means for problem solving.

Research methodology is the process of arriving at the solution of the problems through a planned and systematic dealing with the collection analysis and interpretation of facts and figures. The objective of this study will be to figure out the major impacts of Liquidity Crisis in Nepalese Financial System with reference to Nabil Bank Ltd. and Ace dev bank Development Bank.

Research methodology is the way to solve systematically about the research problem. It consists of the research design, research population and sample, sources and types of data, variables and method of analysis and presentation.

(Quey-Jen Yeh , 1996)

3.2 Research Design

The research design is an organizational approach and not collection of loose unrelated parts. It is an integrated system that guides the researcher in formatting, implementation and controlling the study. Useful research design can produce the answers to the proposed research questions. The research design is thus an integrated framework that guides the researcher in planning and executing the research work.

This study adopted the descriptive and analytical type of research design. It describes and analyzes all the aspects that have been collected for the purpose of the study. A study design is the arrangement of conditions for collection and analysis of data in the manner that aims to combine relevance to the study with economy in procedure. This study is based on the analysis of major impacts of liquidity crisis based on relevant data. There are several methods of data collection and an investigator himself may collect data or supervise its collection. If the data are published in different reports and publication then such reports and publication are called "Source of Data". According to Selftiz, writing man and cook as quoted by Ritchie (1989), "The purpose of various data collection is to produce trust worthy evidence that is relevant to the research question being asked". Statistical data based on different sources are primary and secondary data.

3.2.1 Sources of Data

o **Sources of Primary Data**

The data collected for the first time by the investigator from the field of inquiry is called "Primary Data". An investigator can collect data by using different methods for his purpose of investigation. For the collection of primary data a structured interview **(see appendix)** was taken on the basis of questionnaire with the banker of the concerned banks (Nabil Bank official and Department Corporate Affairs, Head Office, Ace dev bank Development Bank) and the information received from the interview/Talk will be analyzed and presented.

o **Sources of Secondary Data**

This study is mainly based on the secondary data. The secondary data includes annual reports of the concerned banks, NRB reports, annual reports, quarterly bulletins, economic reports, various articles and publications dealing in the subject matter of the study, websites etc. Annual reports are the main sources of the data for this study. However in some areas annual reports, bulletins and publications from NRB are used

for the analysis. Furthermore, Newspaper, Journals and Articles are taken as secondary sources.

Major Sources of Secondary data:

1. Financial statement of Nabil Bank/Ace dev bank Development Bank.
2. Annual reports of Nabil Bank/Ace dev bank Dev Bank.
3. Quarterly report of Nabil Bank/Ace dev bank Dev Bank.
4. Bulletins and reports periodically published by various government bodies.
5. Various websites, Magazines, past newspapers, Articles etc.

And other secondary data are presented in the appendix in this report.

3.2.2 Population and Sample

There are 30 commercial banks registered in Nepal Rastra Bank and are on operation. Sampling is done to draw conclusion from the whole population. The population refers to the industries of same nature, service and product in general. So among the various commercial banks and Development banks under the banking industry Nabil Bank Limited and Ace dev bank Development Bank are selected for the study. However the performance of finance companies and cooperatives are not considered in the calculation of the population of the study. A brief profile of the selected banks under the study is on Appendix A.

3.2.3 Data Gathering Procedure

At first the researcher collected the annual reports by field visiting the respective banks. NRB publications like annual reports, economic reports, quarterly economic bulletin, banking and financial statistics etc. has been collected from the banks. Primary data has been collected through structured interview/Talk taken with the Banker (Ace dev bank Development Bank and Nabil Bank Ltd.). On some aspects data has also been collected from the website of NRB, NBL, Ace dev bank Dev Bank, and other various sites related with the issues.

3.2.4 Method of Analysis & presentation

Various financial and accounting tools have been used to achieve the objective of the study. The analysis of the data will be done according to the pattern of data available. As per the limited time and resources simple analysis have been done. Some strong accounting tools such as ratio analysis and trend analysis have also been used for financial analysis. The various calculated results obtained through financial and accounting tools are tabulated under different headings and they are compared with cash other to interpret the results.

- ## Tools Used

The attempt has been made to analyze the tabulated data to review the financial aspects of Nabil Bank and Ace dev bank Development Bank. For mathematical analysis various statistical tools like mean, Karl Pearson's Correlation co-efficient etc are used. The various formulas used for mathematical and financial analysis are:

$$N\ UV-\ U.\ V$$

- **Correlation Co-efficient (r) =** _____

$$[N\ U2-\ (\ U)\ 2]\ 1/2 - [N\ V2 - (\ V)\ 2]\ 1/2$$

- **Net liquidity ratio=**   **Net Liquid assets (Cash + Bank Balance + Investment)**

          Total deposit (current + saving)

- **Cash & Bank Balance to current deposit ratio=**   **Cash and Bank Balance**

          Current Deposit

- **NRB balance to total deposit ratio=**   **NRB Balance**

          Total deposits

- **Total Loan and Advances to Total Deposit Ratio=**   **Total Loan & Advance**

          Total deposits

- ## Trend Analysis:

One of the most important tasks before the economics and businessmen is to estimate the figure. Growth rate analysis was carried out to ascertain growth rate of the past. Trend analysis was adopted to ascertain future factor. It predicted the future behaviors

of data and helped to find out the future growth factor. Hence, trend analysis is taken as a tool to evaluate the future financial position of the banks. Out of various methods, least square method of trend analysis is used.

o **Ratio Analysis:**

The relationship between two accounting figures, expressed mathematically, is known as financial ratio (or ratio). In financial analysis, a ratio is used an index for evaluating the financial position and performance of a firm. The absolute accounting figures reported in the financial statements do not provide a meaningful understanding of the performance and financial position of firm. An accounting figure conveys meaning when it is related to some other relevant information. Raito helps to summarize the large quantities of financial data and to make qualitative judgment about the firm's financial performance. There are various ratios in this study only the ratios relevant to the study are calculated and analyzed.

o **Analysis of Growth Ratios:**

In order to find out relative growth of different portfolio, growth analysis is done. Growth ratios are directly related to fund mobilization, investment and loan and advances management of commercial bank and development bank. It represents how well the bank is maintaining its economic position.

To examine and analyze following growth ratios are calculated under this study:

1. Growth ratio of total deposits.
2. Growth ratio of loan and advances
3. Growth ratio of total investment
4. Growth ratio of net profit

3.2.5 **Analysis of Primary Data:**

A structure interview is taken with the banks department officials of Nabil bank ltd. and Ace dev bank Dev bank ltd. to get information about the liquidity management,

impacts of liquidity, Causes and consequences of the liquidity crisis. The information obtained from the interview/Talk would be analyzed and presented.

3.2.6 Market-Efficiency-Coefficient

The Market-Efficiency-Coefficient is a price-based measure. It seeks to account for the difference between temporary and permanent price movements, and, hence, to capture the resiliency-dimension. Given that a share changes in price most within short periods of time, the question arises, what fraction of price-change is due to temporary movements caused, e.g. by noise traders and what fraction is a real and permanent change in price due to favorable or unfavorable developments in the value of the underlying fundamental.

This question has gained huge prominence in the run-up to the Great Crash in 1930 and, consequently, a measure to differentiate permanent or temporary price movements would provide an important source of information.

In order to distinguish temporary and permanent price changes, the Market-Efficiency-Coefficient [MEC] "exploits the fact that price movements are more continuous in liquid markets, even if new information is affecting equilibrium prices.

Thus for a given permanent price change, the transitory changes to that price should be minimal in resilient markets:

$$MEC = VAR \log (R1)/T*VAR \log(r1)$$

The MEC compares the variance of long-period returns (VAR(Rt)) to the variance of short period returns (VAR(rt)) and weights the short-period returns by the number of short periods in each given long-period.49 A value for MEC close to one indicates a resilience market, i.e. a market in which "new order flow quickly to correct order imbalances".50 However, for orders to flow quickly, information about price movements is needed. Galbraith in his seminal work on the Great Crash has a carefully crafted chapter in which he shows the problem with depicting price movements, i.e. with deciding whether the price a actual price of a share is a good proxy of the company value, whether the share is underpriced or overpriced.51 The

entire research-branch of "arbitrage" is devoted to the study of balancing effects given in a particular market, i.e. attempts to re-balance an undervalued or an overvalued share made by arbitrageurs, i.e. market players, specialized in discovering underpriced shares and by buying them, doing their share to bring the respective share closer to its underlying of fundamental value.

3.2.7 Methods to measure liquidity

According to typical nature of bank, it collects and lends money to customers. For instance, if it collects of Rs. 1000 and lends Rs. 1000, then it Ace dev banks liquidity problem. On the other hand, if it collects Rs. 1000 and lends Rs. 800 only, then it will have balance of cash Rs. 200. In this way it will not Ace dev bank liquidity problem.

$$liquidity = deposits - loans$$ (P.S. Positive is surplus and negative is Deficit)

CHAPTER FOUR

ANALYSIS AND PRESENTATION OF DATA

The purpose of this chapter is to analyze study and evaluate the major liquidity position during the liquidity crisis and major impacts of crisis to the Nabil bank ltd. and Ace dev bank Development bank ltd. which are mainly related to the strategy of liquidity position or management of these banks. It is notable that all types of financial ratios are not studied under this chapter. Only those ratios are calculated and analyzed which are very important to evaluate liquidity position of Nabil Bank and Ace dev bank development bank.

Analysis comprises resolving the statement by breaking them into simple statement a process or rearrangement and the calculation of the ratios. Similarly, interpretation is the mental process of understanding the terms of such statement and forming opinions or references about the financial health, profitability, liquidity, efficiency and other such aspects of understanding.

4.0 Data Presentation and Analysis Technique:

The collected data has been presented in a proper form through table, pie chart, multiple bar diagram, curves and so on. Those presented data has been interpreted and analyzed on the basis of appropriate financial tools. Tools used in the analysis are trend analysis, ratio analysis, mathematical analysis, and SWOT analysis.

4.0.1 Trend Analysis:

Trend means figure with the profitability and short Trend means figure possibility. Trend analysis acquaints term and long term liquidity of the bank. There is two method of trend analysis, viz.

Trend ratio

Using graph

4.0.2 Ratio Analysis:

A ratio analysis is a statically yard stick that provides a measure of relationship between two accounting figures. Ratio analysis has been used in both the trend analysis and stable analysis. Ratio analysis involves two types of comparison namely:

Ratio of different years of Nabil Bank and Ace dev bank Development Bank

Ratio of these two banks

As the objective of this study is to know the liquidity position and trend of liquidity of Nabil Bank and Ace dev bank development Bank.

4.1 Interpretations and Analysis of Liquidity Position:

In order to satisfy the credit needs of the community, to meet demands for deposits , withdraws, pay maturity obligation in time and convert non cash assets into cash to satisfy immediate needs without loss to bank and consequent impact in long run profit Nabil Bank and Ace dev bank Development bank must maintain its satisfactory liquidity position. The liquidity position of these two banks studied through following ratios:

4.1.0 Current Ratio

This ratio indicates the ability of the bank to meet its current obligation. This is the main important tool to measure the liquidity position of the financial institution. Hence, current ratio is obtained by dividing current assets by current liabilities. Therefore current ratios of Nabil Bank and Ace dev bank Dev bank are as follows:

Table 2: Current Ratio

Banks						
	Nabil Bank Limited			**Ace dev bank Development Bank**		
Fiscal Year	**Current Assets**	**Current Liabilities**	**Ratio (in times)**	**Current Assets**	**Current Liabilities**	**Ratio (in times)**
2006/07	13868.30	15135.43	0.9163	7467.30	8359.46	0.8933
2007/08	14244.03	15153.80	0.9400	11103.33	12506.95	0.8878

2008/09	14971.80	15420.82	0.9709	13936.94	15078.84	0.9243
2009/10	18133.82	20352.56	0.8910	17889.28	19900.84	0.8989
2010/11	22829.54	25095.29	0.9097	23555.96	25699.13	0.9166
Mean			0.9256			0.9042
S.D.			0.0308			0.0156
C.V.(%)			3.3283			1.7255

[Sources: Annual Report of Nabil Bank and Ace Development Bank of 2007, 2008, 2009, 2010, 2011]

Table 1 indicates the current ratios of the sampled banks. The ratio of NBL is in fluctuating order. From fiscal year 2006/07 to 2010/11 it is in increasing order thereafter ratio is decreasing in fiscal year 2009/10 and increasing in 2010/11. The highest ratio is registered in 2008/09 which is 0.9709 and lowest ratio is registered in 2009/10 which is 0.8910. Similarly ratio of ACE DEV BANK DEV BANK is in fluctuating order throughout the study period. The highest ratio of ACE DEV BANK DEV BANK is 0.9243 in fiscal year 2008/09 and lowest ratio is registered in 2007/2008 which is 0.8878. Since mean ratios of NBL found to be highest than ACE DEV BANK DEV BANK from which we can conclude that NBL is successful to meet their current obligation. Even though ACE DEV BANK DEV BANK have failed to maintain the current obligation they are not failed in earning the profit. From point of view of working policy they have taken the aggressive policy.

As concern with liquidity and consistency ACE DEV BANK DEV BANK seems to be in better position than NBL which shows by the lowest C.V. (1.7255 %) among the sample banks NBL are failed to maintain the consistency in the liquidity.

<div align="center">Figure - 3</div>

4.1.1 Loan and Advance to Total Working Fund Ratio

This ratio exhibits the extent to which the banks are successful in mobilizing their total assets (working fund) on loans and advances for the purpose of income generation. The following are the ratios of different sample banks that have been calculated in the study period:

Table 6 reveals that fluctuations in ratio are found during the study period. The ratios of NBL are in increasing trend from 0.4683 in 2006/07 to 0.6160 in 2008/09 with mean ratio of 0.5445. The highest ratio (0.6403) and lowest ratio (0.5379) recorded by ACE is in year 2006/07 and 2007/08 with mean ratio of 0.6052, which is highest mean ratio among sample banks.

Therefore ACE is successful to maintain the higher mean ratio whereas NBL is behind ACE in maintaining the ratios. It means the ACE are successful in mobilizing the loan

<div align="center">48</div>

and advance with respect to the total assets (working fund). ACE are found to be best investor among the sample banks, since it has a higher mean ratio.

Since, ACE has lowest C.V. 6.6850%, they are able to maintain the consistency in investing in loan and advances from its working fund. NBL is failed to maintain the consistency in comparison to ACE. The C.V. of NBL 11.5533% which shows the higher degree of fluctuation.

<u>Figure - 4</u>

[Sources: Annual Report of Nabil Bank and Ace Development Bank of 2007, 2008, 2009, 2010, 2011]

4.1.2 Loan and Advance to Fixed Deposit Ratio

This ratio measures the effectiveness of mobilizing loan and advance in respect with fixed deposit. Fixed deposits are high interest bearing obligation whereas as loan and advances are the major sources of investment to generate income for the commercial banks. The following table displays the ratio of loan and advances to fixed deposit ratios of sample banks.

Table 5 shows that all sample banks has fluctuation ratio throughout the study period. NBL has increasing order of ratio from fiscal year 2006/07 to 2008/09 and then decreasing order from 2009/10. The highest ratio (5.0931) registered by NBL is in year 2008/09 and lowest ratio (2.8602) registered in year 2010/11. ACE has a fluctuating ratio ranged between the 2.2997 and 3.4505 in year 2010/11 and 2006/07 respectively. The mean ratio of NBL and ACE are 3.7375 and 2.8740 respectively.

49

Thus above table clearly indicate that loans and advances are being effectively and properly utilized by NBL and ACE with respect to fixed deposit. Among above sample banks ACE is able to success in maintaining the stability in investing in loan and advances with respect to fixed deposit, which is indicate by lowest C.V. 17.8939%.

Figure - 5

[Sources: Annual Report of Nabil Bank and Ace Development Bank of 2007, 2008, 2009, 2010, 2011]

4.1.3 Cash and Bank Balance to Current Assets Ratio:

Cash and bank balance to total deposit ratio shows the percents of readily available fund within the banks. A high ratio indicates the sound ability to meet their daily cash requirements of their customer deposits and vice versa.

Table 3 shows that the ratio of NBL is ranged between the 0.0613 in 2010/11 and 0.0825 in 2006/07 with mean ratio of 0.056 and ACE is ranged between the 0.1036 in 2010/11 and 0.1241 in 2006/07 with mean ratio of 0.1130. Since, the mean ratio of ACE is higher than the average of all sample banks. It supports the conclusion is that, ACE has been successful in maintaining its higher cash and bank balance to current assets ratio, but it doesn't mean that it has mobilized its more funds in profitable sectors. It actually means that ACE can meet its daily cash requirement. In contrast ACE has a lowest mean ratio because it may have invested their fund in more productive sectors. ACE has lowest C.V. (12.5882%) which means they are successful in maintaining a stability of cash and bank balance in comparison Nabil Bank ltd.

Figure -6

Following are the analysis and presentation of data that are shown separately:
4.1.4 Balance with N.R.B. to Total Deposit

The commercial banks are required to maintain a certain percentage of total deposit with NRB to fulfill the requirement of a legal provision. This ratio is calculated by dividing balance with NRB by total deposits in different accounts.

Balance with NRB and to Total Deposit = Balance with N.R.B./Total Deposit

Mean of Ratio =   Ratio/N

       Where, N = number of years

The following table indicates the balance maintained by Ace dev bank with NRB and the total amount of deposits collected in different accounts:

Table No. 6

Balance with NRB to Total Deposit (Rs. In million)

Fiscal Year	Balance with NRB (Rs.)	Total Deposit (Rs.)	Ratio (%)
2066/67	730.33	6694.96	10.91
2067/68	442.24	8063.90	5.48
2068/69	779.67	10097.69	7.72

Source: Annual Report of Ace Development Bank Limited of 2066, 2067, 2068

Figure No. 6

Balance with NRB to Total Deposit
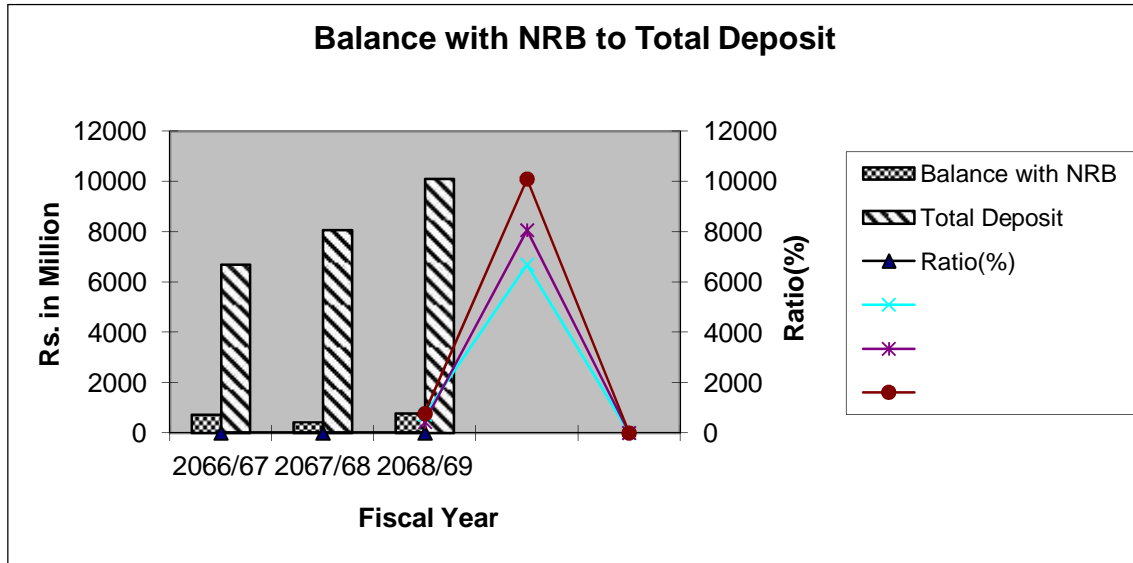
[Sources: Annual Report of Ace Development Bank of 2066, 2067, 2068]

On the basis of the above table and figure, it can be clearly seen that Ace Development Bank ltd. has maintained its balance with NRB up to 10.91%, 5.48% and 7.72% in the fiscal year 2066/67, 2067/68 and 2068/69 respectively. Similarly, in the fiscal year 2066/67, the ratio balance with NRB and total deposit is 10.91% in which balance with NRB amounts to Rs. 730.33 million and total deposit amounts to Rs. 6694.96 million.

4.1.5 Loans and Advances to Total Deposits

Loans and advances to total deposit ratio measures the extent to which the banks are successful in utilizing the outsider's funds (Total Deposit) in the form of extending loans and advances for the profit generating purpose. In other words, this ratio measures the bank's ability to utilize their deposits viz. current, saving, fixed call and short, margin and other deposits inn term of granting loans and advances.

The following formula is used to determine the loans and advances to total deposit ratio:

Loans and advances to total deposit ratio = Loans and advances/Total deposits

Mean of Ratio =   Ratio/N
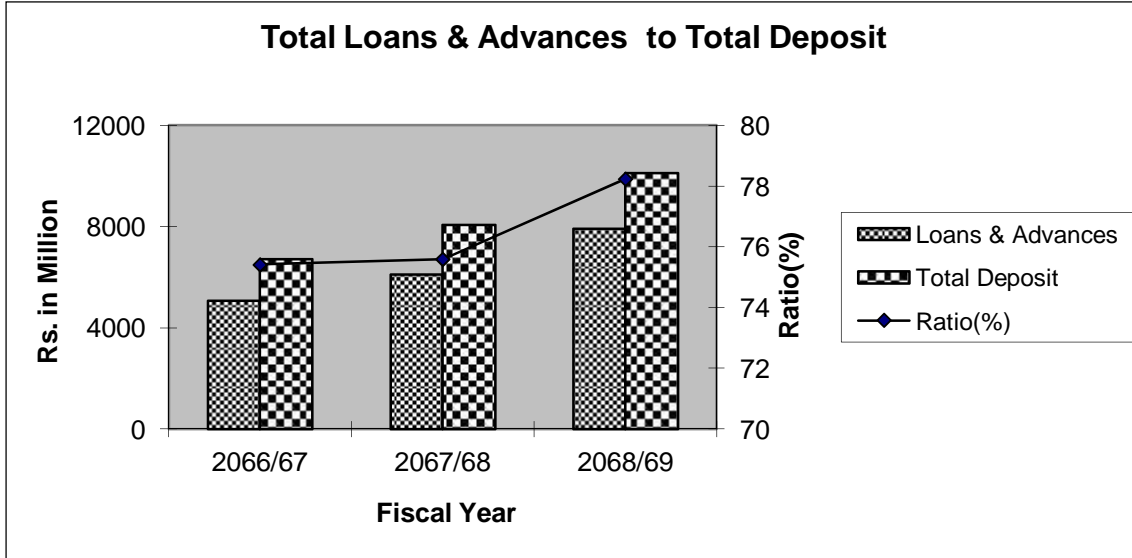
   Where, N= number of years

The following table shows the loans and advances to total deposit ratio of the bank for five fiscal years period.

Table No. 7

53

Loans and Advances to Total Deposit (Rs. In million)

Source: Annual Report of Ace Development Bank Ltd of 2066, 2067, 2068.

Figure No. 7

Source: Annual Report of Ace Development Bank Ltd of 2066, 2067, 2068.

As shown in the above table and figure, the loans and advances to the total deposits ratio highest of 78.24% in the fiscal year 2068/69 and the lowest of 75.42% in fiscal year 2066/67. And it again increases to 75.60% in fiscal year 2067/68. The amounts in loans and advances and total deposits are spontaneously increasing but ratios are seen to be slightly fluctuating. Ace Development Bank Ltd. has maintained 76.42% in average.

4.1.6 Investment to Total Deposit Ratio

Investment is very important part in the banking sector. Bank cannot utilize whole of its fund in advancing loans only. So, the bank goes for investment such as in government securities, treasury bills, stock of other organization, etc.

This ratio measures the mobilization of percentage amount of total deposit on investment. It is calculated by dividing the amount of investment by total deposits.

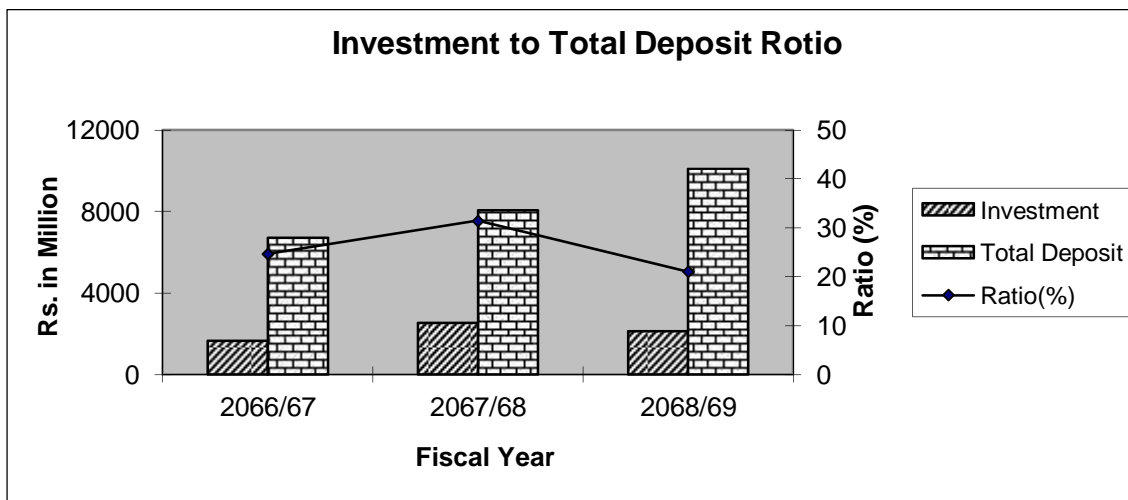*Investment to Total Deposit Ratio =Investment/Total Deposits*

The following table shows the amount of total deposits and net investment made by Ace Development Bank Ltd., along with the ratio of investment to total deposit which measures the capacity of Ace Development Bank Ltd. to manage funds.

Table No. 8

Investment to Total Deposit Ratio (Rs. In million)

Fiscal Year	Investment (Rs.)	Total Deposit (Rs.)	Ratio (%)
2066/67	1653.98	6694.96	24.70
2067/68	2535.66	8063.90	31.44
2068/69	2128.93	10097.69	21.08

Source: Annual Report of Ace Development Bank Ltd of 2066, 2067, 2068.

Figure No. 8

Source: Annual Report of Ace Development Bank Ltd of 2066, 2067, 2068.

The above table and bar diagram presents the amount and percentage of investment out of its total deposits. The percentage invested in the fiscal years 2066/67, 2067/68 and 2068/69 are 24.70%, 31.44% and 21.08% respectively.

4.1.7 Profitability Ratios

Profitability ratios measure the management's overall effectiveness or operational efficiency of the firm. It shows the combined effect of liquidity, assets management and debt management on operating results. The profitability ratios are as follow:

4.1.8 Return on Assets (ROA)

This ratio is primarily an indicator of managerial efficiency. It indicates how capably the management of the bank has been covering the institution's assets into net earnings. It is calculated dividing the net profit after tax by its total assets as illustrated by following formula:
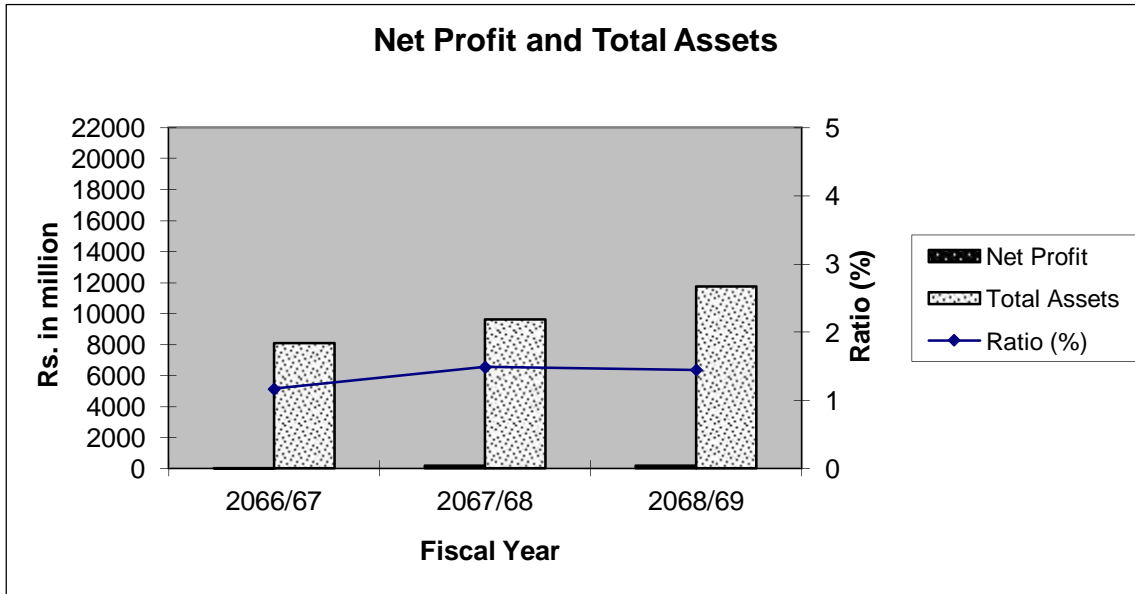
Return on Assets (ROA) = Net profit after Tax/Total Assets

Table No. 9

Return on Assets

Fiscal Year	Net profit after tax (Rs.)	Total Assets (Rs.)	Ratio (%)
2066/67	94.2	8052.2	1.17
2067/68	143.6	9608.6	1.49
2068/69	170.8	11732.5	1.45

Source: Annual Report of Ace Development Bank Ltd of 2066, 2067, 2068.

Figure No. 9

Net Profit and Total Assets

Source: Annual Report of Ace Development Bank Ltd of 2066, 2067, 2068.

The above table and figure implies that the amount in net profit and total assets are spontaneously increasing but percentage of return on assets is fluctuating year by year. 1.17%, 1.49% and 1.45% respectively, are the return on assets for the respective three fiscal years. ROA ratio is primarily an indicator of managerial efficiency. Therefore, it assures that Ace Development Bank is more efficient for investing and utilizing its overall resources.

4.1.9 Return on Investment (ROI)

Basically ROI means the company's return from investment. The ratio of return on investment is useful in measuring the profitability of all financial resources invested in the banks. The formula for return on investment given in the following manner:
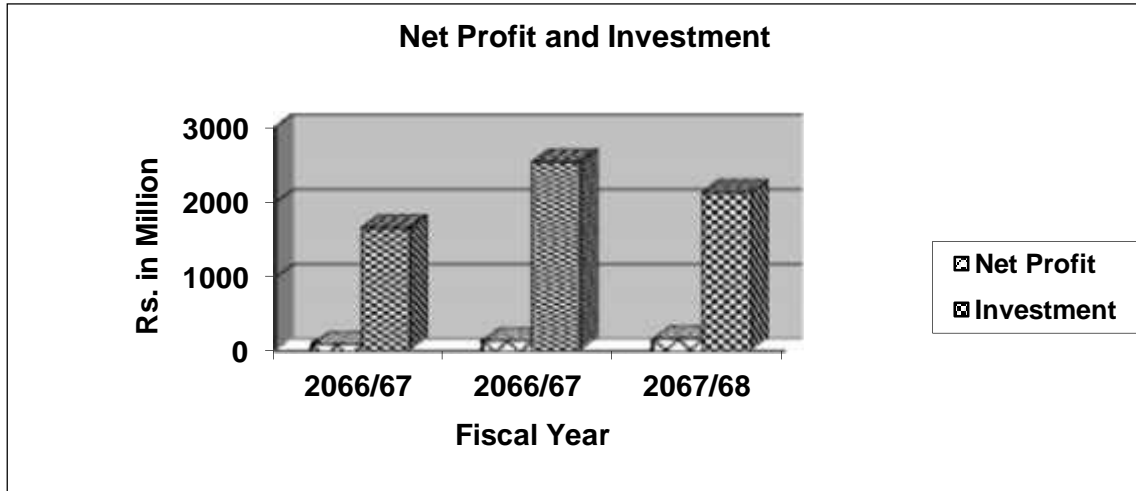
Return on investment = Net profit after tax/Total Investment

Figure No. 10

Source: Annual Report of Ace Development Bank Ltd of 2066, 2067, 2068.

Above the table and figure shows the increasing trend in the amount of net profit and investment but the ratio of return on investment shows the unsatisfactory results. The return on investment for Ace Development Bank Ltd. was maximum in the fiscal year 2068/69 i.e. 8.02% and minimum in the fiscal year 2067/68 i.e. 5.66%. Since, there is increase in investment but the desirable amount is not invested, whatever be the reason for Ace Development Bank Ltd.

4.1.10 Net Income to Loan and Advances

This ratio shows the return on loans and advances during the year. It is also important ratio to evaluate the bank performance. This ratio examine the net income after tax in proportionate to the loans and advances. It is calculated as follows:
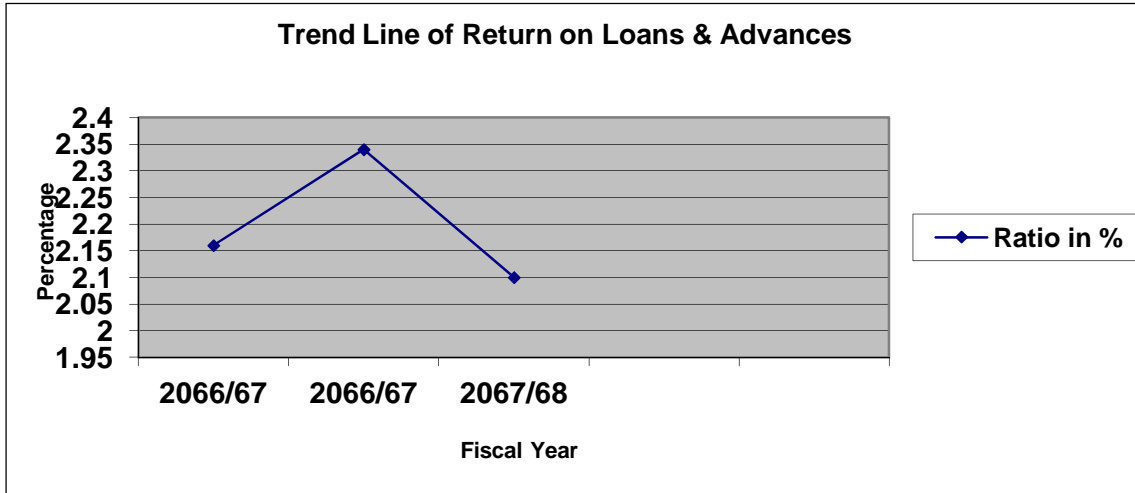
Net income to loans and advances ratio= Net Income/Loans and Advances

Table No. 11

Net Income to Loans and Advance (Rs. In million)

Figure No. 11

Source: Annual Report of Ace Development Bank Ltd of 2066, 2067, 2068.

The above table and trend line shows the ratio is in increasing and decreasing trend from fiscal year 2066/67 to 2068/69. The ratio in fiscal years 2066/67, 2067/68 and 2068/69 is 2.16%, 2.34% and 2.10% respectively. The increase in the amount of loans and advances is more than the increase in net income.

4.2 Nabil Bank's Analysis:

Table No: C
Cash and Bank Balance to Total Deposit Ratio

FY	2007	2008	2009	2010	2011
Ratio	0.051	0.068	0.085	0.069	0.038

Source: Annual Report of Nabil Bank Ltd of 2007, 2008, 2009, 2010, 2011.

From the above given table and graph it is clear that the cash and bank balance to total deposit ratios are in decreasing and increasing trend during the study of five years. The highest ratio is 0.085 in 2009 whereas the lowest ratio is 0.038 in the year 2011.

From the above analysis, it is concluded that the cash and bank balance position of NABIL with respect to deposit is not better against the readiness to serve its customer's deposit. In contrast, a high ratio of cash and bank balance may be unfit which indicates the bank's inability. Thus NABIL may invest in more productive sectors like short-term marketable securities, treasury bills etc to improve its profitability.

4.2.0 Cash and Bank Balance to Current Assets Ratio

This ratio examine the bank's liquidity capacity on the basis of its most liquid assets i.e. cash and bank balance. It reveals the ability of the banks to make the payment of its customer deposits. A high ratio indicates the sound ability to meet their daily cash requirement of their customer deposits and vice-versa. Both higher and lower ratios are not desirable. The reason is that if a bank maintains higher ratio of cash, it has to pay interest on deposits and some earnings may be lost. In contrast, if a bank maintains low ratio of cash, it may fail to make to make the payment for presented cheques by its customer. So, sufficient and appropriate cash reserve should be maintained properly. It is computed by dividing

cash and bank balance by current assets. A detail is given in Appendix-D. The ratios of percentage are presented below in the form of table.

Table No-D

Cash and Bank Balance to Current Assets Ratio

FY	2007	2008	2009	2010	2011
Ratio	0.062	0.079	0.11	0.091	0.047

Source: Annual Report of Nabil Bank Ltd of 2007, 2008, 2009, 2010, 2011.

Source: Annual Report of Nabil Bank Ltd of 2007, 2008, 2009, 2010, 2011.

The above table reveals that NABIL's cash and bank balance to current assets ratio have quite decreasing and increasing trend. During the study period, in the beginning i.e. in 2007 it maintained 0.062, 0.079 in 2008, 0.11 in 2009, 0.091 in 2010 and 0.047 in 2011. It had maintained its highest ratio as 0.11 in the year 2009 and the lowest ratio as 0.047 in the year 2011. Thus it can be concluded that NABIL is in better position to maintain its cash and bank balance. It actually means that NABIL can meet its daily requirement to make the payments on customer deposit.

4.2.1 Profitability Ratio

A commercial bank's main objective is to earn profit providing different types of banking services to its customers. To meet various objectives like to have a good liquidity position, meet fixed interest obligation, overcome the future contingencies.

Grab hidden investment opportunities, expand banking transaction in different places, finance government in need of development fund etc. A commercial bank must have to earn sufficient profit. Therefore, profitability ratios are the best indicators of overall efficiency. Here; mainly those ratios are presented and analyzed which are related with profit as well as liquidity position. Through the following ratios, effort has been made to measure the profit earning capacity of NABIL.

4.2.2 **Return on Total Working Fund/Return on Total Assets (ROA)**

This ratio measures the profitability with respect to each financial resource of the bank assets. If the bank's working fund is well managed and efficiently utilized return on such assets will be higher and vice-versa. Minimizing taxes with in the legal options available will also improve return. Minimizing taxes with in the legal option available will also improve return. The ratio of return on total assets is calculated by dividing net profit after tax by total assets. The table given below shows the profitability position of NABIL and details are given in Appendix-F.

Table No-E
Return on Total Assets (ROA) %

FY	2007	2008	2009	2010	2011
Ratio	1.60	1.54	2.51	2.71	3.02

Source: Annual Report of Nabil Bank Ltd of 2007, 2008, 2009, 2010, 2011.

From the above table it is clear that return on working fund ratios are in fluctuation trend throughout the study period. NABIL maintained highest ratio i.e. 2.71% in the year 2010, and the lowest ratio in the year 2008 i.e. only 1.54%.

This ratio observed that NABIL seems to be failure in earning higher return on its working fund. Due to its lower mean ratio i.e. 1.54%, it can say that NABIL must try to earn more profit by mobilizing its working assets more efficiently. It can also be said that NABIL's profit earning capacity by utilizing available resources is not so good. Moreover, NABIL's earning power on its working fund is stable only at last.

But we can see that it had raised its return from the fiscal year 2008/2009 i.e. from 1.54 to 2.51 and 2.71 in the year 2008 and 2009 respectively.

4.2.3 Return on Loan and Advances Ratio

This ratio measures the earning capacity of a commercial bank on its mobilized fund based loan and advances. A high ratio indicates a high success to as loan and advances and vice-versa. It is calculated by dividing net profit after tax by loan and advances. The table given below shows the return on loan and advances of NABIL. Its details are shown in Appendix-E.

<div align="center">Table No-F</div>

Return on Loan and Advances Ratio

FY	2007	2008	2009	2010	2011
Ratio	3.50	3.65	5.13	5.32	4.90

Source: Annual Report of Nabil Bank Ltd of 2007, 2008, 2009, 2010, 2011.

Source: Annual Report of Nabil Bank Ltd of 2007, 2008, 2009, 2010, 2011.

The listed above table depicts that NABIL's return on loan and advances ratios are in decreasing and increasing trend. This shows that it is not in position to earn high return on loan and advances previously rather than current two i.e. in 2009 and 2010.

4.2.4 Karl Pearson's coefficient of correlation

It is most widely used statistical tools which measures the significance of the relationship between two variables during the study period. Correlation coefficient is calculated to measure the relationship between Net Profit After Tax (NPAT) and shareholder's equity (SHE) of Ace Development Bank Ltd. The value of coefficient correlation shall always be between +1 and -1, where r= +1 means there is perfect positive correlation between the variable, where r= -1 means there is perfect negative correlation between the variable and where r= 0 means there is no relationship between the two variables.

The formula for computing Karl Pearson's Coefficient of Correlation is as follows:

$r = [N \sum XY - \sum X. \sum Y] / [N \sum X^2 - (\sum X)^2]^{1/2} [N \sum Y^2 - (\sum Y)^2]^{1/2}$

Here,

N= Number of Pairs of X and Y absorbed

X= Net Profit after Tax

Y= Shareholder's Equity

r= Pearson's correlation coefficient

XY= Sum of product of variables X and Y

Table No. 14

Calculation of Karl Pearson's Coefficient of Correlation of of Ace Development Bank Ltd

(Rs. In million)

F/Y	X	X^2	Y	Y^2	X.Y
2066/67	170.8	29,172.64	769.6	592,284.16	131,447.68
2067/68	237.2	56,263.84	962.8	926,983.84	228,376.16
2068/69	296.4	87,852.96	1201.5	1,443,602.25	356,124.6
Total	**704.40**	**173289.44**	**2933.90**	**2962870.25**	**367881869**

Source: Annual Report of Ace Development Bank of 2066, 2067, 2068.

Here,

N= 3

X= 704.40

Y= 2933.90

X^2= 173289.44

Y^2= 2962870.25

XY=367881869

Substituting the value in formula, we have

$= [3*367881869 - 704.40*2933.90] / [3*173289.44 - (704.40)^2]^{1/2}.[3*2962870.25 - (2933.90)^2]^{1/2}$

$= [4356826.4 - 3982679.4] / [1013920.2 - 887740.84]^{1/2}.[19006010.9 - 17867529]^{1/2}$

$=374147 / (126179.36)^{1/2}*(1138481.9)^{1/2}$

= 374147 / (355.22*1066.99)

= 0.987

The above calculation of the coefficient of correlation between return and shareholders equity of Ace Development Bank Ltd. is 0.987. This indicates there is positive correlation between Net profit after tax and Shareholders equity. According to correlation coefficient, net profit after tax increases with the increase in shareholders equity.

4.2.5 SWOT Analysis

A SWOT analysis is a tool, which has been used to for the purpose of evaluation of NABIL and Ace effectiveness. Effectiveness is not one –dementia concept that can be measured by a single, clear-cut criterion rather it is multidimensional concept. SWOT analysis is an acronym for the internal strength, weakness, environmental opportunities and threats faced by a business. It is intact a systematic identification of the factors and the strategies that reflect the best match between them. It is based on the logic that on effective strategy maximizes business strength and opportunities but at the same time minimizing its weakness and competitive threats.

It is in fact a picture in which a company is working. They are evaluated in the following ways:

SWOT Denotes: Strength of bank, weakness of bank, opportunities of bank and threats of bank.

On the basis of above factors SWOT analysis of Nabil Bank is carried out as under:

Strength:
- Established under joint venture with IFIC
- Goodwill and image of bank
- Well capital structure
- Dedicated and well trained staff
- Development of its own market.

Weakness:

- High cost of production
- Limited market
- Compression and inflation in business

Opportunity:
- New projects to customers
- Credit Card
- Net Work Style
- Impact of economic policy
- Increase in number of investor and customer in the economy

Threats:
- Growing Competition
- Impending economic recession
- Political instability
- Threats from media.

4.2.6 Analysis of Primary Data:

A structure interview is taken with the banks department officials of Nabil bank ltd. and Ace Dev bank ltd. to get information about the liquidity management, impacts of liquidity, Causes and consequences of the liquidity crisis. Questionnaire method is also applied. See appendix to review the Questionnaire.

4.2.6.0 Findings from Questionnaire and Interview:

The major reasons of liquidity crisis:

- Lack of cash Management within Banking Sectors.

- Changes in NRB Policies.

The question was asked about the impact that their bank faced:

Ace Development bank didn't face liquidity problem during the crisis period. On the other hand, Nabil had some impact on the management of cash. However, Nabil managed the crisis to overcome the negative impact of crisis to the bank.

Ace development bank had a positive impact because they are a merchant banker too. This had collected huge amount of cash and were highly demanded in the financial market. Other banks which were in financial crisis requested for cash from commercial bank to different financial institutions. Ace was able to face the crisis without any financial problem due to balance of cash management in borrowing and lending.

What measurements can be applied to face the crisis was asked. They stated that one reason can be the balance of cash management i.e. lending should not be higher than the deposit collection. Other reasons are changes in NRB policies with long term vision. This refers that, if NRB implements changes in policies in phase wise according to the time period rather than all changes at once then it will improve the situation because it will provide some time in the economy to react with the changes, take necessary feedback, corrections and solutions. Thus, balance action is required from NRB and concerned organizations to handle these crisis situations.

4.2.7 Major Findings from Secondary data:

Co-efficient of Correlation Analysis

♦ Correlation coefficient between total deposit and loan and advances of all the banks shows positive relationship between these two variables. ACE has the highest correlation in total deposit to loan and advances. It indicates that ACE's good performance is generating loan and advances from the deposits.

♦ Generally, correlation of investment and loan and advances has a negative correlation because the unavailability of good lending opportunities results in increase in investment and vice versa. But the excess deposit liability in these banks has succeeded in contribution of significant proportion of both investment and loan and advances and as a result there is a positive significant relationship between these two variables.

- Correlation coefficient of shareholders equity and loan and advances shows that there is high degree of positive correlation in Ace Dev bank and Nabil.
- Correlation coefficient of total income and loan and advances shows that there is high degree of positive correlation of all the banks.
- Correlation coefficient of interest suspense and interest income shows that there is no correlation of Nabil and Ace.

Trend Analysis:

- The loan and advances to total deposit ratio of Nabil and Ace are in increasing trend. Nabil seems more successful than Ace in utilizing its deposit in investment.

Growth Ratio:

- The growth ratio of total deposit and loan and advances by analysis of five years of study period found out that Ace has highest growth ratio and it has improved exceptionally well in collecting deposits and extending loan and advances whereas Nabil has more steady growth ratios and has not been able to increase substantial amount of deposits and loan and advances yearly.

Liquidity Ratio

- It is well known that the standard current ratio is 2:1. Among sample banks the current ratios of Nabil dominates the respective current liabilities which indicate that Nabil is capable in paying the current obligation. Therefore Nabil has a highest liquidity ratio among sample banks. ACE have low current ratio, but it does not mean that they are failed to maintain the liquidity position. From point of view of working policy they are very much aggressive. However average of all banks shows the satisfactory level of current ratio.

CHAPTER FIVE

SUMMARY, CONCLUSION & RECOMMENDATION

5.1 Summary

Nepalese financial sector is fighting against the severe liquidity problem since July 2009. The Liquidity Crisis made a huge impact in the Nepalese economy and Financial Sectors of Nepal. However, the question whether this impact was a consequence of investors withdrawing from markets or whether it was the consequence of hysteria fueled by national governments who exceeded each other in their attempts to rescue the financial community has yet to be established. Results gathered in this thesis, however, raise some doubts on the tale of investors fleeing from markets and looking for safe havens by investing in art or the like. The demise of art funds, may serve as a further indicator that gives evidence to the conclusion suggested in this thesis, that the Sub-prime Mortgage Crisis was not that bad for stock markets as told. This may be considered the main result of this thesis.

This thesis started with liquidity. Liquidity is an illustrious concept. It is quite hard to define, it is not clearly referenced and it commands a number of measures that all measure different aspects of liquidity. Accordingly, this thesis tried to sort-out the different meanings of liquidity. In doing so, a distinction has been made between asset liquidity and market liquidity. Asset liquidity refers to the ease by which an asset can be liquidized. The easier it is, to transform an asset into legal tender or another asset, the more liquid the asset. Liquidity, however, can be seen as a property incorporated in an asset, it can also be seen as a condition produced by a market. Hence, the market becomes a facilitator for liquidity. Different properties of a market foster liquidity. The more trade occurs in a market, the better for liquidity. The higher the price-volume of trades in a market, the better for liquidity. The higher the price-volume of trades that do not affect market prices, the better for liquidity. And finally, the higher the liquidity of a market, the less risk is attached to the market (or the asset).

These features of market-liquidity allow for different ways to operationalize market liquidity. This finds expression in various measures constructed to measure liquidity. However, as research showed, these different measures do not always measure the same. Some attempts to find the commonality of different measures, to find the latent variable common to all the different measures have been in vain. Hence, the concept is seriously flawed, because it is not clear, what measure measures what. However, there are signs that point in the direction of a distinction between order- and trade-based measures. These signs originating from factor analysis in a particular way beg the question.

Of all the measures available to measure liquidity, this thesis concentrated on three, the Turnover Rate, the Market-Efficiency-Coefficient and the Bid-Ask Spread. While the bid-ask spread is a if not the central concept in market microstructure research, it is hard to get data to the spread and it is even harder to make direct sense of the results, without consulting theoretical guidelines formulated in the context of market microstructure research and addressing such topics as asymmetric information, transparency and limit order impact. Market-Efficiency-Coefficient which is quite a complicated concept and does not provide too much information that would justify the effort.

Thus, it can be stated that the Liquidity Crisis did affect the Bank analyzed in this thesis, however, it did so in different ways.

The thesis has come to summarize as the following are the causes of crisis that Nepalese Financial Systems is experiencing:

o **Political and economic instability.**
o **Stagnant Deposit:** As per Nepal Rastra Bank's, in the 10 months of 2009/10, deposit mobilization of commercial banks increased merely by 5.6% (NPR 30 billion) to reach total deposit of NPR 580 billion. The increment was 20% (NPR 82 billion) in the corresponding period of the previous year. More interestingly, the level of deposit is almost stagnant since last 6 months.

o **Excessive Investment in Gold:**

During last 2 years, investment in gold is also taken as measure for safe investment due to increased price of gold. Nepal Rastra Bank has implemented quota system to manage the import of gold as well. However, the consumption seems to be always encouraging leading to funds transferring from banking channel to stock of gold.

o **Capital flight:** Though we don't have data to prove possible capital flight from Nepal. However, declined real estate price in countries like USA and all time high real estate price in Nepal must have encouraged Nepalese to invest in USA's real estate. Also, political and economic instability of the country was main reason for non spending of money in productive sector here and amount might have gone out of Nepal.

o **Deficit Balance of Payment** by NPR 17.36 billion in the 10 months of 2009/10, against the surplus of   NPR 43 billion in the same period last year.

o **Assets Liabilities Mis-match of BFIs:** Many Nepalese BFIs lack to manage the asset liability maturity mismatch. Long term assets are funded by very short term sources of funding, which hits hard when funds are not available easily in the market.

o **Cash Holdings by general Public**

o **Decrease in Remittance:** Due to global financial crisis, the rate of remittance sent by Nepalese workers has decreased this year.

5.2 Conclusion:

Despite the fact that several successful attempts have been made so far to address the problem of liquidity in Nepalese Financial System much need to be done for an effective way in solving the liquidity issues in Nepalese banks.

Reinforcing cooperation among JV's in other countries supportive of Nepalese banking can help in solving the problem. This is better done through the existing institutions such as the other Banks in Nepal. As Ace Development Bank had no crisis of cash during the period of liquidity crunch.

At the same time there is a need of close cooperation between Nepalese Financial system and Central Banks especially those of member countries. NRB's policies should not bring the liquidity problem. Several Policies are endorsed by NRB as a result, Financial System of Nepal got problem in following the Policies during the crisis period. It is not only the Banks but also the regulator, Nepal Rastra Bank, should pay attention to manage the liquidity as even a liquidity problem in a single BFI may lead to loss of public faith to the banking system. In this context, NRB should see this as an economic problem rather than problems of Banks.NRB should pay more attention towards these roles such as Proper education and regulation in liquidity management of BFIs, Proper and timely monitoring of liquidity position of BFIs, Implementation of sustainable and effective liquidity management tools so as to supplement BFIs effort to combat the liquidity problems.

Nepal Rastra Bank and individual Banks and Financial Institutions to take a lesson from this type of mis-match in the financial system. Political stability, proper economic vision and implementation thereof, proper and regular review and monitoring of BFI activities by regulator like Nepal Rastra Bank and sound Liquidity Risk Management Framework within BFIs are the bare minimum requirement so as to mitigate any unforeseen liquidity risk in the financial system. Otherwise, who knows, current liquidity problem, can be an indication of downfall of the nation's financial system as a whole?

An effective management information system (MIS) is essential for sound liquidity management decisions. BFIs should be able to monitor its day to- day liquidity position and risk control. MIS of liquidity should be developed keeping a crisis monitoring in mind. Accuracy and timeliness of information are important elements for monitoring liquidity. Since bank liquidity is primarily

affected by large, aggregate principal cash flows, detailed information on every transaction may not improve analysis. An appropriate mechanism for monitoring activities helps in proper identification of liquidity risks through early warning indicators, which have the potentials of igniting the problem. Management should develop systems that can capture significant information. The content and format of reports depend on a bank's liquidity management practices, risks, and other characteristics. Management should regularly consider how best to summarize complex or detailed issues for senior management or the board. Besides several types of information important for managing day-to-day activities and for understanding the bank's inherent liquidity risk profile include: Asset quality and its trends, Earnings projections, The bank's general reputation in the market and the condition of the market itself, The type and composition of the overall balance sheet structure, The type of new deposits being obtained, as well as its source, maturity, and price.

BFIs should institute review process that should ensure the compliance of various procedures and limits prescribed by senior management. The structure (unit) for review should be independent of the funding areas. Reviewers should verify the level of liquidity risk and management's compliance with limits and operating procedures.

In a nutshell, there are some impacts that financial system of Nepal has faced during the crisis. They are follows:
Increment in Bank Deposit/Lending Rate of Interest: We have been witnessing soaring interest rates in the deposits and lending rates of BFIs. One year fixed deposit report even touched the level of 12%-14% and lending rates touched the level of 20%. Average rate of treasury bills also seemed increased. Similarly, Standing Liquidity Facility (SLF) rates and inter bank rates touched the as high as 14-15%. • Difficulty for BFIs to advance loans: Loans flow by the BFIs is also hardly increased. Loans and advances of commercial banks increased by 12% (NPR 63 billion) to reach NPR 582 billion in the first 10 months of

2009/10. It grew up by 18% (NPR 71 billion) in the same period last year. Possible loss of public faith on the BFIs, leading to concentration of funds in nonbanking sectors. It is observed that, individual deposits of the BFIs are seen decreasing trend and believed to be concentrated in non banking form and even in small cooperatives. This has led to the deposit crisis to the banking sector. Bearish trend in Stock Market: The NEPSE index declined by 31% to 458 points in the first 10 months of 2009/10. The index stood 661 points in the same period last year. NEPSE is witnessing smaller volume of trading. Nepal Rastra Bank's policy to tighten loans against shares was also one of the main reasons for bearish sentiment in the market.

5.3 Recommendation:

On the basis of analysis, summary and conclusion of the study, following recommendations can be advanced to overcome weakness, inefficiencies and to improve present liquidity policy of NABIL. Besides that Ace development Bank has positive conclusion, so Ace may adopt the followings recommendations for the betterment of its operation as well as being stability on the competitive markets. Nepalese financial system have been facing liquidity crisis as it has negative impacts on banking as well as positive impact on some banks. Ace Development bank have been enjoying positive impacts of liquidity shortfall due cash shortage in other financial institutions. Ace is also acting as merchant banker, so Ace never experienced liquidity crisis during the period of crisis. Ace is giving inter bank loan to other banks, besides all, Ace is not among those victims banks of crisis.

Some recommendations that two banks may refers:

a) Some banks having strong financial position of Japan and Indonesia bankrupt on last decade because of insufficient liquid assets. So NABIL and ACE are recommended to learn from the bank's history of different countries and maintain its sufficient liquid assets.

b) Before mobilizing the fund well, NABIL and ACE are recommended to collects a large variety of deposit scheme like cumulative deposit scheme, prize bonds

scheme, gift cheques scheme, house building deposit scheme, recurring deposit scheme deposit like life insurance scheme, monthly interest scheme and many others etc.

c) The liquidity position of a bank may be affected by external as well as savings, investment situations, central basic's directives, the lending policies, capability of management, strategic planning and fund flow situation. As NABIL and Ace have maintained the ratio of cash and bank balance to total deposit considerably lower than other JVB'S, NABIL and ACE are recommended to increase cash and bank balance to meet loan demand.

d) To get the success in competitive banking environment, depositor's money must be utilized as loan and advances. The largest item of the bank in the assets side is loan and advances, diligences in administering this asset could be the main cause of a liquidity crisis in the bank and one of the main reasons of a bank failure. It has been found from the study that NABIL and ACE loan and advances to total deposit ratio. To overcome this situation these banks strongly recommended following liberal lending policy and investing more and more percentage amount of total deposits in loans and advances.

e) From the above study, it has found that NABIL and ACE have given more priority to invest it fund in government securities. Though securities issued by a government are considered to be free of risk of default, such securities yield the lowest interest rates of a particular maturity due to lower risk features. So, NABIL and ACE are recommended to give importance to the government securities only should be abandoned.

f) To get success in its objective, commercial bank must mobilize its fund in different sectors such as to purchase shares and debentures at other securities. Out of total working fund NABIL has not invested its more funds as total investment. So, NABIL is recommended to invest its funds in different sectors of investment too. ACE is also recommended to invest or make portfolio for the investment.

g) Branches existing in some limited area will not enable a bank to boost up its campaign of deposit mobilization and credit disbursement as desired. HMG has

also encouraged the joint venture banks to expand the banking services in rural area and communities without making unfavorable impact in their profits. Therefore, Nabil and ACE are recommended to open new branches at certain places every year after making feasibility of studies. Before choosing a particular place for opening a branch earning and business potentiality of that area should be studied well. This will be very helpful to the bank in tapping the resources of different places.

h) As a bank of private sectors, NABIL and ACE cannot keep its eyes closed from the profit motive. It should be careful in increasing profit in a real sense to maintain the confidence at shareholders depositors and its all customers. NABIL's profitability position is worse than that of other JVB'S. So NABIL is strongly recommended to utilize its risky assets and shareholders fund to gain highest profit margin. Similarly, it should reduce its expenses and should try to collect cheaper fund being profitable. So does the ACE be aware on same criteria.

i) Both banks are recommended to be serious towards research and development. NABIL should research for more profitable areas and for more deposits. The innovation on profitable sectors may lead a bank to bright future. So, these banks should research for such sector and develop it. It may set up research and development department and make plan for future activities.

j) Slackness in economic activities gives chances to increase the bank liquidity. This causes low interest on deposits. NABIL and ACE has high fund position and rate of interest on deposits in low due to high liquidity. In normal situation, banks should maintain attractive interest rates on the deposits and must find new investment sector and entrepreneurs.

k) No doubt unity is strength, but this unity should be utilized for bank interest. If employees union is of vested political interest and not in bank interest then it is detrimental of failure of both – organization and the union. Therefore, there should be good relation between bank and union. Both should work together to achieve the organizational goals.

l) Deposits mobilization programs on TV's, radio; newspapers should be carried out to motivate the people. Pamphlets, posters should be distributed to make the people aware of banking business. Such motivational programs help the people aware of banking business. Such motivational programs help the people to take the advantage from the NABIL and ACE as their old friend revived with latest technology.

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Appendix

A. Brief about Organization under study area

Nabil Bank Ltd.

Nabil Bank Ltd. is the first commercial Joint Venture bank in Nepal, which was established in 1984 under the Company Act 1964. Dubai Bank Ltd. was the initial foreign joint venture partners with 50% equity share investment. The shares owned by Dubai Bank Ltd. (DBL) were transferred to Emirates Bank International Ltd., Dubai by virtue of its annexation with the later. Later on Emirates Bank International Ltd. Dubai sold its entire 50% equity holding to National Bank Ltd., Bangladesh. Out of the 50% shares, NIDC has taken 10%, Rastriya Beema Sansthan and Nepal Stock Exchange Center has taken 9.66% and 0.33% shares respectively and remaining 30% shares were issued to general public of Nepal.

Nabil Bank Ltd. (Nabil) commenced its operation on 12 July 1984 as the first joint venture bank in Nepal. Dubai Bank Ltd., Dubai (later acquired by Emirates Bank International Ltd, Dubai) was the first joint venture partner of Nabil. Currently, NB (International) Limited, Ireland is the foreign partner. Nabil Bank Ltd. had the official name Nepal Arab Bank Limited till 31st December 2001. Nabil is the pioneer in introducing many innovative products and marketing concept in banking sector of Nepal with 16 branches and 2 counter in all major cities. It is the only Bank having its presence at Tribhuvan International Airport, only international airport of Nepal. Also, the number of outlets in the country is the highest among the joint venture and private banks operating in Nepal. Success of Nabil is milestone in the banking history of Nepal. It paved the way for the establishment of many commercial banks and financial institutions. Nabil provides a full range of commercial banking services through its outlets spread across the nation and reputed correspondent banks across the globe. Moreover, Nabil has a good name in the market for its highly personalized services to the customers.

1.2 Capital Structure

The share holding of Nabil Bank Ltd. is as follows:

N.B. (International) Limited, Ireland	50%
Nepalese Public	30%

Nepal Industrial Development Corporation	10%
Rastriya Beema Sansthan	9.67%
Nepal Stock Exchange Limited	0.33%

Authorized Capital   :   Rs.500 Million

Issued Capital   :   Rs. 492 Million

Paid Up Capital   :   Rs. 492 Million

(4,916,544 shares of Rs. 100 each)

1.3   Branches and Location

The number of outlets in the country is highest among the joint venture and private banks operating in Nepal. Success of Nabil is a milestone in the banking history of Nepal. It paved the way for the established of many commercial banks and financial institutions. Altogether there are 17 branches of Nabil Bank which has been providing their best services and facilities to their customer.

Performance of Bank

Nabil Bank Limited had the official name Nepal Arab Bank Limited till 31st December 2001. Nabil is the pioneer in introducing many innovative products and marketing concept in banking sector of Nepal with 17 branches and 1 counter in all major cities. It is the only Bank having its presence at Tribhuvan International Airport, only international airport of Nepal. Also, the number of outlets in the country is the highest among the joint venture and private banks operating in Nepal. Success of Nabil is a milestone in the banking history of Nepal. It paved the way for the establishment of many commercial banks and financial institutions. Nabil provides a full range of commercial banking services through its outlets spread across the nation and reputed correspondent banks across the globe. Moreover, Nabil has good name in the market for its highly personalized services to the customers.

B. Introduction to Ace Development Bank Ltd.

Introduction:

Ace Development Bank is a well known name in the financial field of Nepal. It was established in the year 1995 as Ace Finance Ltd. and it was upgraded as a Development bank in the year 2007.

Over the years, customers and regulators have been in appreciation of the many financial products and innovations developed by Ace. Their diversified risk asset portfolio has served the economy in every sector as have the wide choices of deposit account schemes. Their wholesale banking initiatives have assisted numerous commercial banks and private enterprises with risk management concerns such as debentures and rights.

The Institute of Chartered Accountants of Nepal has Awarded Ace "Best Presented Accountants Award" for four in a row for accuracy and transparency in the book of Accounts.

Mission: With its establishment till today Ace Development Bank has become a leading player in financial market of Nepal due to its clear Mission and Vision. The mission is "BANKING ON INNOVATION AND INTEGRITY".

- To be preferred the preferred provider for financial services by introducing wide range of banking products.

- To serve a larger base of customers by expanding geographically.

- To participate in the economic development of Nepal by providing services in Micro finance, Infrastructure development financing etc.

- To ensure maximum value to Stakeholders.

- To focus on good corporate governance and Corporate Social Responsibilities.

- To diversify revenue stream.

- To continue to invest in talent.

- To became financial conglomerate.

Ace as a Merchant Banker

In banking, a Merchant Bank is a financial institution primarily engaged in offering financial services and advice to corporations and to wealthy individuals.-With providing the regular Banking service Ace is also providing the Merchant banking service in Nepalese

Financial Market. It is contributing as a merchant bank from the work like Issue manager to the Financial Advisory, Portfolio Management service.

Appendix B

Net Profit

Calculation of net mean, SD and CD of Net Profit of Different Bank.

Nabil Bank net profit let be the x, y, z

Year	x	y	z	$(x-\bar{x})^2$	$(y-\bar{y})^2$	$(z-\bar{z})^2$
2007	816.6	537.9	280.3	590.5	39640.8	110622.7
2008	714.3	612.5	410	6068.4	15500.2	41168.4
2009	654.7	692.1	561.7	18906.3	2016.0	2621.4
2010	746.5	814.4	830.7	2070.2	55980.7	47436.8
2011	1031.1	1028.3	982	57073.2	84855	136234.8
	3961.1	3685.2	3064.7	84708.6	1476033	340084.1

Mean of Nabil $\quad \bar{x}=\dfrac{3961.1}{5}=792.2 \quad \bar{y}=\dfrac{3685.21}{5}=737.0$

$\bar{z}=\dfrac{3064.7}{5}=612.9$

S.D of x $=\sqrt{\dfrac{84708.6}{5}}=130.16 \qquad$ S.D of y $=\sqrt{\dfrac{147603.9}{5}}=171.82$

CV of x $=\dfrac{130.16}{792.2}=16.43 \quad$ CV of y $=\dfrac{171.82}{737}=23.3$

CV of z $=\dfrac{260.8}{612.9}=42.6$

APPENDIX C

Correlation between Deposit and Loan and Advance
Nabil Bank's
Let be the Deposit = x
Let be Loan and Advance = y

Year	x	y	$d_1(x-\bar{x})$	$d_2(y-\bar{y})$	$d_1 d_2$	d_1^2	d_2^2
2007	11078	14586.3	-6739.5	-10721.7	72248819	45420860.2	114954850
2008	130213	19348.4	-4796.2	-5959.6	28583433	23003534.4	35516832
2009	1565701	23342.4	-2160.4	-1966	4246560	4667328.2	3865156.0
2010	21514.6	31915.0	3697.1	6607	24426739	13668548.4	43652449
2011	27816.6	37348.3	9999.1	12040	120387960	99982000.8	144961600
	89087.6	126540.1			249893511	393742272	342950887.0

Mean of x $(\bar{x}_1) = \dfrac{\sum x}{n} = \dfrac{89087.5}{5} = 17817.5$

Mean of y $(\bar{y}_1) = \dfrac{\sum y}{n} = \dfrac{26540.1}{5} = 25308.0$

$r = \dfrac{\sum d_1 d_2}{\sqrt{\sum d_1^2 \cdot \sum d_2^2}} = \dfrac{249893511}{\sqrt{393742272 \times 34290887}} = \dfrac{249893511}{276492045} = 0.9038$

$r^2 = 0.8169$

$\text{PER} = \dfrac{0.6745(1-r^2)}{\sqrt{}} = \dfrac{0.6745(1-0.8169)}{\sqrt{5}} = 0.0551$

$6 \times PER = 0.3308$

r>6xPER Conclude that highly significant.

Growth Rate Calculation:

Growth Ratio of Deposit

Nabil banks:

Last year deposit D_o= 14586.3

Current Year Deposit (D_o) = 27348.3

Growth Rate (g) = ?

$\therefore D_n = D_o(1+g)$

or, $(1+g)^4 = 1.875$

or, $1+g = 1.875^{1/4}$

g=0.1701

=17.01%

Similarly, growth ratio of other criteria are calculated.