INVESTMENT POLICIES OF COMMERCIAL BANKS

(Special Reference to NABIL Bank Ltd and Nepal Investment Bank L--td.)

Submitted By:

RESHNA BAJRACHARYA

Shanker Dev Campus

Roll No: 587/063-064

T.U. Reg. No: 7-2-431-28-2003

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RECOMMENDATION

This is to certify that the Thesis

Submitted By:

RESHNA BAJRACHARYA

Entitled:

INVESTMENT POLICIES OF COMMERCIAL BANKS (Special Reference to NABIL Bank Ltd and Nepal Investment Bank Ltd.)

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

………….......................   …………………………   …………………………….

Shashi Kanta Mainali   Prof. Bisheshwor Man Shrestha   Prof. Dr. Kamal Deep Dhakal

(Thesis Supervisor)   (Head of Research Department)   (Campus Chief)

………………………………….

Rabindra Bhattarai

(Thesis Supervisor)

VIVA-VOCE SHEET

We have conducted the Viva-Voce examination of the thesis presented

Submitted By:

RESHNA BAJRACHARYA

Entitled:

INVESTMENT POLICIES OF COMMERCIAL BANKS (Special Reference to NABIL Bank Ltd and Nepal Investment Bank Ltd.)

And found the thesis to be original work of the student and written in accordance to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for **Master of Business Studies (MBS)**

Viva-Voce Committee:

Head, Research Department   ---

Member (Thesis Supervisor)   ---

Member (Thesis Supervisor)   ---

Member (External Expert)   ---

DECLARATION

I hereby declare that the work reported in this entiled **"Investment Policy of Commercial Banks"** submitted to Shanker Dev Campus, Faculty of Management, and Tribhuvan University in my original work done in the form of partial fulfillment of the requirement for the Masters's Degree in Business studies under the supervision of our kind teachers Shashi Kanta Mainali and Rabindra Bhattarai.

....

RESHNA BAJRACHARYA

Researcher

Shanker Dev Campus

Roll No: 587/063-064

T.U. Reg. No: 7-2-431-28-2003

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This study is an effort to present in the Department of Management in Partial fulfillment of the requirement of the degree of Masters's in Business studies.

This study is mainly based on secondary data which is collected from NABIL Bank limited, Nepal Investment Bank Limited, Nepal Rastra Bank and other related institutions and information sources.

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Thank you.

RESHNA BAJRACHARYA

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ABBREVIATIONS

&	: and
ABBS	: Any Branch Banking System
A.D.	: Anno Domini
ATM	: Automated Teller Machine
B/S	: Bikram Sambat
BOKL	: Bank of Kathmandu Limited
CRR	: Cash Reserve Ratio
C.V.	: Coefficient of Variation
EBL	: Everest Bank Limited
F/Y	: Fiscal Year
GDP	: Gross Domestic Product
HBL	: Himalayan Bank Limited
i.e.	: that is
JVB	: Joint Venture Bank
L/C	: Letter of Credit
Ltd.	: Limited
NBBL	: Nepal Bangladesh Bank Limited
NEPSE	: Nepal Stock Exchange
NIBL	: Nepal Investment Bank Limited
NRB	: Nepal Rastra Bank
OBS	: Off balance sheet
P.Er.	: Probable Error
RBB	: Rastriya Banizya Bank
ROA	: Return on Total Assets
ROE	: Return on Equity
ROI	: Return on Investment
S.D.	: Standard Deviation
WWW	: World Wide Web

CHAPTER- I
INTRODUCTION

1.1 Background of the Study

It is obvious that economic development is impossible without the development of different sectors like Agriculture, Industry, and Trade of the country. So, development of these sectors needs a regular supply of financial resources. In developing countries there is always shortage of the capital for the development activities it is not possible to handle and develop all the sector by the government alone at a time private people also can not undertake large business because per capita income of the people is very low while their propensity to consume is very high. Due to low income their saving is very low and capital for motion is very low. So, their saving is not sufficient for carrying on development works.

"Economic development demands trans formation of saving or investable resources into the actual investment. It is the financial institution that transfer funds form surplus spending units to deficit units" *(Nepal Rastra Bank, 1996:43).*

The proper mobilization and utilization of domestic resources is one of the key factors in the economic development of a country. Similarly, integrated and speedy development of the country is only possible when competitive and reliable banking services are reached and operated to every corner of the country. It has been well established that the economic activities of any country can hardly be carried without the assistance and support of financial institutions. Financial institutions have catalytic role in the process of economic development. The investment policy of financial institution, especially banks has long term impact not only on their growth and sustainability but also on the economic development of the country. Successful formulation and effective implementation of investment policy is the prime requisite for the successful performance of banks and other financial institutions. Good investment policy has a positive impact on economic development of the country and vice-versa.

Capital formation is one of the important factors in economic development. The capital formation leads to increase in the size of the national output, income, and employment, solving the problem of inflation and balance of payment and making the economy free from the burden of foreign debt. Domestic capital formation helps in making a country self-sustainable. Profit by business community constituted the major part of the saving of the community and what was saved was assumed to be invested.

The initial step investing policy involves is determining the investment objectives and the amount if one's investing able fund. Investment is always related with risks and returns. Making money alone cannot be an appropriate objective. It is appropriate to state that the objective is to make a lot of money by recognizing the possible losses. Therefore, investment objective should be stated in terms of both risks and returns setting a clear investment policy also involve the identification of the potential categories of financial assets for consideration in the ultimate portfolio. The identification of assets depends upon many things such as investment objectives investable fund, tax consideration etc.

Investment is a very risky job for a purposeful, safe and profitable investment. Bank must follow sound investment policy. The fundamental principle of investment must be followed thoroughly for profitable investment policy should ensure maximum amount of investment to all sectors with proper utilization. There is high liquidity in the amount and it seems no profitable place to invert there days. Investment policy provides the bank several inputs through which they can handle their investment operation efficiently ensuring the maximum return with minimum risk, which ultimately leads the bank to the path of success to achieve its organizational objectives of shareholder wealth maximization.

Investment operation of commercial banks is very risky on for this, commercial banks have to pay due consideration while formulating investment policy. A healthy development of any commercial bank depends upon its investment policy. A good investment policy attracts both borrowers and lenders which help to increase the volume and quality of deposits, loans and investment.

The Roman Empire collapses in the last of 15th century and consequently, commercial

banking transactions were because of revival of commercial and other trading activities in European countries. According to the opinion of great economist Geoffrey Crowther, following community groups are the ancestors of modern banking:

1   The Merchant Trader
2   The Goldsmith
3   The Money Lenders

History tells us that it was the merchant banker who first evolved the system of banking by trading in commodities then money. Their trading activities required the remittance of money from one place to another for which they issued different documents as the near substitutes of money, called draft or hund is in modern days.

The next stage in the growth of banking was the goldsmiths; the business of goldsmiths was such that they had to take deposits such as bullion, money and ornaments for the security form theft. This makes possible to the goldsmiths to charge something for taking care of the money, bullion and jewellery. On the other hand, as the evidence of receiving valuables, they used to issue a receipt to the depositors. As those receipts are good for payment equipment to the amount mentioned, it become like the modern cheques, as a medium of exchange and a means of payments.

Finally, money lenders in the early age had contributed in the growth of banking to a larger extends. They used to advance the coins on loan by charging interest. As a safe guard they used to keep some money in the reserve. Therefore goldsmiths and money lenders became bankers who started performing the two functions of bank i.e. accepting deposit and providing loans and advances. "The bank of Venice" of Italy was established in 1157 AD as the first banking institution in the world. The second banking institution namely "The bank of Barcelona" of Spain was established in 1401 AD Its function is to exchange money, receive deposits and discount bill of exchange, both for their own citizens and for the foreigner. During 1407 A.D. "The Bank of Genon" was established in 1609 AD "The Bank of England" was incorporated in 1694 AD as a joint stock bank and later on the 1844 A.D. it becomes a first central bank in the world.

1.2 Commercial Banks and Investment policy

"Commercial Bank is an entity, which accepts deposits and makes short-term loans to business enterprises, regardless of the scope of its other services." *(American Institution of Banking; 1972: 345-346).*

Commercial banks are major financial institutions, which occupy quite an important place in the framework of every economy. Commercial banks render numerous services to their customer in view of facilitation their economic and social life. All the economic activities of each and every country are greatly influenced by the commercial banking business of that country. Commercial banks, by playing active roles, have changed the economic structure of the world. Thus, commercial banks have become the heart of financial system.

Commercial bank deals with people's money. They have to find ways of keeping their assets liquid so that they could meet the demand of their customers. In their anxiety to make profit, the banks can't afford to lock up their funds in assets that are not easily realizable. The depositor's confidence could be secured only if the bank is able to meet the demand for cash promptly and fully. The banker has to keep adequate cash for this purpose. Cash is an idle asset and hence the banker cannot afford to keep a large portion of his assets in the bank. Therefore the banker has to distribute his assets in such a way that he can have adequate profits without sacrificing liquidity.

Commercial banks must mobilize its deposits and other funds to profitable, secured, stable and marketable sector. Then only it can earn more profit as well as it should be secured and can be converted into cash whenever needed. But, commercial banks have to pay due consideration while formulating investment policy regarding loan and investment. Investment policy is one facet of the overall spectrum of policies that guides bank's investment operations. A healthy development of any bank depends heavily upon its investment policy. A sound and viable investment policy attracts both borrowers and lenders, which helps to increase the volume and quality of deposits loan and investment. Commercial bank should be careful while performing the credit creation function. The banks should never invest its funds in those securities, which

are subject to too much depreciation and fluctuations because a little difference may cause a great loss. It must not invest its funds into speculative businessman who may be bankrupt at once who may earn millions in a minute.

Commercial banks must follow the rules and regulations as well as different directions issued by the central bank, ministry of finance, ministry of law and other regulatory bodies while mobilizing its funds. So, the bank should invest its funds in legal securities only. Dina McNaughton in her research paper "Banking Institutions in Developing Market's states that, investment policy should incorporate several elements such as regulatory environment, the availability of funds, the selection of risk, loan portfolio balance and term structure of the liabilities." *(McNaughton; 1994: 19)*. Thus, commercial banks should incorporate several elements while making investment policy. The loan provided by commercial bank is guided by several principles such as length of time, their purpose, profitability, safety etc. These fundamental principles of commercial bank's investment are fully considered while making investment decision.

1.3 Introduction of Sample Banks.

i)NABIL Bank Limited

NABIL Bank Limited is newly named of pervious Arab Bank Limited NABIL; the first joint venture bank of Nepal was established in 1984 A.D. under the company Act, 1964 A.D. It is joint venture with the Dubai Bank Limited owned 50% equity partner which was transferred to Emirates Bank International Limited Dubai (EBIL). Later in EBIL sold its entire stock to National Bank Limited Bangladesh (NBL). The current structure of equity with five parties.

1. The National Bank Limited, Bangladesh is having 50% of share,
2. Nepal industrial development corporation (NIDC) is the holder of 10% share,
3. Rastrya Beema Sansthan as 9.66%,
4. Nepal stock exchange (NEPSE) as 0.34% and
5. The remaining 30% being held by the General Public (which means that NIBL is a Company listed on the Nepal Stock Exchange).

Bangladesh (NBLB) is managing the bank in accordance with the technical service agreement signed between NBLB and the NABIL Bank on June 1995 A.D. the bank expanded its banking service towards the different regional and parts of the country by expanding its branches.

ii) Nepal Investment Bank Ltd.

Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners.

The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one the largest banking group in the world.

With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, has acquired on April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd. The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

1. A group of companies holding 50% of the Capital
2. Rashtriya Banijya Bank holding 15% of the Capital.
3. Rashtriya Beema Sansthan holding 15% of the Capital.
4. The remaining 20% being held by the General Public (which means that Investment Bank is a Company listed on the Nepal Stock Exchange).

1.4 Focus of the study

The main focus of the study is to highlight the investment policies of commercial banks expecting that the study can be bridge the gap between deposit and investment policies. On the other hand, the study would provide information to management of the bank that would help them to take collective action. Further from the study, the shareholder would get information to make decision while making investment on shares of various banks. Having completed the basis analysis required for the study, the researcher must point out the mistakes and errors and also correct them by giving suitable suggestion for further improvement. It helps to understand the investment

policy followed by the commercial bank and how does it affects on liquidity and profitability situation. It is the major concern of stakeholders to know the segregation of loan and advances and investment component of bank. Therefore, this summarizes and recommended tasks of the researcher of the study would be meaningful to the top management of the bank to initiate the action and achieve the desire result.

1.5 Statement of Problems

Mushrooming of private sector banks is the present situation of Nepalese financial sector. The fast growth of such organization has contributed the prorate increment in collection deposits and their investment. They collect adequate amount from the mass, however they could not find or locate new investment sectors required to mobilize their funds on the changing context of Nepal. Only few commercial banks are getting regular profits. Most of them are unable to satisfy their shareholders and customers in earning profit and ensuring their safe deposit. Some banks are incurring clients or adequate deposits but they cannot find profitable sectors or opportunities to invest the deposit collections. They have always feared with high degree of risk and uncertainty. There are various problems in resource mobilization by financial institution in Nepal. The most important problem is poor investment climate prevailing in Nepal due to heavy regulatory procedure, uncertain government policy, NRB's stringent directives, unsecured social environment etc. Lack of sound investment policy is another reason for a commercial bank not to properly utilizing its deposits that is making loan and advances or lending for a profitable project. This condition may lead the commercial bank to the position of liquidation.

Commercial banks invest their funds in limited areas to achieve highest amount of profit. They are found to be more interested in investment in less risky and highly liquid sectors like in T-Bills, development bonds and retail and consumer lending. There are obvious hesitations to invest on long term project and in venture capital investment. So, many of them follow conservative and un-efficiency investment policy. As with everything in Nepal, every commercial bank has an investment in the same sectors. They are in consumer lending, tourism, garments and in trading sector.

They are the major sector. But given the current situation of the country, it is not up to them to decide which sector they want to go into. The main factor for success of any organization is the security situation. Once the security situation stabilizes, then only commercial bank consider rationally as to where they should to invest and grow. So, security problem is the burning problem for every commercial bank to invest their fund in our any sector.

Many of Nepalese commercial banks have not formulated their investment policy in an organized manner. Majority of them mainly rely upon instruction and guideline of Nepal Rastra Bank. They don't have clear view towards investment policy. Furthermore, the implementation of policy formulation and absence of strong commitments towards its proper implementation has caused many problems to commercial banks.

The compared problems specially related to investment functions of the commercial banks have been presented briefly as under:

a) Is NABIL Bank's investment policy more effective and efficient than that Investment Bank?

b) Is NABIL Bank's investment Strategy successful to utilize its available fund in comparison to the Investment Bank?

c) Are they maintaining sufficient liquidity, profitability and risk position?

d) What is the relationship of investment on loan and advances with total deposit and total net profit?

e) Does the investment decision affect the total earning of the commercial banks?

1.6 Objectives of the Study.

Objectives of the study are as follows:

a) To analyze the investment policy of the sampled objectives.

b) To analyze the utilization of available fund of NABIL Bank and Investment Bank.

c) To evaluate the liquidity, profitability and risk position of NABIL bank and Investment Bank.

d) To analyze the empirical relationship between deposit, loan and advances, investment, net profit and compare them between NABIL and Investment Bank.

1.7 Significance of the Study.

In the context of Nepal there is less availability of research work, journals and article in investment policy of commercial banks as well as other financial institution. As it is a well known fact that the success and prosperity of the bank relies heavily upon the successful investment of collected resource to the important sector of economy. Successful formulation and effective implementation of investment policy is the prime requisite for the successful performance of commercial banks.

There are various problems in effective investment of commercial banks of Nepal, which affect their performance to a greater extent. Performance of commercial banks does not seem so satisfactory in terms of utilizing its resource efficiently in productive sectors. Hence the main significance of this study of investment portfolio analysis of Nepalese commercial banks is to help how to minimize risk on investment and maximize return through portfolio analysis, portfolio management, credit management and effect on investment decision on earning will strive to disclose the internal weakness of the banks and furnish the ideas for improvement. Therefore, the researcher has undertaken this study to analyze the existing investment portfolio of Nepalese commercial banks with reference to NABIL and Investment Bank and point out the various weaknesses of defects inherent in it and provide package of suggestions for its improvement.

1.8 Limitations of the Study

This study is simply a partial study for the fulfillment of MBS degree, which has to be finished within limited period. Hence, this study is not far from several limitations of its own kind, which weaken the scope of the study to some extent.

Some of such limitations are as follows:

a. The study is mainly based on secondary data collected from different sources.

b. The study period will be covered for only five fiscal year i.e. from 2005/06 to 2009/010.

c. Out of the numerous affecting factors, this study concentrates only on those factors, which are related with investment policy, and available in the form required for analyzing the different issues.

d. Due to wide range of data deficiencies only simple technique has been used for the analysis of the data.

e. The study deals with only two commercial banks and data related to other commercial banks have not been accounted.

f. Analysis is done on the basis of best available information.

1.9 Organization of the Study

The study contains following five chapters:-

Chapter: I Introductions

This chapter deals with the introduction of the study consisting subject matter, objectives of the study, statement of the problem, focus & signification of the study, limitations of the study and chapter plan.

Chapter: II Review of Literature

This chapter deals with review of literature which includes review of books, review of journals and annual reports published by the banks and other authorities review or related articles and previous thesis as well.

Chapter: II Research Methodology

This chapter describes the research methodology of various sequential steps that have been followed in conduction this study and material used as each steps which included research design, population and sample, data analysis and tools, ratio analysis profitability ratio, risk ratio, growth ratio etc.

Chapter: IV Presentation and Analysis of Data

This chapter represent the data presentation and analysis chapter, which deals with the presentation and analysis of data through a define course of research methodology. This chapter is to analysis different statistical tools and financial tools.

Chapter: V Summary, Conclusions and Recommendation

This chapter related to summary, conclusion and recommendation of the study. Finally, bibliography and appendices have been included at the end.

CHAPTER –II
REVIEW OF LITERATURE

This chapter has focused on the review of literature that is relevant to the investment policy of commercials banks. Every possible effort has been made to wider knowledge and information that is available from libraries, documentation centers and related thesis works. The first section of the chapter implies the conceptual framework of the study, the second section relates to the NRB directives, and the third section implies the review of previous studies.

2.1 Conceptual Framework

There is an important role of banks in the economic growth and development of a country. To achieve an ideal economic growth and development of the country, banks should have strong and well-managed organization of banking system. When banking is appropriately organized, it aids and facilitates the growth of trade and industry and hence of national economy. Banks are such type of institutions, which deal in money and substitute of money. They deal with credit and credit instruments. The most important thing for the bank is good circulation of credit. Fluctuate flow of credit and decisions harm the whole economy and the bank as well. Thus to collect fund effectively and its well utilization is the very challenging task for the bank. The decision for an investment of fund may be the question of life and death of the bank.

In modern economy, banks are considered not as dealer of money but as the leaders of development. Banks are not only the warehouse of the country's wealth but are also the reservoirs of the resources necessary for the economic growth of the country. Investment is the employment of funds with the aim of achieving addition income or growth in value. It involves the commitment of resources that have been saved or put away from current consumption in the hope that same benefits will accrue in future. Investment involves long-term commitment and waiting for a reward. The sacrifice takes place in the present and is certain while the rewards come later and uncertain.

"The business of banking is collection of funds from the community and extension of credit to people for useful purposes. Banks have played a pivotal role in making

money from lenders to borrowers. Banking is a profit seeking business, not a community to carry profit seeker, expected to pay dividend and otherwise, add to wealth of shareholders" *(Grywinshki; 1993: 87).*

"Banking institutions are inevitable for the resource mobilization and all-round developing of the country. It is resource for economic development; it maintains economic confidence of various segments and extends credit to people." *(Edimister; 1980: 95).*

2.1.1 Meaning of Commercial Banks

The ordinary meaning of bank is commercial bank. Commercial are those banks that pool together the saving of the community and arrange for their productive use. They supply the financial needs of modern business by various means. They accept deposits from the public on condition that they are repayable on demand or on short notice. In other words, a bank is a financial intermediary, a dealer in loans and in debts. It borrows from one set of people and lends to hiring money and hiring out again. Some banks draw their capital mainly from their shareholders, other's mainly from depositors. Some lend mainly to industry, others mainly to government, central and local. Some deal in short loans, borrowings and lending for short periods, others deal in long periods. However the business of individual bank may differ, their essential function is to gather saving together and lend out what they collect.

A sound investment policy of a bank is such that its funds are distributed of different types of assets with good profitability on the one hand and provides maximum safety and security to the depositors and bank on the other hand, moreover risk in banking sectors trends to be concentrated in the loan portfolio when a book gets into serious financial trouble its problem usually spring from significant amounts of loan that have become uncollectable due mismanagement illegal manipulation of loan misguided lending policy or unexpected economic down turn. So the bank investment policy must be such that it is sound & prudent in order to protect public funds. *(Baidya; 1967: 13)*

"A banker seeks optimum combination of earning liquidity and safety, while formulation investment policy". *(Chandra; 1973: 12)*

"Investing involves making a current commitment of funds in order to obtain and uncertain future return. It is a risky business that demands information. To process information effectively and select the best investment requires goals that are clearing cut and realistic." *(Francis; 1983: 7)*

Economic investment that is an economic definition of investment. Investment is a more general extended sense which is used by "the man of the street." The sense in which are going to be very much interested namely financial investment. "Banks are those institutions which accept deposit from the public and turn provides credit to trade, business and industry that directly makes remarkable impact on the economic development of a country. Hence sound investment policy or a bank is another secret of a successful bank. To collect fund and utilize it in a good investment is a very risk job. Various people have given their view regarding the investment policy of CBS which has been written below."

2.1.2 Investment Policy

The income and profit of the bank depends upon its lending procedure, lending policy and investment of its fund in different securities. The greater the credit created by the bank, the higher will be the profitability. A sound lending and investment policy is not only pre-requisite for profitability, but also crucially important for the promotion of commercial savings of backward country like Nepal. Many authors as under have given some necessities for sound lending and investment policies, which most of the bank must consider:

The investment policy of the bank helps the investment operation of the bank to be efficient and profitable by minimizing the inherent risk.

"The investment policy of banks is conditioned to great extend by the national policy frame works every bankers has to apply his own judgment for arriving at a credit decision, keeping of course, his banker's credit policy also in hand". *(Singh; 1993: 9)*

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They further state," The field of investment is more challenging as it offers relatively greater scope to banker for judgment and discretion in selecting their loan portfolio. But this higher degree of freedom in the field of credit management is also accomplished greater risk. Particularly during recent years, the credit function has become more complex."

"Investment is any vehicle into which funds can place with the expectation that will present or increase in value and generate positives returns." *(Gitman; 1990: 16.)*

"Investment as commitment of funds to one or more assets that will be held over some future time period. Investment is concerned with the management of an investor's wealth. This is the sum of current income and present value of all income." *(Jones; 1991:5)*

"Investment is the employment of funds with the aim of achieving additional income of growth in value." *(Singh; 1992: 3).*

"The investment objectives are to increases systematically the individual wealth, defined as assets minus liabilities. The higher the level of desired wealth the higher must be received. An investor seeking higher return must be willing to face higher level of risk." *(Cheney and Moses; 1998: 13)*

"Investment in its broadcast sense means sacrifice of certain present value for (possible uncertain) future value." *(Sharpe and Gorden; 1998: 9)*

2.1.3 Investment Decision

"In Investment decision, expenditures and benefits should be measured in cash. In investment analysis, cash flow is more important than accounting profit. It may also be pointed out that investment decision affect the firm's value. The firm's value will Increase if investments are profitable and add to the Shareholder' wealth. Thus Investment should be evaluated on the basis of a criterion which is compatible with the objective of the shareholders fund maximization. An investment will add to the Shareholders wealth if it yields benefits in excess of the minimum benefits as per the Opportunity cost of capital." *(Pandey; 1999: 407)*

"An investment may be define as the current commitment of funds for a period of time to derived future flows that will compensate the investing unit for time of funds are committed, for the expected rate of inflection and also for the uncertainty involve in the future flow of the funds." *(Reilly; 1999:23)*

From the above quotation, it is clear that an investment means to trade a known rupee amount today for some expected future stream of payment or benefits that will exceed current outlay by an amount that will compensate the investor for the time of uncertainty involve in expected future cash flows. Thus investment is the most important function of commercial banks. It is a very challenging task for commercial banks. So, a bank has or be very caution while investing their funds in various sectors. The success of a bank heavily depends upon the proper management of its investible funds. Investment management of a bank is guided by the investment policy adopted by the bank. The investment policy of a bank helps the investment operation of the bank to be efficient and profitable by minimizing the inherent risk.

2.1.4 Portfolio Analysis

In financial leverage, portfolio could be defined as the composite mixed of ownership to financial assets/investments in which a particular investor wishes to invest. Thus, portfolios are composition of investments in various sectors which in turn are composed of expected risk and return of their component investments. It helps an investor to make optimal investment decision minimizing overall risk and maximizing overall return. Portfolio theory was first developed by Markowitz in connection with the investment in stock market securities. The ground theory was that, if the correlation between the assets return is not perfectively positive, investing in two assets can minimize risk.

2.1.5 Portfolio Management

In general, portfolio management is the process of selecting a combination of investment alternatives that provide the investor a maximum attainable return for a given level of risk or a minimum risk for a given level of return. Portfolio management can also be taken as the management of risk and return. It aims to

determine an appropriate mix of investments that attains optimum level of risk and return depending upon the attitude of investor.

"Portfolio management is the art of handling a pool of funds, so that it not only preserves its original worth but also overtime appreciates in value and yields an adequate return consistent with the level of risk assumed." *(Cohen, Zinbarg and Zeikel; 2000: 65)*

"A portfolio simply represents the practice among investors of having their funds in more than one asset. The combination of investment assets is called a portfolio." According to *(Weston and Brigham; 1999: 65)*

"Portfolio means a collection or group of assets." (Sharpe, Alexander and Bailey; 1999: 19) "Portfolio construction involves identifying those specific assets in which to invest as well as determining the proportions of the investors wealth to put in to each one." According to *(Lawrence J. Giman; 1993: 47)*

"The term 'portfolio' simply means collection of investments. For an investor through the stock exchange the portfolio will be a collection of shareholders in different companies. For a property investor, portfolio will be a collection of buildings. To a financial manager within an individual company, portfolio will be a collection of real capital projects. It will be apparent that the actual nature of the components of a portfolio depends on the population of opportunities from which the selection has been made." *(Raymond and Brockington; 1987: 14)*

Portfolio management of banks' loan investments basically are the allocation of funds to different types of consumption and investment loans having different degrees of risk and varying rates of return in such a way that balances the conflicting goal of maximizing return and minimizing risk. The process of managing banks' loan investments considers a number of relevant and influencing factors such as the availability of funds, liquidity required, central bank's rules and regulations that abide banks, risk associated with the respective industries, and the expected rate of return on

respective loan sanctioned sectors. In addition, the banks should carefully examine the macroeconomic indicators such as interest rates, inflation, aggregate expected money multiplier, national income; saving ratio etc. effective management of banks' loan investments can lead the banks into the success as loan investments constitute the major portion of a traditional bank's total assets.

"Portfolio behavior of commercial banks in Nepal." Said that "The commercial banks fulfill the credit needs of various sector of the economy including agriculture, industry, commercial and social service sector. The lending policy of commercial banks is based on the profit maximizing of the institution as well as the economic enhancement of the country." *(Shrestha; 1995:4)*

2.1.6 Feature of the Sound Lending and Investment Policy

The income and profit of the banks depends upon its lending procedures, lending policy and investments of its funds in different securities. In many causes a sound lending and investment policy is not only pre-requisite for the promotion of commercial saving of backward country like Nepal.

The need of the bank its origin the meaning of the bank mechanism controlling the bank operation loan management and capital management. It means that the bank must formulate the guideline to invest its deposit and capital in various forms of earning assets. Allocation of deposit in different sector areas also knows as portfolio management. In other words we can say that do not take risk by putting all eggs in one basket alone misguide policies can cause the bank to suffer to a lot. Therefore the bank must formulated sound investment policies to protect the public funds.

"Every bank's board of directors generally formulates an investment policy statement in order to define the objectives of the banks liquidity management and investment portfolio", *(Vaidya; 1996: 5)*

Regarding the investment policies of commercials banks there are basically eight basic principles the bank follow while providing the loans. They are as follows.

a. Liquidity

Liquidity is the ability of a firm to satisfy its short term obligations when they become due for payment. People deposit money at the bank in different account with confidence that the bank will repay their money when they need. To maintain such confidence of the depositors, the bank must keep this point in mind. While investing its excess fund in different securities, so that it can meet current or short term obligation when they because due for payment.

b. Profitability

A commercial bank can maximize its volume of wealth through maximization of return on their investment in lending. So, they must invest their fund where they can gain maximum profit. The profit of commercial banks depends on the interest rate, volume of loan, its time period and nature of investment in different securities.

c. Safety and Security

The bank should never invest its funds in those securities which are too volatile i.e. which are subject to too much depreciation and fluctuations because a little difference may cause a great loss. It much not invest its fund into speculative businessman who may be bankrupt at once and who may earn million in a minute also. Security means adequate collateral having good value which can be easily sold off it required at any point of time. The bank should accept that type of securities, which are commercial durable and marketable having fair market value for this purpose 'MAST' should be applied while reaching an investment decision where MAST stands for

M= Marketability.

A= Ascertain ability.

S= Stability.

T= Transferability.

Bank deals with customer is money so it must take care the belonging of public the risk and return involved must be analysis thoroughly so that depositors money is advance safety where the risk of followed while we arrive in decision regarding the advances of fund. The three 'C' stand for

Character

Capacity

Capital

d. Suitability

Banks should always know that why a customers need loan because if the borrower misuse the loan granted by bank he will never be able to repay loan. In order to avoid such circumstance advances should be allowed to select the suitable borrowers and it should demand all the essential detailed information about the scheme of the project in which the bank is lending for. Bank must keep in mind the overall development plans of the nation and the credit policy of the concern authority i.e. central bank.

e. Purpose of Loan

From the view print of security a banker should always be known that why a customer is in need have loaned. If a borrower misuses the loan granted by the bank it can never repay and bank will process heavy bad debts. Therefore in order to avoid this situation each and every bank should demand examine all the essential detailed activities, before lending.

f. Diversification

'A bank should not lay all its eggs on the same basket'. This saying is very important to the bank and it should always be careful not to grant loan in only one sector. To minimize risk, a bank must diversify its investment on different sectors. Diversification of loan helps to sustain loss according to the law of average because if securities of a company deprived, there may be appreciation in the securities of other companies. In this way the loss can be minimized or recovered.

g. National Interest

In addition to its own profitability the bank should also consider the national interest. Even though the bank cannot get maximum return from such investment it should carry out its obligation towards the society and the country. The bank is required to invest on such sectors as per the government and Nepal Rastra Bank's instruction.

Investment on government bonds, priority and deprived sector lending are the examples of such investments.

h. Legality

Illegal securities will bring out many problems for the investor. A commercial bank must follow the rules and regulations as well as different directives issued by the central bank (Nepal Rastra Bank), Ministry of finance, Ministry of law and other relevant authorities while mobilizing its funds.

2.1.7. Invest Management Functions

Every investment is not risk free so the investment must be made in such a way so that the risk is diversified. According to this book the investment can be made on securities such as treasury bins long term bond common stocks. The focuses of supply and demand inter act to determine a security market price. A security market is a mechanism for bringing together buyers and sellers of financial assets in order to facilitate trading. The investment decision has go through the following process: *(Sharpe, Alexander & Bailey, 1999:11)*

a. Set Investment Process

Setting the investment policy involves determine the investors objective and amount of wealth tax consideration etc because there is a positive relationship between risk and return for deniable investment.

b. Portfolio Construction

Portfolio construction involves identifying those specific assets in which to invest and what proportion the investors wealth portfolio construction involves the diversification which minimizes the risk.

c. Portfolio Revision

The revision of portfolio is done from time to time. Due to changing partner of risk the portfolio revision are done to minimize the risk.

d. Security Analysis

Security analysis involves examines the number of securities. The purpose of analysis is to check whether the securities are missing priced. Technical analysis, the analysis conducted on the basis of past history to predict future trend and fundamental analysis that calculates the intrinsic values of share are conducted. Fundamental analysis, tries to identify the real or true value of financial assets.

e. Portfolio Performance Evaluation

It determines performance of portfolio periodically regarding the return earned and risk experienced by the investor. The performance should be evaluated not only in the terms if the returns but also the risks experienced. To evaluate the performance appropriate measures and standards are needed.

2.2 An overview on NRB Directives Regarding Investment of a Commercial Bank.

NRB directs the banks and other financial institutions too. Plans police, directions rules regulations form NRB are major subject to run the commercial banks. Every step of the commercial banks is always observed by NRB, as a represential of the Nepalese government. To allocate and mobilize the deposit collected by commercial banks in different sectors of the different areas of the nation, the NRB as a central bank, formulates fundamental rules regulations, directives polices etc. in fact, NRB controls the over the overall activities made by the commercial banks as well as establishment or operation or dissolution of banks. Hence, the directions rules regulations directed by NRB terms of investment by commercial banks are briefly mentioned below (NRB directive 2066). (www.nrb.org.np / directives, 2006)

Directive-8.3.1 Investment in Share and debenture of other listed company

Commercial banks should only invest on those company's shares and debenture which are listed in the Nepal Stock Exchange. As per the directive given in these sections it has also clearly mentioned that the investment should not be more than 10% of its issued capital.

Directive-8.3.3 Investment in Housing and Land development

Commercial bank cannot invest more than 10% of its Authorized capital in housing and land development sector. But if the investment is for its own use then commercial bank should follow following criteria,

) Shares should be fully issued to the public

) Banks must earn profit.

) Bank's capital fund should be adequate as per its directions

Directive -8.3.9 Direction for extension counter of joint venture banks

) Commercial banks can't open extension in metropolitan and semi metropolitan area expect during trade, fairs festivals ceremonies celebration etc as a directed by NRB such extensions must be converted as a branch within two years otherwise must be closed.

) The extension opened can accept deposit and make payment as well as exchange of foreign currencies after the reemission from NRB.

) If the extension is opened in the areas of Royal place hospitals, foreign diplomatic offices industries those extensions are not allowed to operate as a branch as mentioned in (11).

2.3 Review of Related Studies

2.3.1 Review of Journals and Articles

Bhatta (1992), in his article *"Financial Policies to Prevent Financial Crisis"* has given more emphasis on Nepalese financial market sector. He has mentioned the financial crisis occurred in China, Mexico, South Asia, Russian Federation Ecuador and Brazil & Argentina. This crisis affected all these economic by posing negative effects in their real output. He had also focused on Nepalese financial market, which is directly affected by the national and international events. The most effected events were September 11 incident in U.S.A., which had added more to the fragility in the global financial market. In present context in many part of the world, the move towards liberalization is getting its momentum on one hand and the process of economic development is being threatened due to various unanticipated incidents on

the other. He has defined a financial crisis as a description to financial markets in which adverse section and moral hazard problems become much worse, so that financial markets are unable to efficiently channel funds to those who have the most productive investment opportunities.

He has given light on dynamics of financial crisis dividing it into three stages. In addition, he has suggested the policies to prevent financial crisis.

- Prudential Supervision
- Accounting Standards & disclosure requirements
- Legal and judicial system
- Monetary policy and price stability
- Exchange rate regimes and foreign exchange reserves
- Capital controls
- Restriction on foreign denominated debt
- Reduction of the role of the state owned financial institution
- Encouraging market based discipline

Sharma and Bhatt (2002) in their article *"Priority Sector"* have explained that the commercial bank should take care of board national interest and they showed not confine their lending activities only to commercial area providing quick interest if some proportion could be directed to the area conclusive to build economic infrastructures of the country it would create atmosphere conductive to their investment in future. In our society where ignorance and literacy is in wide scale, it is necessary that the bank search entrepreneurs instead of entrepreneurs searching banks. so they have opined that the priority sector program is a timely and appropriate will designed to create additions productive employment opportunities there by increasing production and the general living standard of rural poor. But the success of the program largely depends upon the integrated operation with other programs designs for rural development. Further they argue that various programmers VIZ. Rural development land reform SAJHA, Back to the village national Champaign. Adult literacy etc. Could not materials their objective despite their some theoretically philosophy and good objectives.

Shrestha, (2055; B.S.), in his article *"A Study on Deposit and Credits of Commercial Bank in Nepal"* concluded that the credit deposit ratio would be 51 .30% other things remaining the same in 2000 B.S 3 much was the lowest under the period of review. So he had strongly recommended that the commercial bank should try to give more credit entering new field as far as possible. Otherwise they might be able to absorb even its total expenses.

Pokharel (2006), in the article entitled *"Financial Sector Reform and Challenges",* stresses that highest liquidity makes the financial institutions un-bankable by creating unnecessary burden of bearing the cost of capital. Dr. Pokharel expresses that most of the financial institutions are lying on uneconomic situation due to ineffectiveness of portfolio management on the one hand and deficiencies of efficient modern management on the other. As for the betterment of the financial possibility in portfolio projects, like health, residential buildings, communications, tea gardening etc. Pokharel further suggests that commercial banks need to make strong strategy urgently with shifting the money from fixed deposit to saving reducing the interest between deposits and interest spread in both sectors. He highlights that fixed deposit has been increasing in the ratio of 0.44 to 0.95 from 2001 to 2002.

2.3.2 Review of Thesis

Prior to this, several works has been attempted by previous student regarding various aspects of commercial banks like financial performance, lending policy, investing Policy, resource mobilization, capital structure etc. Among them some research those that were found relevant for this study are presented below:

Ghimire, (2003), conducted a study on *"Lending Policy of Commercial Bank in Nepal"*

The objectives of the study are as follows:

- ꞁ To analyze the role of commercial bank in its historical prospective.
- ꞁ To identify to major weakness of lending policy of the commercial banks.
- ꞁ To show the relationship between deposits, loans and advances.
- ꞁ The research was conducted mainly on the basis of secondary data.

The research findings of the study are as follows.

∫ By paying higher interest rate the banks are increasing deposits, which in run create saving habits of the general people. Then the banks will be able to utilize their idle funds in productive channels. This type of business of commercial banks is relay a necessary one in an agriculture country like Nepal, where public investment has limited capacity.

∫ Effectiveness of lending policy is directly based upon a sounding banking system. But to geographical variation, transportation and other regional disparities, it is very difficult to expand braches in different rural area. So it can be said that commercial banks in Nepal are not playing an active role to utilize their sources collected from different sectors.

Laudari, (2004), has conducted a study on, *"A Study on Investment Policy of Nepal Indosuez Bank Ltd, in a Comparison of Nepal State Bank of India Bank ltd."* The researcher main objective of study was to examine the liquidity assets management and profitability position and investment policy of NIBL in comparison to NSBI to study the growth ratios of loan and advances and investment to total deposits and net profit of NIBL in comparison to NSBI.

Through his research Mr. Laudari has found that the both banks current assets have exceeded the current liabilities therefore the ratio consider satisfactory but there cash reserve ratios have fluctuated in high degree. However NIBL has maintained both current ratio and cash reserve ratio better than that of NSBI. As per Mr. Laudari the assets management ratios shows that deposit utilization of NIBL is less effective than NSBI. He has stated that NIBL has invested lesser amount on government securities and share and debenture than that of NABIL, not only did NIBL a better performance in:

∫ Return on total assets and loan and advances.

∫ Invest earning but it paid lower interest amount to working fund.

∫ The growth ratio of total deposit loan and advances.

∫ The growth ratio of total deposit loan and advances total investment and net profit of NIBL are less than that of NSBI.

Bohara (2005) has conducted a research entitled *"A Comparative Study on Investment Policy of joint Venture Banks of Nepal"*.

The objectives of the study are as follows:

- ⟩ To find the Liquidity position and profitability position of above
- ⟩ Mentioned JVB‟s in comparison with finance companies.
- ⟩ To find the relationship between with finance companies.
- ⟩ To the deposit utilization trend and its future projection for next five Years for JVB‟s and finance companies.
- ⟩ To study the various risk in investment of JVB‟s in comparison finance Companies.
- ⟩ To analyze the relationship between deposit and investment, deposits
- ⟩ Loans and advances, net profit and total assets of JVB‟s in comparison With finance companies.
- ⟩ To provide suggestion and recommendation on their basis of findings.

The major findings of the study are as follows:

- ⟩ Liquidity position of JVB‟s comparatively better than that of finance companies. Finance companies have made nominal amount of investment in government securities.
- ⟩ Finance companies have mobilization their deposits smoothly in comparison with JVB‟s. The average loan and advance to total deposit ratio of finance companies is higher than JVB‟s.
- ⟩ Profitability position of JVB‟s except for BOKL is better than that of finance companies, but profitability position of finance companies in terms of return on total assets is better. Interest income in relation to proportion of total assets and operating income is higher in finance companies in comparison to JVB‟s.
- ⟩ The growth ratio of deposits, net profit, loan and advances are highr than that of JVBs and are increasing every year, with indicates good performance of the finance companies.

) The risk ratios of finance companies are less variable the JVB‟s. The interest risk ratio of finance companies is higher where as the capital risk ratio of JVB‟s is comparatively higher than that of finance companies.

) JVB‟s are in a better position in mobilizing deposits as loan and advances, but so far finance companies have been successful in utilizing their sources of funds and in their mobilization.

Shrestha (2006) has conducted a research entitled *"Investment Analysis of Commercial Banks" (A Comparative Study of Nepal Bank Limited and Nepal State Bank of India Limited).*

The objectives of the study are as follows:

) To analyze investment trend, deposit trend and total income and there to analyze percentage of investment made by HBL and NSBIL in total investment made by commercial banks.

) Projection for next five year of HBL and compare them with that of NSBIL.

) To identify investment sector of HBL and NSBIL.

) To evaluate the liquidity, assets management efficiency, profitability and risk position of HBL in comparison to that of NSBIL.

) To study the relationship between investment and deposit of bank.

The major findings of the study are as follows

) Percentage of HBL‟s investment to total commercial banks investment in extremely higher than NSBIL.

) Both HBL and NSBIL have invested mostly on government securities but HBL has invested in NRB bonds also as well as in other productive sector.

) NSBIL is better than HBL from liquidity point of view.

) HBL has higher profitability position than NSBIL.

) HBL is exposed to more risk than NSBIL.

) HBL has maintained higher growth rate in net profit in comparison to NSBIL.

Yadav (2009) conducted a study on "A *Study on Comparative Financial Performance of Joint Venture banks in Nepal"*.

The objectives of the study are as follows:

⟩ To find out comparative and competitive position of two JVBs banks.

⟩ To rank the Nabil and NBBL in terms of financial operational profitability, productivity position.

⟩ To show the trend of total deposits, investments, total income, total expenses and total net income.

⟩ Measuring financial risk of Nabil and NBBL.

⟩ To Provide package of recommendation and possible guidelines to improve banking business based on the findings of the study.

The research findings of the study are as follows:

⟩ Capital structure ratios of both banks are low. Debt portion is more used in NBBL but profitability position in lower than Nabil.

⟩ Both banks should be developed separately research and training department so they would be able to study different aspect of management and supply practical suggestion to develop as an innovative approach in bank management and bank operation.

⟩ The trend of total deposits, total investment, total expenses, total net income, interest expenses and Interest earning of NBBL is exceptionally higher than Nabil.

⟩ NBBL is more risky bank. Researchers recommended that portfolio situation should be carefully examined from time to time. The varied rate of return should be verified in such a way that balances the conflicting goal of maximum yield and minimum risk.

⟩ it should be careful in increasing profit in real sense to maintain the confidence of shareholders, depositors and its customers. Comparatively Nabila profitability position better than NBBL.

Thapa (2010) has conducted a research entitled "*Investment Policy of Commercial Banks in Nepal".*

The objectives of the study are as follows:

〕 To evaluate liquidity, activity and profitability ratios of RBB in comparison with NBL and industry average.

〕 TO analyze the relationship of loan and total investments with total deposit and net profit of RBB and to compare it with that of NBL and industry average.

〕 To use trend analysis to compare loan and advance, total investment, total deposit and net profit of RBB and compare the same with other two.

〕 To examine the loan loss provision of RBB and NBL.

〕 To provide suggestion and recommendation on the basis of findings.

The major findings of the study are as follows:

〕 RBB ha good deposit collecting, enough loan and advance and investment in government securities. It has comparatively better liquidity position than NBL.

〕 RBB and advance is in comparatively better position regarding issue of loan and advance but it does not have good position in regarding investment in shares and debentures of other companies, off balance sheet operation. Loan loss ratio shows low quality of loan and advance.

〕 The profitability position of RBB and advance is worse. RBB and advance needs to take immediate steps to increase its profitability.

There is significant relationship between deposit and loan and advance. There is insignificant relationship between deposit and investment, and ==outside assets== and net profit.

Shrestha (2010) has conducted a thesis research entitled "*Investment Portfolio Analysis of JVB's".*

The objectives of the study are as follows:

〕 To analyze the risk and return ratios of commercial banks.

〕 To evaluate the financial performance of JVBs.

〕 To provide suggestions package based on the analysis of data.

⟩ To study existing investment policies taken by NIBL in various sectors.

⟩ To study portfolio structure of NIBL in investment as compared to other JVB's.

⟩ Preference given by NIBL for investment between, Loan Investment. Investment in real fixed assets, Investment in financial assets.

The main findings of the study are as follows:

⟩ BOKL has the highest return on share holders fund and total assets. It has also been successful in mobilizing its deposits as investments. NIBL and EBL have invested high amounts of deposits as loan and advances in comparison to BOKL, NIBL and HBL.

⟩ Among the JVB's, looking at the investment portfolio, EBL has investment highest amount of funds in government securities, NBB has invested highest amount of funds on shares and debentures and has invested highest amount of funds on NRB bonds in comparison to other JVB's.

⟩ BOKL has the highest EPS and EBL the lowest EPS among the JVB's.

Tapol (2011) conducted a study on "*Investment Practice of Commercial Banks in Nepal*".
The objectives of the study are as follows:

⟩ To measure the financial performance.

⟩ To find out comparative and competitive position of two JVBs banks of Nepal

⟩ Measuring risk of NABIL & NIBL bank.

⟩ To find out the relationship between different variables like investment, deposits loan and advances, net profit & compare them between NABIL & NIBL.

⟩ To recommended measure for the improvement of the financial performance and effciency on the basis of the conclusion drawn from the research.

The main findings of the study are as follows:

⟩ The mean ratio of return on loan and advances of NIBL is lower than that of NABIL. On the other hand, NIBL's variability between ratios is lower than that of NABIL.

⟩ The mean ratio of credit risk ratio of NIBL is higher than that of NABIL and

NIBL's ratios are more homogenous than that of NABIL

⟩ From the analysis of growth ratio, NABIL has lower growth rate on total deposits, loan & advances, total investment and net profit than NIBL. Therefore NIBL has successfully collected and utilized fund amount of its customer than NABIL.

⟩ Banks are recommended to activate foreign technology and investment in Nepal by means of their wide international banking sector and make Nepalese personnel capable of operating these banks as efficiency as international banks.

⟩ Complain boxes should be kept in each and every branch and bank personnel try to eliminate those deficits which are in the complaint box in order to maintain better relation with its customers.

Research Gap

This research work is quite different from the studies made by the above scholars. This study focuses ineffectiveness in investment. Policy analysis of NABIL Bank & NIBL Bank Ltd. Banking comprehensive manner considering the major items. Different financial, statistical tools and primary data have been used in this study. Among them, ratio analysis, test of hypothesis are the strong financial tools. This study is a little bit different than previous studies because of the new data and new rules and regulations. Banks should follow their directives and circular furthermost their own investment guidelines and polices should be in line with NRB directives and circulars. It may be one of the best research studies of investment policy in little research work with reference to NABIL & NIBL Bank. This study tires to indicate the effectiveness of investment policy of concerned banks.

CHAPTER-III
RESEARCH METHODOLOGY

The research methodology is the process of arriving to the solution of the problem through planned and systematic dealing with the collection, analysis and interpretation of facts and figures. The research methodology adopted for the present study is mentioned in this chapter which deals with research design, population and sample, sources of data, presentation and analysis of data, methods for analyzing collected data. The objectives of this study are to evaluate the investment policy of NABIL Bank and Nepal investment Bank limited. In order to accomplish the objectives of the study, different activities are carried out and different stages are crossed during the study period. This chapter has following research methodologies.

3.1 Research Design

It describes the design used in the research activity. It is purely and simply the framework or plan for a study that guides the collection and analysis of data. Research design is the plan, structure and strategy of investigations conceived so as to obtain answers to research questions and to control variances. A true research design is basically concerned with various steps to collect the data for analysis and draw a relevant conclusion. To achieve the objectives of the study, descriptive research design has been used. Financial and statistical tools have been applied to examine facts and to evaluate investment policy of NIBL and NABIL Bank Limited.

3.2 Sampling Procedures:

it describes the sampling procedure of data collection. The population refers to the industries of the same nature and its services and product in general. Thus the total commercial banks constitute the population of the data and the understudy constitutes the sample of the study. So, from the population of 25 commercial banks operating in Nepal, NABIL Bank Limited and Nepal Investment Bank limited has been selected as the sample for the study and the period of study is about 5 years.

3.3 sources of Data:

The major data for the study are as follows:

⌡ Annual Reports of NIBL and NABIL Bank Ltd.

⌡ NRB bulletins

⌡ Websites of NIBL and NABIL Bank Limited.

⌡ NEPSE Reports.

3.4 Method of Data presentation and Analysis:

The data presentation and analysis are focal part of the study. Ranges of financial and statistical tools are used to analyze the collected data and to achieve the objectives of the study. The analysis of the data will be done according to pattern of data available. Because of limited time and resources, simple analytical statistical tools such as graph, percentage and coefficient of correlation the technique of least square are adopted in this study. In the same way, some strong financial tools such as ratio analysis and trend analysis have also been used for financial analysis. The data extracted from annual report, financial statement and other available information are processed and tabulated in various tables and charts under different headings according to their nature. .

3.4.1 Financial Tools

Financial analysis is the process of identifying financial strength and weaknesses of the firm by properly establishing relationship between the items of balance sheet. Financial tools are used to examine the financial strength and weaknesses of the bank. In this study financial tool like ratio analysis has been used.

Ratio Analysis

Ratio analysis is a tool of scanning the financial statement of the firm. "Ratio means the numerical or quantitative relationship between two items or variable. It can be expressed as percentage, Fraction or a stated comparison between numbers." (I.M. Panday, 2001; 104).Ratio analysis is the relationship between two accounting figures expressed mathematically. It is computed by dividing one item of relationship with the

other. Management itself can use these parameters to improve the organization's performance in future by knowing the strengths and weakness for exploiting maximum benefits and to repair the weakness to meet the challenges.

Even though there are many ratios, only those financial ratios are calculated and analyzed which are related in this study. They are as follows:

a. Liquidity Ratios: Liquidity ratios measure the firm's ability to meet its current obligations. It is the measurement of time within which a bank's assets can be converted into cash to meet deposit withdrawal and other current obligations. A bank should ensure that it does not suffer from lack of liquidity and also it does not have excess liquidity. Both conditions of liquidity are not in favorable to the bank.

The following ratios are evaluated under liquidity ratios

i) Current Ratio

where, current ratio shows short term solvency. Current assets include cash and bank balance, money at call or short notice, loan and advances for commercial bank, investment in government securities and other receivable, overdrafts, bill purchased and discounted and miscellaneous current assets. Current liabilities include deposits and other short term loan, bills payble, tax provision, staff bonus, dividend payables and miscellaneous current liabilities.

Mathematically it is represented as:

$$\text{Current Ratio} = \frac{\text{Total Curretnt Assets}}{\text{Total Current Liabilitie s}}$$

Higher the current ratio better is the liquidity position. The traditional standard of current ratio is2:1 but accurate standard depends in circumstances in case of seasonal business.

ii) Cash and Bank Balance to Total Deposit Ratio (Cash Reserve Ratio)

Cash and bank balance are the most liquid current assets. This ratio measures the percentage of most liquid fund with the bank to make immediate payment to the depositor. This ratio is calculated by dividing the cash and bank balance by the amount of total deposits. Mathematically it is expressed as,

$$CRR = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

Hence, cash and bank balance includes cash at vault (Including local and foreign currencies). Balance with other banks at Nostro Account is including current deposits, saving deposits, fixed deposits, money at call and short notice and other deposits.

iii) Cash and Bank Balance to Current Assets Ratio

This ratio measure the proportion of most liquid assets i.e. cash and balance among the total current assets of the bank. Higher ratio shows the bank's ability to meet its demand for cash.

This ratio is calculated by dividing cash and bank balance by current assets.

Mathematically it is expressed as.

$$\text{Cash and bank balance to current assets ratio} = \frac{\text{Cash and Bank Balance}}{\text{Current Assets}}$$

iv) Investment on Government Securities to Current Assets Ratio

Investment on government securities includes treasury bills and development bonds etc. This ratio is calculated to find out the percentage of current assets invested in government securities.

This ratio is calculated by dividing investment made on government made on government securities by current assets.

Mathematically it is expressed as,

Investment on government securities to current assets ratio

$$= \frac{\text{Investment on Government Securities}}{\text{Current Assets}}$$

v) Loans and Advances to Current Assets Ratio

To make a high profit and for mobilizing its fund in the best way a commercial bank should not keep its all collected funds as cash and bank balance but they should be invested as loan and advances to the customers. In the present study loan and advances represent to local and foreign bills discounted and purchased and loans, cash credit and overdraft in local currency as well as in convertible foreign currency.

b) Assets Management Ratio (Activity Ratios)

Activity ratios are employed to evaluate the efficiency with which the firm manages and utilizes its assets. These ratios are also called turnover ratios because they indicate the speed with assets are being converted into sales. Assets management ratio measures how efficiently the bank manages the resources at its command.

The following ratios are used under this asset management ratio.

i) Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out that which banks are able to utilizing their total deposits on loan and advances for profit generation purpose. This ratio can be obtained by dividing loan and advances by total deposits; this can be stated as below:

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

ii) Total Investment to Total Deposit Ratio

This ratio implies the utilization of firm's deposit on investment in government securities and share/debentures of other companies and banks.

This ratio can be calculated by dividing total investment by total deposit. This can be stated as.

$$\text{Total Investment to Total Deposit Ratio} = \frac{\text{Total Investment}}{\text{Total Deposit}}$$

Hence, total investment consists of investment on government securities, treasury bills, investment on debenture and bonds, share in subsidiary companies and other investment.

iii) Loan and Advances to Working Fund Ratio

Loan and advance indicates the ability of any banks to canalize its deposits in the form of loan and advances to earn high return. This ratio is computed by dividing loan and advances by total working fund; this can be stated as,

$$\text{Loan and Advances to Working Fund Ratio} = \frac{\text{Loan and Advances}}{\text{Working Fund}}$$

Where,

Total working fund consists of current assets, net fixed assets, loan to development banks and other miscellaneous assets.

iv) Investment on Government Securities to Total Working Fund Ratio

This ratio shows that banks investment on government securities in comparison to the total working fund.

This ratio is calculated by dividing investment on government securities by total working fund, this can be stated as,

Investment on Government Securities to Total Working Fund Ratio

$$= \frac{\text{Investment Govt.Securities}}{\text{working Fund}}$$

Hence, Investment on government securities includes treasury bills and development bonds etc.

v) Investment of Share and Debentures to Total Working Fund Ratio

This ratio shows the banks investment in share and debenture of the subsidiary and other companies.

This ratio can be computed by dividing investment on shares and debentures by total working fund; this can be started as

Investment of Share and Debentures to Total Working Fund Ratio

$$= \frac{\text{Investment on Share and Debentures}}{\text{Working Fund}}$$

Where, numerator includes investment on debentures/ bonds and shares of the other companies.

c) Profitability Ratios

Profit is the difference between revenues and expenses over a period of time. A company should earn profit to survive and grow over a long period of time, and it will have no future if it fails to make sufficient profits in longer run. Therefore, the finance manager should continuously evaluate the efficiency of its company in terms of

profits. The profitable ratios are calculated to measure the operating efficiency of a company. It is the indicator of the financial performance of any institution. This implies that higher the profitability ratio, better the financial performance of the bank and vice versa.

The following ratios are taken into account under this heading.

i) Return on Total Working Fund Ratio

This ratio measures the overall profitability of all working funds i.e. total assets. A firm has to earn satisfactory return on assets or working fund for its survival. This ratio is calculated by dividing net profit by total working fund.

This can be expressed as below:

$$\text{Return on Total Working Fund Ratio} = \frac{\text{Net Profit}}{\text{Woking Fund Ratio}}$$

ii) Return on Loans & Advance Ratio

This ratio indicates how efficiently the bank has employed its resources in the form of loans and advances. This ratio is computed by dividing net profit by loan & advances. This can be expressed as below:

$$\text{Return on Loans \& Advance Ratio} = \frac{\text{Net Profit}}{\text{Loan and Advance}}$$

iii) Total Interest Earned to Total Working Fund Ratio

This ratio is calculated to find out the percentage of interest earned to total assets (Working fund). Higher ratio implies better performance of the bank in terms of interest earning on its total working fund. This ratio is calculated by dividing total interest earned by total working fund.

This can be expressed as,

$$\text{Total interest Earned to Total working Fund Ratio} = \frac{\text{Total Interest Earned}}{\text{Total Working Fund}}$$

Where, total interest earned includes interest on loan, advances and overdrafts, government securities, investment in debentures and other interbank placements.

iv) Total Interest Paid to Total Working Fund Ratio

This ratio is calculated to find out the percentage of interest paid on liabilities with respect to total working fund. This ratio is calculated by dividing total interest paid by total working fund. It can be expressed as,

$$\text{Total Interest Paid to Total Working Fund Ratio} = \frac{\text{Total Interest Paid}}{\text{Total Working Fund}}$$

Where, total interest paid includes total expresses on deposits, borrowings and interbank takings.

d) Risk Ratios

Risk taking is the prime business of bank's investment management. The proper risk management increase effectiveness and profitability of the bank. These rations inductee the amount of risk associated with the various banking operations, which ultimately influences the bank's investment policy.

The following ratios are taken into account under this heading.

i) Liquidity Risk Ratio

The liquidity risk ratio measure the level of risk associated with the liquid assets i.e. the ratio of current assets deducted from prepaid expenses to current liabilities is the indicator of the bank liquidity needed. Higher the liquidity ratio, lower is the liquidity risk.

This can be mentioned as

$$\text{Liquidity Risk Ratio} = \frac{\text{Current Assets - Prepaid Expanses}}{\text{Current Liabilities}}$$

ii) Credit Risk Ratio

Credit risk ratios measure the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. By definition, credit risk ratio is expressed as the percentage of non-performing loan to total loan & advances by total assets.

This can be mentioned as,

$$\text{Credit Risk Ratio} = \frac{\text{Total Non - Performing Assets}}{\text{Total Loans and Advances}}$$

e) Growth Ratios

Growth ratios measure how well the firm is maintaining its economic position in its industry. It is directly related to the fund mobilization and investment management of a commercial bank.

The following growth ratios are calculated in this study.

i. Growth ratio of total deposit

ii. Growth ratio of loan & advances

iii. Growth ratio of total investment

iv. Growth ratio of net profit.

3.4.2 Statistical Tools

Some important statistical tools are used to achieve the objective of this study. In this study, Statistical tools such as trend analysis of important variables, coefficient of correlation between different variables as well as test of hypothesis have been used which are as follows:

a. Arithmetic mean

Arithmetic mean is the sum of all the observations divided by the number of Observations. Arithmetic mean is calculated to find the mean of financial ratio. The asthmatic mean can be commuted as:

Arithmetic mean (AM) is given by, $\bar{X} = \frac{\sum X}{n}$

Where,

$\bar{X}$ = Arithmetic Mean

X = Sum of all the values of the variable X

n = Number of observations

b. Standard Deviation

The Measurement of the sectaries about an average is known as dispersion. The S.D. means a high degree of uniformity of the observations as well as homogeneity of the serried a large S.D means a high degree of uniformity of the observations as well as homogeneity of the serried a large S.D of different ratios are calculated. It is computed as:-

$$\text{Standard Deviation } (\omega) = \sqrt{\frac{\phi(x Z \bar{x})^2}{n}}$$

Where,

n = No of observation in Series X

$(X-\bar{X})^2 =$ Summation of square of deviation from mean value

c. Co-efficient of Variation (C.V)

The co-efficient of variation is the relative measure of dispersion comparable across distribution which is defies to the mean expresses in percent. It is
Calculated as:

$$\text{C.V} = \frac{\sigma}{\bar{X}} \times 100\%$$

Where,

† = Standard Deviations

$\bar{X}$ = Arithmetic mean

d. Co-efficient of Correlation Analysis

The correlation co-efficient determines the relationship between the two or more variable. The case of highly correlated variable, the effect on the variable may have effect on other correlated variable when two elements have zero correlation with each other they are unrelated in any way and have zero variance positive correlation implies positive covariance.

$$r = \frac{xy}{\sqrt{x^2} \sqrt{y^2}}$$

e. Trend Analysis

This topic analyzes the trend of loan and advance to total deposit ratio and trend of total investment to total deposit ratio of NABIL and Nepal investment bank from 2005/06 to 2009/010 and makes the forecast for the next six years. Under this topic following sub-topic has been presented.

i) Trend analysis of total deposits.

ii) Trend analysis of loan and advances.

ii) Trend analysis of total investment.

iii) Trend analysis of net profit.

f. Test of Hypothesis

The objective of this test is to test the significance regarding the parameters of the population on the basis of sample drawn from the population.

Types of Hypothesis:-

Null hypothesis

Alternative hypothesis

Null Hypothesis (H_0): $\overline{x_1} = \overline{x_2}$:-It always rejected the difference & accepts they (assumption value & actual value) are same i.e. there is no significant different between mend ratios of loan & advances to total deposits of NABIL and Nepal Investment Bank Limited.

Alternative Hypothesis(H_0): $\overline{x_1}$ | $\overline{x_2}$:- Complementary of null is called alternative hypothesis i.e. there is significant difference between mean ratios of loan & advances to total deposits of NABIL & Nepal Investment Bank Limited.

Generally, following steps are followed for the test of hypothesis.

Formulating hypothesis

⌡   Null Hypothesis

⌡   Alternative hypothesis

     o   Computing the test statistics

     o   Fixing the level of significance

     o   Finding critical region

     o   Deciding two-tailed or one tailed test

     o   Making decision

In this topic statistic is used to find out the test of significance regarding the partner of the population on the basis of sample drawn from the population on the basis of sample drawn from the population.

t-Test

If we draw a large number of small samples i.e.(n<30) and compute the mean for each sample and then plot the frequency destruction of these mean, the resulting sampling distribution would be t-test. On these study sample are taken only for five years i.e. (5<30).

Assumption made for using t-test in this case is that:-

The parent populations from which samples are drawn are normally distributed.

The two samples are random and independent of each other.

The population variances are equal and unknown.

This test has been conducted on the various ratios related with the banking business.

i)   Test of hypothesis on loan and advances to total deposit ratios between NABIL and Nepal investment bank.

ii)   Test of hypothesis on total investment to total deposit ratio between NABIL and Nepal investment bank.

iii) Test of hypothesis on investment on Government securities to current assets ratio between NABIL and Nepal investment bank.

iv) Test of hypothesis on loan and advances to current assets ratio between NABIL and Nepal investment bank.

v) Test of hypothesis on return on loan and advances ratio between NABIL and Nepal investment bank.

CHAPTER-IV

PRESENTATION AND ANALYSIS OF DATA

This chapter implies the presentation and analysis of data collected from various secondary sources. The chapter has been divided into two main sections. The first section of the chapter includes the presentation and analysis of data while the second section includes major findings of the study.

4.1 Financial Analysis of Commercial Bank

Financial analysis of the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the items of the balance sheet. Here relevant ratio is calculated and appropriate interpretations are made. Analysis of financial ratio reflects the performance of the concern banks.

4.1.1 Liquidity Ratio:

Commercial Banks must maintain its satisfactory liquidity position to satisfy the credit needs of community, meet demands for deposits withdrawal, pay maturity obligation in time and convert to cash assets into cash to satisfy immediate needs without loss to the bank and without consequent impact on long run profitability of the bank. To measure the liquidity position of the bank, the following measures of liquidity ratio has been calculated and a brief analysis of the same has been done as below.

i) Current Ratio:

It is the relationship of current assets and current liabilities. Current assets can be converted into cash with in short period of time normally not exceeding one year. Current liabilities are those obligation which are payable with in short period. Current assets consist of each and banks balance money at call or short terms notice, loan and advances investment in government securities and other interest receivable and other miscellaneous current assets. Current liabilities consist of deposits, loan and advances, bills payable, Tax provision, staff bonus, dividend payable and miscellaneous current liabilities.

Table 4.1

Current Ratio (Times)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	0.93	0.96	1.01	0.80	0.90	0.92	0.056	6.09
NIBL	0.89	0.92	0.93	0.94	0.87	0.91	0.074	8.13

Sources: Appendix- 1

In the table 4.1 current Ratio of commercial banks are analyzed. The table shows that the current assets of sampled commercial banks have exceeded the current liabilities during the five years period. In general it can be said that sample bank have sound ability to meet their short term obligations in other words bank is capable of discharging the current obligations.

In case of NABIL the current ratio is in increasing trend from fiscal year 2005/06 to 2007/08 but it has decreased in the year 2008/09 by 0.80 and it has slightly increased in year 2009/010. Similarly NIBL has a slightly increasing trend in year 2005/06 to year2008/09 but it has fluctuating trend in year 2009/010. The mean of current ratio of NABIL and NIBL were 0.92 and 0.91 respectively which are slightly comparison to the 1:1. Standard deviation which shows the risk of not being able to meet the current obligation was 0.056 and 0.074 which is not so high. Coefficient of variance between the current ration of NABIL and NIBL is 6.09% and 8.13% respectively which shows that the current ratio of NIBL is less homogeneous or high variation of NABIL.

Though the standard of current ration should be 2:1, the conventional measure of liquidity is not applicable in banking business. Banking business holds big portion of deposits as a core deposits and this deposits remains all the time through the years. This core deposits forms the fixed liability of bank through it is current in nature so the ratio maintained by the bank at the level of around 1:1 can be regarded as sound liquidity position.

ii) Cash and bank balance to total deposit Ratio (Cash reserve ratio)

Cash and bank balances are the most liquid current assets. This ratio measures the percentage of most liquid fund with the bank to make immediate payment to the depositor. Cash and bank balance are assets that constituted banks first line of defense and consist of cash and hand foreign cash on hand cherubs and other cash items balance with demotes banks and balance aboard. These ratios of both higher and lower ratios are not desirable and satisfactory. If a bank maintain higher ratio of cash, it has pay interest to depositor and some earning may be lost. If the bank maintain low ratio of cash, it may fail to make payments for the demands of the depositors. The table 4.2 reflects cash and bank balance to total deposit ratio of NABIL and NIBL from the FY 2005/06 to 2009/010.

Table 4.2

Cash and Bank Balance to Total Deposit Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	6.87	3.83	3.26	5.99	5.94	5.18	1.55	29.93
NIBL	10.65	9.40	12.34	9.97	12.51	10.97	1.40	12.76

Sources: Appendix- 2

The table 4.2 reflects the percentage of cash and bank balance total deposit ratio position of NABIL and NIBL. NIBL maintain 6.87% cashed reserve in year 2005/06 and decrease in year 2006/07 and 2007/08 and increased in year 2008/09 and slightly decreased in year 2009/010. Whereas NIBL maintain 10.65% cash reserve in year 2005/06, then the cash reserve is decreased in year 2006/07 to 9.40% and then increasing in 2008/09 and then decreasing trend in year 2009/010. The mean ratio of NABIl and NIBL is 5.18% and 10.97% respectively. Hence cash reserve ratio of NIBL is greater than NABIL. Co-efficient of variation shows that there is variation of the cash reserve ratio of both banks. Even though the banks have maintained satisfactory cash reserve ratio.

iii) Cash and Bank Balance to Current Assets Ratio

This ratio measures the proportion of most liquid assets i.e. cash and bank balance among the total current assets of bank. Higher ratio indicates the bank's ability to meet the daily cash requirement of their customer's deposit. Bank has to balance the cash and bank balance to adequate cash for the customers demand against deposit when required and less interest is required to be paid against the cash deposit. The table below reflects the cash and bank balance to current asset ratio of NABIL and NIBL from the FY 2005/06 to 2009/010.

Table 4.3

Cash and Bank Balance to Current Assets Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	6.81	3.73	3.05	6.89	6.67	5.43	1.62	29.90
NIBL	11.01	9.60	13.05	10.35	15.10	11.82	2.00	17.52

Sources: Appendix- 3

This table 4.3 reflects the mean, standard deviation and coefficient of variation of cash and bank balance to current assets ratio of two banks. They show the ability to manage the deposit withdraw from the customers. NABIL has maintained a highest ratio of 6.89% in the year 2008/09. Similarly NIBL has a highest ratio of 15.04% in the year 2009/010. The mean value of NIBL is highest in comparisons to NABIL Bank. Similarly the coefficient of variation of NABIL is 29.90 % which is higher than NIBL it reflects that the current ratio is less heterogeneous of NABIL than NIBL. Lastly, the analysis reflects that NABIL is better position during the study period as the bank shows the ability to manage the deposit with draws from the customers although it has the fluctuating trend.

iv) **Investment on Government Securities to current Assets Ratio**

The ratio examines Share of a commercial banks current assets which invested in different government securities i.e. treasury bills and government bonds. Commercial banks are interested to invest their collected fund on different securities issued by

government to utilize their excess fund. Even governments securities are not so liquid as cash and bank balance of commercial bank they can easily be sold in the market or it can also be converted into cash in other ways. The ratio is computed as:

Table 4.4

Investment on Government Securities to current Assets Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	25.78	16.13	11.15	23.66	14.99	18.42	6.01	32.66
NIBL	17.96	13.95	14.09	13.81	10.07	13.98	2.50	17.88

Sources: Appendix- 4

The above table 4.4 reflects that investment in government securities to current assets ratio of NABIL is in decreasing trend from fiscal year 2006/07 to 2007/08 but it has increased in the year 2008/09 by 23.66% and increased in year 2009/010.Similarly NIBL is fluctuation trend during the study period. The mean ratio of NABIL is higher than NIBL it means that NABIL has invested it's as much as portion of its current assets on government securities as that of NIBL. The coefficient of variation of NABIL is higher in comparison to NIBL bank. Lastly it can be conclude that NABIL has invested it's more of portion assets as government securities than other banks and investment made is consistence of coefficient of variation reveals.

iv) Loans and Advances to Current Assets Ratio

To make a high profit and for mobilizing its fund in the best way a commercial bank should not keep its all collected funds as cash and bank balance but they should be invested as loan and advances to the customers. In the present study loan and advances represent to local and foreign bills discounted and purchased and loans, cash credit and overdraft in local currency as well as in convertible foreign currency.

Table 4.5

Loan and Advances to Current Assets Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	57.40	70.72	62.61	76.05	81.34	69.62	8.70	12.50
NIBL	63.99	72.50	71.35	73.30	88.85	74.00	8.18	11.75

Sources: Appendix- 5

The table 4.5 shows the percentage of loan and advances ratio to current assets ratio position of NABIL and NIBL. The loan and advances to current assets ratio of NABIL is increasing trend during the study period. Similarly NIBL is in fluctuating trend from 2005/06to 2006/07 and it has increased from year 2007/08 to 2009/010. The mean ratio of NIBL is slightly more than NABIL Percentage. The coefficient of variation among ratio is higher in case of NABIL, which indicates formality of NABIL in comparison to NIBL. So, it can be concluded that it is not better to mobilize NABIL funds as loan and advances.

4.1.2 Asset Management Ratio

The different assets management ratios are calculated and analyzed to know how well the assets are managed by the bank. the important items on the part of balance sheet is an assets and it includes cash and bank balances, money at call and short notices, investments, loans and advances, fixed assets and other assets. Among them investment and loans and advances are the vital assets which are to be managed properly.

i) Loan and Advance to Total Deposit Ratio

This ratio measures how successfully the banks are able to mobilize the total deposit on loan and advances for profit generating purpose higher the ratio indicates the better mobilization of total deposits, but too high is not be better from its liquidity point of view. This table 4.6 presents the percentage of loan and advances to total deposit ratios position of NABIL and NIBL.

Table 4.6

Loan and Advances to Total Deposit Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	58.01	72.57	66.79	66.60	72.44	67.28	5.31	7.89
NIBL	61.87	71.04	67.45	70.59	73.61	68.91	4.03	5.85

Source: Appendix -6

The ratio of NABIL is in increasing trend from year 2005/06 to 2006/07 and then it decreased to year 2007/08 and again increased in year 2008/09 where as NIBL ratio is in increasing in year 2006/07 then it decreased to year 2007/08 then it increased to reaming study period.00 In the case of NABIL has maintained higher loan and advances to total deposit i.e. 72.57% in a year 2006/07, likewise NIBL has maintained higher ratio i.e. 73.61.61% in a year 2008/095respective. The mean value of NABIL i.e. 67.28 is less than NIBL i.e. 68.91% C.V of NABIL is higher than that of the NIBL. Bank which indicate that loan and advances of it is stable and consistent. Lastly it can be concluded that NIBL is in strong position or in better position regarding the mobilization of total deposits on loan and advances and acquiring higher profit in comparison with NABIL.

ii) Total Investment to Total Deposit Ratio

The commercial banks must mobilize its deposit fund by investing in different securities issued by government and other financial non financial sectors. This ratio measures the extent to which the banks are capable to mobilize their deposits on investment in various securities. This ratio is computed by dividing total investment by total deposit. Table 4.7 reflects the total investment to total deposit ratio of the banks NABIL and NIBL

Table 4.7

Total Investment to Total Deposit Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	41.33	29.27	31.93	38.32	35.98	35.37	4.32	12.23
NIBL	34.14	39.31	34.38	28.07	23.63	31.93	5.46	17.10

Source: Appendix- 7

From the table 4.7 it is fund that, total investment to total deposit ratio of NABIL and NIBL banks are in increasing and decreasing trend or in fluctuating trend during study period 2005/06to 2009/010. The total investment to total deposit ratio of NABIL has highest ratio of 41.33% in FY 2005/06 and lowest ratio 29.27% in FY 2005/06. Similarly NIBL has highest and lowest ratio of 39.31% and 23.63% in FY 2005/06 and 2009/010respectively.

In comparison with mean value, NABIL has higher than NIBL. Likewise the value of coefficient of variation on NABIL is lower than NIBL banks. After analysis it is clear that the investment policy of NABIL is in better position in comparison to NIBL bank. The total investment to total deposit ratio of NABIL is more homogeneous because it has low coefficient of variation.

iii) Loan and Advances to Total Working Fund Ratio

Loan and advances is the major components of the total working fund, which indicate the ability of banks to utilize in deposit in the form of loan and advances to earn high return. It is an appropriate level to generate profit the ratio shows the extent to which the commercial banks are able to utilizing their assets loan and advances for the purpose of profit generation. Total working fund is the total assets. It is composed up of current assets fixed assets miscellaneous assets and investment loan and advances and interest receivable. The table 4.8 reflects the loan and advance to total working fund ratio of NABIL and NIBL.

Table 4.8

Loan and Advances to Total Working Fund Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	48.91	61.60	57.87	57.04	65.40	58.17	5.50	9.45
NIBL	53.79	62.22	59.90	62.65	80.78	63.87	9.03	14.14

Sources: Appendix -8

In the table 4.8 reflects that loan and advance to working fund ratio of NABIL is in increasing and decreasing trend during study period. Its increased in year 2006/07 then it decreases in year 2007/08 and then it increases to year 2009/010. Similarly NIBL is increasing and decreasing trend during the study period. NABIL has the highest ratio 65.40% in the FY 2009/010 and NIBL has the highest ratio in same financial year. The mean value of NIBL has maintained average loan and advances to total working fund ratio than that of NABIL. This regard NIBL is in better position among NABIL bank i.e. 9.45% < 14.14% respectively, which clear that loan and advances to total working fund ratio is less variable than NABIL Bank.

iv) Investment on Government Securities to Total Working Fund Ratio

The commercial banks should never use all the total deposits resources as loan and advances and other credit from security and liquidity point of view. So, to some extent commercial bank seem to be interested to utilize their resources by purchasing government securities. This ratio reflects the relationship between the banks investment securities in comparison to the total working funds.

The table 4.9 shows the investment on Government securities to total working fund ratio of NABIL and NIBL

<div align="center">

Table: 4.9

Investments on Government Securities to Total Working fund ratio (%)

</div>

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	21.93	14.04	10.31	17.64	12.05	15.20	4.16	27.35
NIBL	15.10	11.97	11.83	11.80	9.16	11.97	1.88	15.71

Source: Appendix -9

From the table 4.9 it is found that investment on government securities to total working fund ratio of banks are in fluctuating trend in study period 2005/06 to 2007/08. The investment on government securities to total working fund ratio NABIL has highest ratio of 21.93% in FY 2005/05 and lowest ratio 10.31% in FY 2007/08.Similarly NIBL has highest and lowest ratio of 15.10% and 9.16% in FY 2005/06 and 2009/010respectively.

In companion with mean value, NIBL has lower than NABIL i.e. 11.97%<15.20% Likewise the value of coefficient of variation on NIBL is lower NABIL. After analysis it is clear that the investment policy of NIBL is in better position in comparison to NABIL. This means NABIL has invested its more portion of working fund on government securities as than NIBL Bank.

v) Investment on Shares and Debentures to Total Working Fund Ratio

This ratio reflects the banks investment in shares and debentures of subsidiary and other companies. Now a day's commercial banks are interested to invest its fund not on government securities. They are interested to invest in shares and debenture of different types of companies and also in most of commercial bank in Nepal have purchased shares of regional development banks and some of them have purchased the shares of other companies as well.

This ratio shows the extent on which the banks are able to mobilize their assets on purchase of shares and debenture of other companies to generate income and utilize their excess fund. A highest ratio indicated more portion of investment on shares and debenture out of total working fund. The table 4.10 shows the investment on shares

and debenture to total working fund ratio of NABIL and NIBL from the FY 2005/06 to 2009/010.

<p align="center">**Table 4.10**</p>

<p align="center">**Investment on Share and Debentures to Total Working Fund Ratio (%)**</p>

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	209/2010			
NABIL	0.13	0.16	0.12	0.21	0.27	0.18	0.06	30.98
NIBL	0.13	0.11	0.17	0.20	0.21	0.16	0.04	24.37

Sources: Appendix -10.

In the table 4.10 shows that of NABIL have maintain increasing position in year 2006/07 then it decreases in year 2007/08 and it's stared to increase up to 2008/09. Similarly NIBL has decreasing in year 2006/07 and it increased up to year 2009/010. In comparison NABIL has great mean value than the NIBL. On the basis of CV it can be concluded that the ratios are more volatile and inconsistent.

4.1.3 Profitability Ratio

Profitability ratios are useful to measure the efficiency of operation of a firm in term of profit. Profit is the indicator of the financial performance of any firm. Commercial banks acquire profit by providing different kinds higher the profitability ratio shows the efficiency of the management. The following profitability ratios are related to study under this heading.

i) Return on Total Working Fund Ratio

It also known as return on assets. This ratio measures the profit earning by mobilizing available resources (Total assets). The bank has to earn satisfactory return on assets or working funds are well manage and are efficiently utilized maximizing taxes within the legal options available will also improve the available will also improve the return or return will be higher. Net profit includes the profit that is left to the internal equities after all charge and expenses cost. The table below shows the return on assets of NABIL and NIBL.

<p align="center">67</p>

Table 4.11

Return on Total Working Fund Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	2.72	3.02	3.02	2.74	3.41	2.99	0.24	8.02
NIBL	1.75	2.15	2.35	2.53	3.16	2.39	0.47	19.67

Source: Appendix-11

The table 4.11 shows the mean, S.D and C.V of NABIL and NIBL banks from FY 2005/06to 2009/010. NABIL has increasing position up to 2007/08 than it has decreasing trend in the FY 2008/09 and again increasing in year 2009/010, i.e.2.72%, 3.02%, 3.02%, 2.74%, 3.71%. Similarly NIBL has the increasing trend during the study period i.e. 1.75%, 2.15%, 2.35%, 2.53%, and 3.16%. In average, NABIL and NIBL banks have able to maintain a net profit during the study period.

If the mean values are observed NABIL is rocketing than NIBL i.e. 2.99% > 2.39% respectively. The coefficient of variation of NABIL is lower than of NIBL i.e. 8.02 %< 19.67%. It indicates the return on total working fund ratio of NABIL is stable and consistent in comparisons to NIBL. The analysis clear the profitability ratio with respect to financial resources investment of NABIL is better as well as stable.

ii) Return on Loans and Advances Ratio

Return on loan and advances ratio measure the earning capacity of banks on its total deposit mobilized on loan and advances mostly loan and advances included loan, cash credit, overdraft, bills purchased and discount. In order words return on loan and advances ratio indicates how efficiently the banks have employed its resources in the firm of loan and advances.

Table 4.12

Return on Loan and Advances Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	5.56	4.90	5.21	4.80	5.21	5.14	0.27	5.21
NIBL	3.26	3.46	3.92	4.03	3.91	3.72	0.30	8.08

Sources: Appendix -12

The above table shows that how much return had generated through utilization of fund into loan and advances. The mean ration for study period was 5.14 and 3.72 respectively. it shows that NABIL has generated more return through loan and advances than NIBL. NABIL ratios were increasing and decreasing trend. Similarly NIBL has decreasing trend expect year 2008/09. In comparison of CV NIBL has great variation than NABIL.

iii) Total interest Earned to Total Working Fund Ratio

This ratio is calculated to find out the percentages of interest earned total assets. It reflects the extent to which the banks are success in mobilizing there to total assets to gain higher income as interest. Higher ratio indicates higher earning power of the banks of its total working fund. The table below shows the interest earned to total working fund ratio of NABIL and NIBL.

Table 4.13

Total Interest Earned to Total Working Fund Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	5.98	6.21	7.11	7.26	9.25	7.16	1.15	16.00
NIBL	6.28	7.20	7.43	7.95	11.45	8.14	1.70	21.00

Sources: Appendix -13

The table 4.14 reflects that the ratio of NABIL is in increasing trend expected year 2009/010. Similarly NIBL has increasing trend during the study period of five year.

The NABIL has maximum ratio is 9.25% in the FY.2009/010 and minimum ratio is 5.98% in the FY 2005/06 on the other hand the mean value of NABIL has less than of NIBL i.e. 7.16<8.14. Similarly the coefficient of variation of NABIL is 16.00% and NIBL is 21.00%. After analysis it can be concluded that total interest earned of total working fund of NABIL is satisfactory in compared to NIBL. It indicates the total interest earned to total working fund ratio is stable. NIBL has highest coefficient of variation than NABIL. That means it is not successful in earning interest income because high ratio is an indicator of higher earning power of the bank of its total working fund and vice versa.

iv) Total Interest Paid to Total Working Fund Ratio

This ratio is calculated to find out the proportion of interest paid against the total working fund. Higher ratio indicated the higher interest expenses on total working fund and Vice-versa. The table below shows the mean, S.D and C.V of total interest paid to total working fund ratio.

Table 4.14

Total Interest Paid to Total Working Fund Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	2.0	2.60	2.49	2.78	5.13	3.00	1.09	36.33
NIBL	2.67	3.02	3.21	3.59	5.91	3.68	1.15	31.36

Sources: Appendix-14

The table 4.15 total interest paid to working fund ratio of the banks is in increasing trends during the study period. NABIL has variable trend from 2.0% to 5.13% in the FY 2005/06to 2009/10. Similarly NIBL has also increasing trend during the study period. The ratios increases 2.67 to 5.91 in comparison of mean value of NABIL with NIBL reflect that NABIL is lower than NIBL i.e. 3.00<3.68. It means NABIL has paid minimum interest. It has high CV than of NIBL i.e. 36.33>31.36.

4.1.4 Risk Ratio

Risk taking is the prime business of bank investment management which increase effectiveness and profitability of the bank. Bank has to take risk to get return on investment risk taken is compensated by the increase in profit. So a bank has to take higher risk if it expects higher return on its investment.

Through these ratios, focus has been made to measure the level of risk inherent in the NABIL in comparison to NIBL.

i) Liquidity Risk Ratio

The liquidity risk of the bank defines it liquidity need for deposit. A higher liquidity indicates less risk and less profitable bank and vice-versa. The ratio of current assets deducted from prepaid expenses to current liabilities is the indicator of the bank liquidity needed. The cash and bank balance are the most liquid assets and they are considered as bank liquidity sources and deposits as the liquidity needs.

Table 4.15

Liquidity Risk Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010	Mean	S.D	C.V
NABIL	1.143	0.889	0.951	0.768	0.865	0.923	0.124	13.49
NIBL	0.813	0.858	0.865	0.912	0.871	0.864	0.031	3.64

Sources: Appendix -15

In the table 4.16 shows the percentage of liquidity risk ratio of NABIL and NIBL. This table reflects the liquidity risk ratio of NABIL is fluctuating trend expect year 2008/09 i.e. it has maintained a maximum ratio of 1.143% in the FY 2005/06 and the minimum ratio of 0.768% in the FY 2008/09. Similarly NIBL liquidity risk ratio is in decreasing increasing trend. It has the minimum ratio is 0.0.813% in the FY 2005/06. While comparing the mean of two banks NIBL is lower than NABIL i.e. 0.86<0.923 which indicates that NIBL liquidity risk is maximum in compare to NABIL. The coefficient of variation of banks is 13.49% and 3.64% respectively. In comparison them, NIBL has less C.V which indicates that liquidity risk ratio of it's in consistent.

ii) Credit Risk Ratio

Bank utilized its collected funds in providing credit to different sector while making investment. It is essential for a bank sector while making investment. It is essential for a bank to examine the credit risk involved in the project. This ratio shows the proportion of nonperforming assets in total loan and advances of the bank. Due to the unavailability of the relevant data the ratio is measure with the help of loan and advances to total assets.

Table 4.16

Credit Risk Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2005/06	2006/07	2007/08	2008/09	2009/2010			
NABIL	48.91	61.60	57.87	57.04	61.22	57.24	4.57	7.99
NIBL	53.79	62.22	59.90	62.65	77.64	63.24	7.86	12.44

Sources: Appendix- 16

In above table 4.17 reflects the percentage of credit risk ratio of NABIL and NIBL. The credit risk ratio of NABLI is in decreasing trend except year 2007/08 and 2009/010. Similarly NIBL has decreasing trend except year 2007/08. The mean of NABIL is lower than NIBL which means NABIL has minimum credit in comparison to NIBL. The coefficient of variation of NABIL has lower than NIBL i.e. 7.99% < 12.44%. Among these banks, NABIL has less C.V, it indicates that its credit policy is consistent than NIBL.

4.1.5 Growth Raito

It represents how well the commercial banks those growth ratios are maintaining their economic and financial position. Here those growth ratios are analyzed and interoperate, which are related to the fund mobilization and investment management of a bank. In the topic, there are four types of growth ratio of total deposit, total investment, loan and advances and net project calculated.

i) Growth Ratio of Total Deposit

The comparative table 4.18 reflects that the growth ratio of NIBL deposit is higher than that of NABIL. NIBL has maintained ratio of 28.39% where as NABIL is 17.93%. This means the performance of NIBL to collect greater deposit compared to NABIL bank Limited. NABIL is improving year by year.

Table 4.17

Growth Ratio of Total Deposit (%)

Banks	Fiscal Year					Growth Rate
	2005/06	**2006/07**	**2007/08**	**2008/09**	**2009/2010**	
NABIL	14119.03	14586.61	19347.40	23342.28	27310.14	17.93%
NIBL	11,524.67	14,254.60	18927.30	24488.85	31312.45	28.39%

Sources: Appendix -17

ii) Growth Ratio of Loan and Advances

The comparative table 4.19 shows that the growth ratio of NIBL loan and advances is higher than that of NABIL. NABIL has able to maintain of 24.66% where as NIBL able to has maintained 34.08% respectively. The performance of NIBL to grant loan and advance is better in comparison to NABIL.

Table 4.18

Growth Ratio of Loan and Advances (%)

Banks	Fiscal Year					Growth Rate
	2005/06	**2006/07**	**2007/08**	**2008/09**	**2009/2010**	
NABIL	8189.99	10586.17	12922.54	15545.78	19784.73	24.66
NIBL	7130.13	10126.05 1	12776.208	17286.43	23048.57	34.08

Sources: Appendix -17

iii) Growth Ratio of Total Investment

The comparative table 4.20 reflects that the growth ratio of NABIL total investment is lower than NIBL i.e. 13.91% < 17.11%. The total investment of NABIL has less position in comparison to NIBL.

Table 4.19

Growth Ratio of Total Investment (%)

Banks	Fiscal Year					Growth Rate
	2005/06	2006/07	2007/08	2008/09	2009/2010	
NABIL	5836.07	4269.66	6178.533	8945.31	9826.37	13.91
NIBL	3934.18	5602.86	6506.67	6874.03	7399.81	17.11

Sources: Appendix -17

iv) Growth Ratio of Total Net Profit

The comparative table 4.21 reflects that the growth ratio of NIBL total net profit is higher than NABIL bank. Net profit of NABIL is poor in comparison than NIBL. So it clear that NIBL has high growth rate in comparison to NABIL.

Table 4.20

Growth Ratio of Total Net Profit (%)

Banks	Fiscal Year					Growth Rate
	2005/06	2006/07	2007/08	2008/09	2009/2010	
NABIL	455.31	518.63	673.26	746.95	1031.72	22.69
NIBL	232.57	350.38	501.23	697.36	900.6	40.27

Sources: Appendix -17

From the above analysis of all tables it can be concluded that NIBL performance regarding the collection of deposit grow thing loan and advance on total investment and net profit is comparatively better.

4.2 Statistical Tools

4.2.1 Trend Analysis

i) Trend Analysis of Total Deposit

Under this topic an efforts has been made to calculate the trend values of deposits of NABIL and NIBL for five years from mid July 2005/06to 2009/010 and forecast for next five years from the mid July 2010/11 to2014/15.

Table 4.21

Trend Value of Total Deposit of NABIL and NIBL (%)

Fiscal Year	Trend Value of NABIL	Trend value of NIBL
2005/06	12713.512	10139.612
2006/07	16227.301	15120.593
2007/08	19741.09	20101.574
2008/09	23254.879	25082.555
2009/10	26768.668	30063.536
2010/11	30282.457	35044.517
2011/12	33796.246	40025.498
2012/13	37310.035	45006.479
2013/14	40823.824	49987.46
2014/15	44337.61	54968.44

Sources: Appendix-18

The table 4.22 reflects the trend value of total deposit from 2005/06 to 2014/15 of two banks. The total deposits of NABIL and NIBL have in the increasing trend. If all other things remain the same the total deposits of the NIBL will be highest deposit among the two banks under the study period. The growth rate of NABIL is Rs 3513.784 per year and growth rate of NIBL is 4980.981. Same as the total deposit of the NIBL will be 54986.44 million in the mid July 2014. The total deposit of NABIL will be 44337.61 million in the mid July 2014. By analyzing the above trend value it is found that the total deposit position collection of NIBL is better in comparison to NABIL.

Figure 4.1

Trend value of Total Deposit of NABIL and NIBL
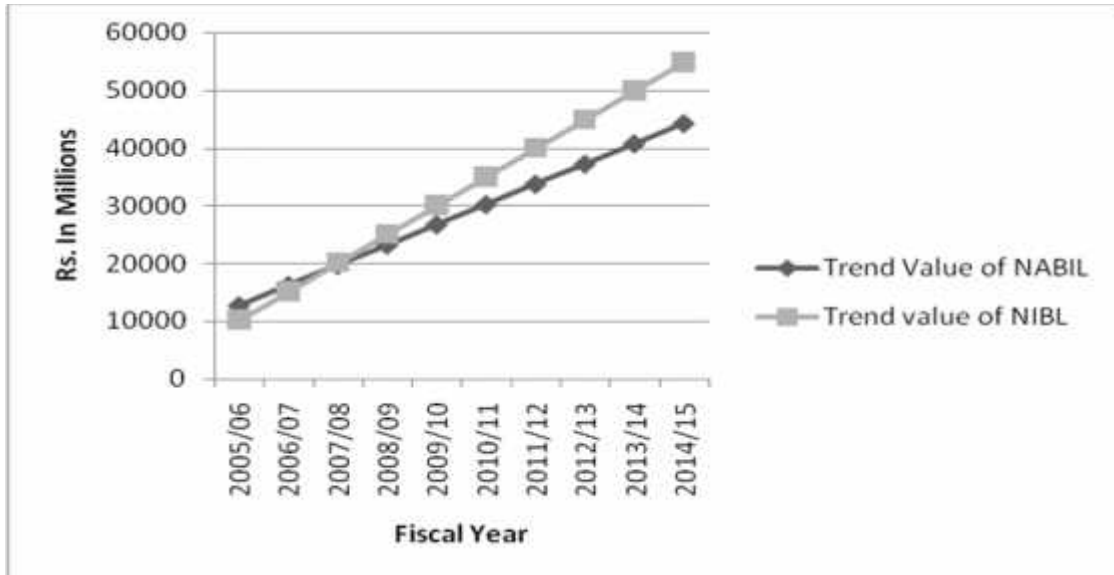
ii) Trend Analysis of Loan and Advances

Here the trend values of loan and advances of NABIL and NIBL level been calculated for five years from mid July 2005/06to 2009/010. The forecast for next five years up to 2015 have been done. The table 4.24 reflects that the trend value of loan and advances of the two banks have been in increasing trend. If other things remain same, total loan and advances of NABIL will be 33110.230 million by 2015. Similarly the total loan and advances of NIBL will be 41371.6018 million. Total loan and advances of NIBL is the higher among the study period.

Table 4.22

Trend values of Loan and Advances of NABIL and NIBL (%)

Fiscal Year	Trend Value of NABIL	Trend value of NIBL
2005/06	7776.022	6274.0138
2006/07	10590.931	10173.7458
2007/08	13405.84	14073.4778
2008/09	16220.749	17973.2098
2009/10	19035.658	21872.9418
2010/11	21850.567	25772.6738
2011/12	24665.476	29672.4058
2012/13	27480.385	33572.1378
2013/14	30295.294	37471.8698
2014/15	33110.203	41371.6018

Sources: Appendix -19

From the above analysis it is found the loan and advances position of NIBL is higher than NABIL i.e. 41371.6018> 33110.203 million respectively. NIBL may use the skill for the other option of secured loans that is quite appreciable. NABIL is tilted towards the secured loan because of less risk due to the sufficient collateral of its clients.

Figure 4.2

Trend values of Loan and Advances of NABIL and NIBL
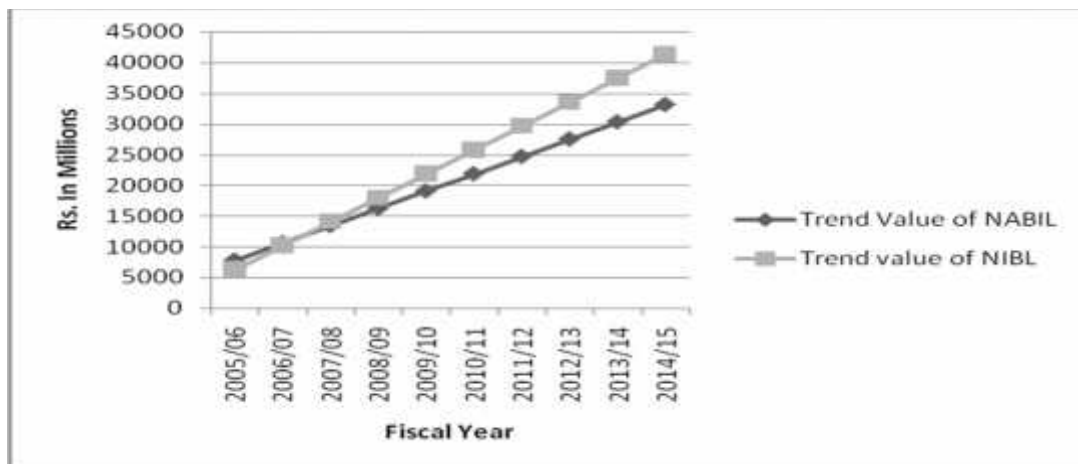
iii) Trend Analysis of Total Investment

In these aspects, an effort has been made to calculate the trend values of total investment from the mid July 2005/06 to 2009/010 have been calculated and forecasted from July 2011 to 2015. The table 4.24 shows the trend values of total investment from mid July 20010/11 to 204/15 of the NABIL and NIBL.

Table 4.23

Trend values of Total Investment of NABIL and NIBL (%)

Fiscal Year	Trend Value of NABIL	Trend value of NIBL
2005/06	4479.918	4423.034
2006/07	5745.543	5243.272
2007/08	7011.168	6063.51
2008/09	8276.793	6883.748
2009/10	9542.418	7703.986
2010/11	10808.043	8524.224
2011/12	12073.668	9344.462
2012/13	13339.293	10164.7
2013/14	14604.918	10984.938
2014/15	15870.543	11805.176

Sources: Appendix- 20

Total investment of NABIL and NIBL has the increasing trend value. The total investment of NABIL will be 15870.543 million in the mid July 2015, which highest in comparison to NIBL i.e. 15870.543> 11805.176 million. The total investment trend of NABIL is satisfactory among NIBL bank from the above analysis it can be concluded that NIBL has not maintained well investment but in case of NABIL it is predicted to be good total investment trend up to the 2014/15 years.

Figure 4.3

Trend values of Investment of NABIL and NIBL
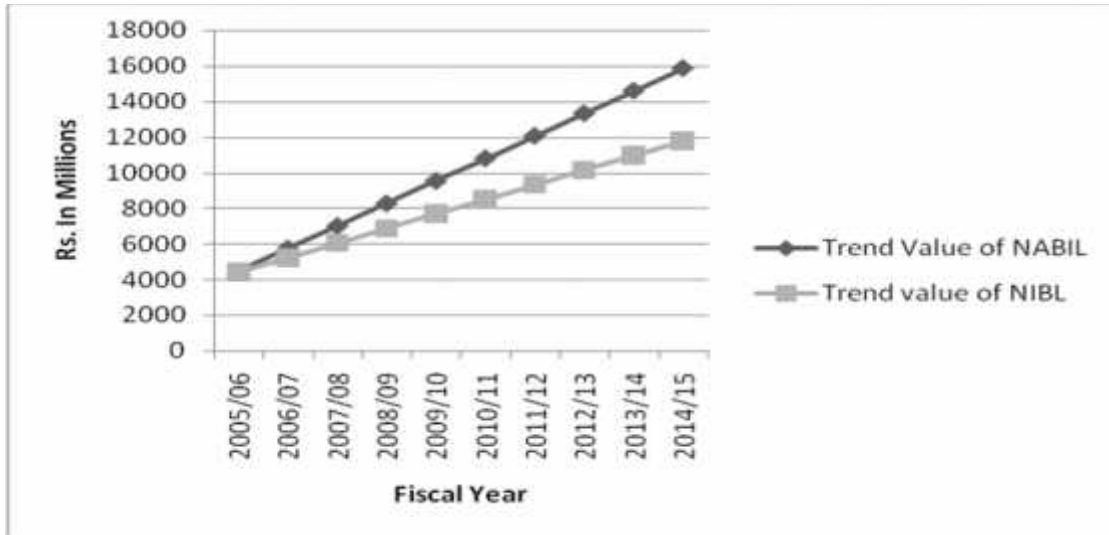
iv) Trend Analysis of Net Profit

Under this topic, an effort had been made to analysis net profit of NABIL and NIBL from the mid July 2005/06to 2009/010 to 2014/15. The table 4.25 reflects the trend values of net profit for ten years from mid July 2005/06to 2014/15 of NABIL and NIBL.

Table 4.24

Trend Analysis of Net Profit of NABIL and NIBL (%)

Fiscal Year	Trend value of NABIL	Trend value of NIBL
2005/06	408.946	199.82
2006/07	547.06	368.124
2007/08	685.174	536.428
2008/09	823.288	704.732
2009/10	961.402	873.036
2010/11	1099.516	1041.34
2011/12	1237.63	1209.644
2012/13	1375.744	1377.948
2013/14	1513.858	1546.252
2014/15	1651.972	1714.556

Source: Appendix - 21

The above table 4.25 shows the net profit of two banks have the increasing tread value. The net profit of NABIL will be 1651.972 million in the mid July 2015. Similarly net profit of NIBL will be 1714.556 million which the higher amount among the NABIL Bank is during the study period.

Figure 4.4

Trend Value of Net Profit of NABIL and NIBL
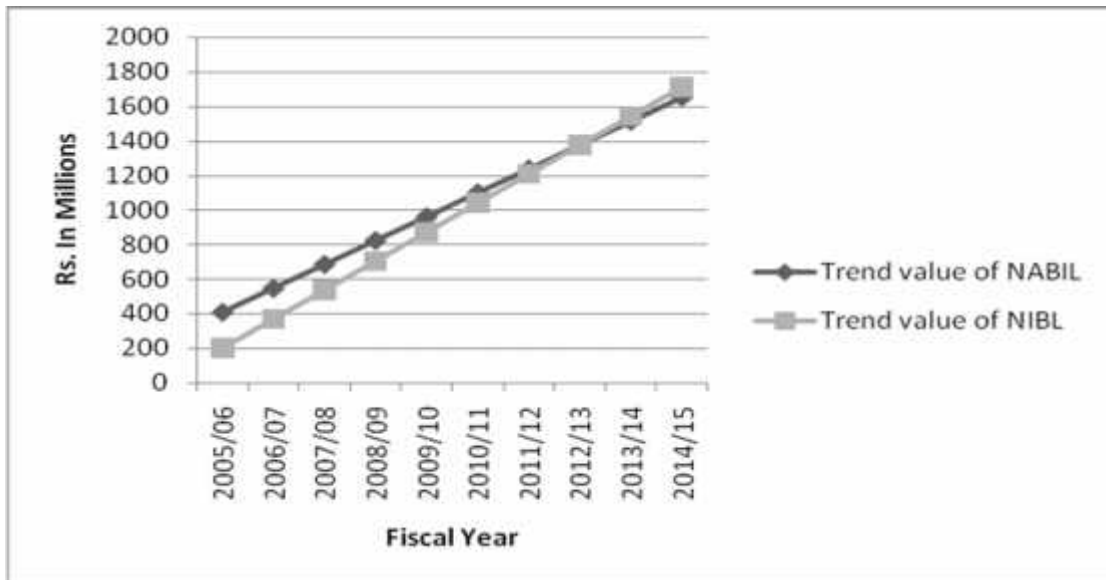
From this trend analysis it can be said that the net profit of NIBL in the highest among the NABIL bank which shows i.e. 1714.556> 1651.972 million in the year 2015. The above calculated trend values of banks are fitted in the trend line.

4.2.2 Coefficient of Correlation Analysis

In this heading Karl Pearson coefficient of correlation (Direct Method) is used to find out the relationship between deposit and advances. Deposit and total investment and net profit and soon.

i) Coefficient of Correlation between Deposit and Loan and Advances

it measures the intensity or magnitudes or degree of relationship between the two variables. In the analysis deposit is independent variable(x) and loan and advances of computing coefficient of correlation(r) between the two variables are to justify

whether deposit is significantly used as loan and advances or not. The table 4.27 reflects the value of r, r^2, P.E r and 6.P. Er between deposit and loan and advances of NABIL in comparison to NIBL.

Table 4.25

Correlation between deposit and Loan and Advances

Banks	Evaluation criterions			
	r	r^2	P. Er	6p.Er
NABIL	0.09855	0.00971	0.2985	1.79097
NIBL	0.05430	0.00295	0.30076	1.80453

Source: Appendix -22

Table 4.26 shows the value of r , r^2, P. Er, 6P.Er between deposit and loan and advances of NABIL comparison to NIBL from the 2005/06to 2009/010. In case of NABIL it is found that coefficient of correction between deposit and loan and advances 0.09855. It shows the positive relationship between two variables. The value of coefficient of determination (r^2) is 0.0.00971. Similarly NIBL coefficient of correlation between deposit and loan and advances 0.05430. It reflects the positive relationship between two variables. When we consider the value of coefficient of determination (r^2) it indicates then NABIL and NIBL are0. 971% and0 .295% respectively of the variation in the dependent variable has been explained by the independent variable since the value r^2 of NABIL and NIBL are smaller than 6p. Er which reveals the of 'r' is not significant.

After analyzing the conclusion can be drawn that in NABIL and NIBL there is not significant relation between deposit and loan and advances of two banks because 'r' is less than P.Er. This indicated that NABIL has higher correlation between deposit and loan and advance as well as higher value of (r^2) than NIBL. It can conclude that it is successful to great loan and advances to mobilize the collected deposits in a proper way.

ii) Coefficient of Correlation between Deposit and Total Investment.

Coefficient of correlation between deposit and total investment measure the degree of relationship between other two variables. Deposit is independent variable (X) and total investment is dependent variable (y). The purpose of computing it is to find out whether deposit is significantly used is investment or not. The table 4.9 shows the value of 'r', r^2, per, 6p. Er between Deposit and total investment is dependent variable(y). The purpose of computing it is to find out whether deposit is significantly used as investment or not. The total 4.28 shows the value of 'r', r^2, P. Er, 6p.Er between deposit and total investment of NABIL and NIBL for the study period 2005/06 to 2009/010.

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Table 4.26

Coefficient of Correlation Deposit and Total Investment

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Banks	Evaluation criterions			
	r	r^2	P. Er	6P.Er
NABIL	0.94372	0.89060	0.03300	0.19800
NIBL	0.89973	0.80952	0.05746	0.34473

Sources: Appendix- 23

The table 4.27 shows the value of r, r^2, Per, 6p.Er between deposit and total investment of NABIL in companion to NIBL. From table, it is found that coefficient of correlation between deposit and total investment of NABIL is 0.94372. It shows the positive relationship between two variables i.e. deposit, independent (X) and total investment dependent (y). Moreover, when we consider the value of coefficient of determination (r^2) it is 0.89060 and it means 89.00% of the variation in the dependent variable is explained by the independent variation in the dependent variable is explained by the independent variable. Similarly considering the value of 'r' and comparing with 6p.Er, it is greater than 6p.Er so we can say that there is significant relationship between total deposit and total investment.

On the other hand, in case of NIBL has positive correlation between deposit and total investment. By considering the probable error since the value of 'r' i.e.0.89973 is

more than 6p.Er i.e. 0.235383, so it indicates that there is significant relationship between total deposits and total Investment. Likewise by the application of coefficient determination i.e. r^2 which indicates NIBLto be 80.952% of the variation in the dependent variable has been explained by the independent variables. The above analysis clears that in case of NABIL there is significant relation between total deposit and total investment because 'r' is less than 6p Er. That means NABIL has able to follow the policy of maximizing the investment of their deposits. It has not certain investment policy of invest their deposit where there as NIBL there is significant relationship between deposit and total investment. Lastly we can say that NIBL has followed the policy of maximizing the investment of their deposit or NIBL is successful in maximizing the investment of their deposit.

iii) Coefficient of Correlation between Deposit and Net Profit.

The coefficient of correlation between deposit and net profit measures the degree of relationship between these two variables. Here deposit(x) is independent variable and net profit (y) is dependent variable the objectives of computing between their two variables are to justify whether net profit is significantly correlated with deposits or not. The following table 4.30 shows the value of 'r', r^2, P Er, 6P.Er between deposit and net profit of NABIL and NIBL during the study period.

Table 4.27

Coefficient of Correlation between Deposit and Net Profit

Banks	Evaluation criterions			
	r	r^2	P. Er	6P.Er
NABIL	0.32275	0.10417	0.27022	1.62134
NIBL	0.31537	0.09946	0.27164	1.62986

Source: Appendix -24

From this table 4.29 it has been found that the coefficient of correlation between total deposits and net profit in case of NABIL 0.32275 which indicated a positive relationship between deposit and net profit. The value of (r^2) is 0.10417 indicates that 10.41% of the variation of the dependent variable has been explained by the

independent variable. The value of r is not greater than that of the value of 6P. Er and value of r is not less than P.Er so by the result nothing can be concluded. Similarly the coefficient of correlation between there variables in case of NIBL is 0.31537. The increase in net profit in case of NABIL is due to effective mobilization of deposits and other factor have a less or role to play in increase in net profit.

iv) Coefficient of Correlation between Deposit and Interest Earned.

The coefficient of correlation between deposits and interest earned measure the relationship between these two variables. Deposits are independent variable (x) and anointer earned is dependent variable(y). The objectives of calculating r between two variables are to justify whether deposit is significantly used to earn interest or not. The table 4.30 shows the value of 'r', r^2. P. Er and 6P.Er of NABIL and NIBL during the study period.

Table 4.28

Coefficient of Correlation between Deposit and Interest Earned

Banks	Evaluation criterions			
	r	r^2	P. Er	6p.Er
NABIL	0.98750	0.97516	0.0487055	0.00749
NIBL	0.99252	0.98509	0.00450	0.02699

Sources: Appendix- 25

The coefficient of correlation 'r' between two variables in case of NABIL and NIBL are 0.98750 and 0.99252 which indicates that 97.516% and 98.509% of the variation of dependent variable has been explained by independent variables. The value of 'r' in case of NABIL has higher than that of 6p.Er. This states that there is a significant relationship between deposit and interest earned of both banks. After above analysis it can be concluded that the relationship between deposit and interest earned in case of NIBL is highly significant with showing higher dependency. It has effectively mobilization of deposits which had a major role to play in its earning where as other are responsible in the earnings of NABIL.

v) Coefficient of Correlation between Loan and Advances and Interest Paid.

It measures the relationship between these variables. Here, loan and advances is independent variables(x) and interest paid in dependent variable (y). The purpose of calculating 'r' between these variables is to established whether increase in loan and advances has play any role in decreasing in interest expenses.

The table 4.31 shows the values of 'r', r^2, P. Er, and 6P. Er of NABIL and NIBL during the study period.

Table 4.29

Coefficient of correlation between loan and advances and Interest Paid

Banks	Evaluation criterions			
	r	r^2	P. Er	6p.Er
NABIL	0.09454	0.00894	0.29895	1.79369
NIBL	0.08456	0.96935	0.66079	3.96476

Source: Appendix -26

The coefficient correlation between loan and advances and interest paid in the case of NABIL and NIBL are 0.09454and 0.98456. They show positive relationship between these variable. The value of coefficient of determination (r^2) are 0.00894and 0.96935it means 0.89% and 9.69% of the variation in the dependent variable is explained by the in depend variable. Again considering the value of r and comparing with P.Er in both cases it is lower than P. Er this reveals that the value is not significant relationship between two variables.

In conclusion, it can be clear that the relationship between loan and advances and interest in case of both banks are not significant. It is not successful to utilize the loan and advances. There banks have no relationship could be established between the loan and advances and interest paid.

vi) Coefficient of Correlation between Total working fund and Net Profit.

The Coefficient of Correlation between them. Here total working fund is taken as independent variable (x) and net profit is taken as dependent variable(y). The main

purpose of calculating 'r' is to justify where total working fund is significantly used to generate earnings or in other words whether there variables are significantly correlated or not. The table 4.32 shows the value of 'r', r^2, P.Er, 6P. Er between their two variable of NABIL and NIBL.

Table 4.30

Coefficient of Correlation between total Working Fund and Net Profit.

Banks	Evaluation criterions			
	r	r^2	P. Er	6p.Er
NABIL	0.95694	0.91573	0.02542	0.15252
NIBL	0.97298	0.94668	. 0.016082	0.09650

Sources: Appendix -27

The coefficient of correlation 'r' between total working fund and net profit in case of NABIL and NIBL are0.95694 and 0.97298 which indicates positive relationship between these variables that means it has significant relation between two variables. The coefficient of determination r^2 in case of NABIL and NIBL are 0.91573 and 0.94668, which shows that only 91.57% and 94.68% of the variation of the dependent variables have been explained by independent variables. The value of 6P.Er is lower than 'r' i.e. 0.15252< 0.95694 in case of NABIL so there is significant relation.The value of 'r' is greater than 6P.Er in case of NIBL, so there is significant relationship between variables.

After analysis the conclusion can be drawn that NABIL is no significant relation so fell to generate earnings or in other words these variables are significant relationship between there variable which indicated that total working fund is significantly use to generate earnings.

4.2.3 Test of Hypothesis

i) Test of significance of difference of averages of loans and Advances to Total Deposit Ratio

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Table 4.31

Loans and Advances to Total Deposits Ratio between NABIL and NIBL

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Fiscal Year	NABIL	NIBL
	X_1	X_2
2005/06	58.01	61.87
2006/07	72.57	71.04
2007/08	66.79	67.45
2008/09	66.60	70.59
2009/010	72.44	73.61
Total	**336.41**	**344.56**
Mean	**67.28**	**68.91**

Sources: Appendix -28

Null Hypothesis: H0: There is no significant difference between average of loan and advances to Total deposit ratio of two banks.

Alternate Hypothesis: H1: There is significant difference between average of loan and advances to Total deposit ratio of two banks.

We have, $t = \dfrac{\overline{X_1} \, Z \, \overline{X_2}}{\sqrt{SP^2 \, \dfrac{1}{n_1} \, \Gamma \, \dfrac{1}{n_2}}}$,

Where, $sp^2 = 85.12$

Now, Test Statistics under H_0 is

…/t/=0.395

With degree of frequency = $n_1 + n_2 - 2 = 5 + 5 - 2 = 8$

The calculated value of (t) =0.359

The tabulated value of 't' at =0.05 of 5% level of significance for two tailed test and for 8 degree of freedom is 2.228 i.e. 0.05 (8) = 2.306

Decision, since the tabulated value of t is greater than its calculated value of 5% level of significance for 8 degree of freedom for two tailed test null hypothesis is (H_0) is accepted. i.e. there is not significance difference and alternative hypothesis is (H_1) accepted so we may conclude that there is not significant differences between mean ratio of loans and advances to total deposit of NABIL and NIBL.

ii) Test of significance of difference of averages of on Total Investment to Total Deposit Ratio

Table 4.32

Test of Hypothesis on Total Investment to Total Deposit Ratio

Fiscal Year	NABIL	NIBL
	X_1	X_2
2005/06	41.33	34.14
2006/07	29.27	39.31
2007/08	31.93	34.38
2008/09	38.32	28.07
2009/10	35.98	23.63
Total	**176.33**	**159.53**
Mean	**35.366**	**59.732**

Sources: Appendix -29

Null Hypothesis: H0: There is no significant difference between averages of total investment to total deposit ratio of two banks.

Alternate Hypothesis: H1: There is significant difference between averages of total investment to total deposit ratio of two banks.

We have,

T=

=83.866

Now, Test Statistics under H_0 is

t= 4.21

The calculated value of t=4.21

Degree of frequency $=n_1+n_2-2= 5+5-2=8$

The tabulated value of 't' at   =0.05 of 5% level of significance for two tailed test and for 8 degree of freedom is 2.228 i.e. 0.05 (8) = 2.306

Decision since the calculated value of t is greater than its tabulated value of 5% level of significance for 8 degree of freedom for two tailed test, null hypothesis is rejected i.e. there is significance difference and alternative hypothesis if accepted. So we may conclude that there is a significance difference between mean ratio of total investment and total deposit ratio of NABIL and NIBL.

iii) Test of significance of difference of averages of Government Securities to Current Assets Ratio.

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Table 4.33

Investment of Government Securities to Current Assets Ratio of NABIL and NIBL

</div>

Fiscal Year	NABIL	NIBL
	X_1	X_2
2005/06	25.78	17.96
2006/07	16.13	13.95
2007/08	11.15	14.09
2008/09	23.66	13.81
20089/010	14.99	10.07
Total	**91.71**	**69.88**
Mean	**18.342**	**13.976**

Sources: Appendix -30

Null Hypothesis: H0: There is no significant difference between averages of government securities to current assets ratio of two banks.

Alternate Hypothesis: H1: There is significant difference between averages of government securities to current assets ratio of two banks.

$$t = \frac{X_1^Z \, Z\overline{X_2}}{\sqrt{S_p^2 \, 1/n_1 \, \Gamma \, 1/n_2}}$$

With degree of freedom = n_1+n_2-2

Now, Test statistics under null hypothesis is H0 is,

t X0.9522

Degree of frequency =n_1+n_2-2= 5+5-2=8

The tabulated value of 't' at =0.05 of 5% level of significance for two tailed test and for 8 degree of freedom is 2.228 i.e. 0.05 (8) = 2.306

Decision, since the tabulated value of t is higher than its calculated value of 5% level of significance for 8 degree of freedom for two tailed test, Null hypothesis is accepted i.e. not significance differences and alternative hypothesis (H_1) is rejected. So we may conclude that there is no significance differences between mean ratio if investment on government securities to current assets ratio of NABIL and NIBL.

iv) Test of significance of difference of averages of Loans and Advances to Current Assets Ratio

Table 4.34

Loans and Advances to Current Assets Ratio of NABIL and NIBL

Fiscal Year	NABIL	NIBL
	X_1	X_2
2005/06	57.40	63.99
2006/07	70.72	72.50
2007/08	62.61	71.35
2008/09	76.05	73.30
2009/010	81.34	88.85
Total	348.12	369.99
Mean	69.624	73.998

Sources: Appendix -31

Null Hypothesis: H0: There is no significant difference between average of loan and advances to current assets ratio of two banks.

Alternate Hypothesis: H1: There is significant difference between average of loan and advances to current assets ratio of two banks.

$$t = \frac{\overline{X_1^Z Z X_2}}{\sqrt{S_p^2 \; 1\!/\!n_1 \; \Gamma \; 1\!/\!n_2}}$$

With degree of freedom = $n_1 + n_2 - 2$

Test statistics is

t= Z0.52378

…/t/=0.52378

The calculated value of t= 0.52378

Degree of frequency =$n_1 + n_2 - 2$= 5+5-2=8

The tabulated value of 't' at   =0.05 of 5% level of significance for two tailed test and for 8 degree of freedom is 2.228 i.e. 0.05 (8) = 2.306

Decision, since the calculated value of t is lower than its tabulated value of 5% level of significance for 8 degree of freedom for two tailed test, null hypothesis of freedom for two tailed test, null hypothesis is accepted i.e. not significance differences and Alternative hypothesis is rejected. So, we may conclude that there is no significance difference between mean ratio of loan and advances to current assets ratio of two banks.

v) Test of significance of difference of averages of Return on Loans and Advances Ratio of NABIL and NIBL.

The ratios of returns on loans and advances of NABIL and NIBL are taken and under T-test of significance difference.

Table 4.35

Return on Loans and Advances Ratio of NABIL and NIBL

Fiscal Year	NABIL	NIBL
	X_1	X_2
2005/06	5.56	3.26
2006/07	4.90	3.46
2007/08	5.21	3.92
2008/09	4.80	4.03
2009/010	5.21	3.91
Total	25.68	18.58
Mean	5.136	3.716

Sources: Appendix -32

Null Hypothesis: H0: There is no significant difference between average of return on loan and advances ratio of two banks.

Alternate Hypothesis: H1: There is significant difference between average of return on loan and advances ratio of two banks.

$$t = \frac{X_1^Z Z \overline{X_2}}{\sqrt{S_p^2 \; {1}/{n_1} \; \Gamma \; {1}/{n_2}}}$$

With degree of freedom = $n_1 + n_2 - 2$

Now, Test statistics of (H0) is

t= 4.431

The calculated value of t= 4.431

Degree of frequency =$n_1 + n_2 - 2$= 5+5-2=8

The tabulated value of 't' at   =0.05 of 5% level of significance for two tailed test and for 8 degree of freedom is 2.228 i.e. 0.05 (8) = 2.306

Decision since the calculated value of t is greater than its tabulated value of 5% level of significance for 8 degree of freedom for two tailed test null hypothesis is rejected i.e. highly significance difference and alternative hypothesis if accepted. So we may

conclude that there is a significance difference between mean ratio of return on loan and advances ratio of NABIL and NIBL.

4.3 Major Findings of the Study

The major findings of the study of the investment policy of the NABIL and NIBL are derived on the basis of financial and statistical data of both banks, which are presented below.

4.3.1 Liquidity Ratios:

⟩ The means current ratios of both banks were lower than the standard current ratio of 2:1 but from the banking point of view it is satisfactory. Ratio is not homogeneous.

⟩ The mean ratio of cash and bank balances and total deposit ratio of NABIL is lower than 10% and ratio of NIBL is higher than the NABIL. The ratio of both banks has fluctuating trend. The cv of NIBL shows it is less variable.

⟩ The mean ratio of cash and bank balances to current assets are 5.43 and 11.82 of NABIL and NIBL respectively. In comparison of cv NIBL is less variable. NIBL is better position in maintaining its cash and bank balances to meet its daily requirement to make the payments on customers deposit withdrawal in comparison to NABIL.

⟩ The mean ratio of government securities to current asset of NABIL is higher than NIBL in comparison, which states that its investment on government securities is highly rich than that of NIBL. On the basis of C.V. the ratio of NIBL are more volatile and in consistent.

⟩ The loan and advances to total deposit ratio of both bank are in fluctuating trend. The mean ratio of NABIL and NIBL are 69.62 and 74.00 respectively which shows that the ratios are not satisfactory consistent over the study period.

4.3.2 Assets Management Ratios:

⟩ The loans and advances to total deposit of both bank are in fluctuant trend during study period. The mean ratio of NABIL is little bit greater than NIBL. it shows

that ratios are not satisfactory consistent over the study period.

⟩ The total investment to total deposit of NABIL bank in increasing trend and NIBL is in fluctuating trend over the study period. The mean ratio of NABIL bank is little bit greater than NIBL. Both banks have mobilized significant amount of found on the government securities and shares and debenture of other companies.

⟩ The mean ratio of loans and advances to total working fund ratio is 58.17 and 63.87 of NABIL and NIBL respectively. Loan and advances is most risky and most productive assest of the bank from the study shows two third of assets taken optimum risk towards the mobilization of its fund to risky assets.

⟩ In case of investment on government securities to total working fund mean ratio, NABIL have ratio of fluctuating trend and NIBL have decreasing trend.

⟩ The investment on shares and debentures to total working fund ratio of both bank have fluctuating trend. The mean ratio of NABIL has little bit higher than NIBL.

4.3.3 Profitability Ratio

⟩ The mean ratio of return on total working fund of NABIL is around 3% and NIBL is 2.39%. There is slight variability occured in the ratio calculated above.

⟩ The mean ratio of return on loan and advances of NABIL is higher than NIBL. The mean ratio is found to be 5.14 and 3.72 of NABIL and NIBL respectively. The C.V. of both banks is less than 10%, which indicates that the ratios are less variable.

⟩ The mean ratio of total interested earned to total working fund is 2.79 and 2.39 of NABIL and NIBL respectively. The ratios indicate that both bank has average earning power of the total assets.

4.3.4 Risk Ratio

⟩ The mean ratio of NABIL and NIBL is 5.94 and 12.51 respectively. Both of the bank ratio have fluctuating trend. The C.V. of NIBL is lower than the NABIL, which indicates that credit policy is consistent than NABIL.

⟩ The mean ratio of credit risk ratio of the bank NABIL and NIBL were measured by dividing total loan and advances to total assets. The mean ratio of the NABIL

and NIBL were 57.24 and 63.24 respectively. The calculated ratio is not variable.

4.3.5 Growth Ratios:

The growth ratios of different components of NABIL and NIBL which are important from the view point of investment policy is calculated and from calculation following result has been found out.

⌡ The growth rate of total deposit from the first year of study period to current year of the study period is 17.93% and 28.39% of NABIL and NIBL respectively.

⌡ The growth ratio of loan and advances for the study period were 24.66% and 34.08% respectively.

⌡ The growth rate of total investment from first year of the study period to current year of the study period is 13.91% and 17.11% respectively.

⌡ The growth rate of net profit for the study period was 22.69% and 40.27% respectively.

4.3.6 Trend Analysis:

Trend analysis of deposits, loan and advances, total investment and net profit for next five year of NABIL and NIBL shows that:

⌡ Trend values of total deposit of NABIL and NIBL were found to be in increasing trend. The trend value of total deposit in case of NABIL and NIBL will be 44337.61 and 54968.44 million at the end of forecasted year.

⌡ Trend value of total loan and advances of NABIL and NIBL were found to be increasing trend throughout the forested year. The total loan and advances of NABIL and NIBL will be 33110.203 and 41371.6018 million at the end of forested year respectively.

⌡ The trend valued of total investment of NABIL and NIBl has in increasing trend. The total investment of NABIL and NIBL will be 15870.543 and 11805.176 million respectively at the end of forecasted period.

⌡ The trend valued for net profit for the study period is in increasing trend. The forecasted profit for the end of the period will be 1651.972 and 1714.556 million respectively.

4.3.7 Co-efficient of Correlation Analysis:

⌡ Coefficient of correlation between deposit and loan and advances has positive values which were 0.0985 and 0.0543 of NABIL and NIBL respectively. The correlation coefficient is significant between deposit and loan and advances. it has strong position during the study period.

⌡ Coefficient of correlation between deposit and total investment has positive value less than 1 i.e. 0.94372 and 0.89973 of NABIL and NIBL respectively. The correlation coefficient is significant, therefore it has been found that there is positive correlation between deposit and loan and advances.

⌡ The correlation coefficient between deposit and net profit has positive values less than 0.5 which were 0.32275 and 0.31537 of NABIL and NIBL respectively. The results show that there are significant differences between variable.

⌡ The coefficient of correlation between deposits and interested earned of NABIL and NIBL were less than 1 i.e. 0.98750 and 0.99252 respectively. The result shows that it is positively and significantly relationship between variable of both banks.

⌡ The coefficient of correlation between loan and advances and interest paid of NABIL and NIBL were 0.09454 and 0.08456 respectively, which is the positive relationship between two variables. In both case r<6p.Er, which indicates that threes less significant relation between two variables.

⌡ The coefficient of correlation between total working fund and net profit of the NABIL and NIBL were 0.95694 and 0.97298 respectively. There is positive correlation between total working fund and net profit during the study period.

4.3.8 Test of Hypothesis:

From the test of hypothesis made, by using t-test the following major finding have been deducted:

⌡ The tabulated value of t 2.306 is greater than calculated value 0.359, so there is not significant differences between mean ratio of loan and advances to total deposit of NABIL and NIBL, which indicates that it it not mobilize the total deposit on loan and advances for profit generating purpose.

⌡ There is a significant difference between mean ratio of total investment to total deposit ratio of NABIL and NIBL so, these banks must mobilize its deposit funds by investing in different securities issued by government and other financial sectors.

⌡ There is no significant difference between mean ratio of investment of government securities of investment of government securities to current assets ratio of NABIL and NIBL.

⌡ The calculated value of 't' is lesser than that of tabulated value of NABIL and NIBL. This indicates there are significant differences between mean ratio of loan and advances to current assets NABIL and NIBL. It must invest its collected funds as and bank balance in order to make high profit by mobilizing its funds by keeping some amount as liquidity.

⌡ There is significant relationship between mean ratio of return on loan and advances of NABIL and NIBL. They have passed to employ its resources in the form of loan and advances.

CHAPTER-V
SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Commercial banks are major financial institutions which occupy quite an important place in the framework of every economy because they provide capital for the development of industry trade and business and other resources deflect sectors investing the saving collected as deposit commercial banks by playing active role have changed the economic structure of the world. Commercial banks have its own role and contribution in the economic development it maintains economic confidence of various segments and extends credit to people. The banking sector has to play developmental role to boost the economy by adopting the growth oriented investment policy and planned effort pushed forward the force of economic growth.

The income and profit of the bank depends upon its lending procedure lending policy and investment of its fund utilize in different securities. Commercial banks able to utilize its deposits properly i.e. providing loans and advances or lending for a profitable project the reason behind it is lack of sound investment policy. The objective of this study is to evaluate the investment policies adopted by NABIL and NIBL. The study is totally based on secondary sources to data i.e. population sample, financial tools, statistical tools etc. The required data has been collected from various financial and statistical tools, i.e. ratio, asset management ratio, profitability ratio, risk ratio and test of hypothesis etc.

Regarding the investment policies of commercial banks there are basically five basic principles of the bank follow while providing the loans i.e. liquidity profitability, security and suitability diversification. Various processes while making investment decision are applied in the study i.e. set investment process security analysis portfolio construction, revision, performance evaluation. The data obtained from annual reports of the concerned banks likewise the financial statement of five year (from 2005/06 to 2009/010) were selected for the purpose of evaluation.

5.2 Conclusion

Joint Venture banks are also among the major commercial banks that contributing to the economic development of the country. The conclusion derived from the comparative study of the investment policy of Nepal Investment Bank Ltd. and NABIL Bank Ltd. reveals that:

a. As shown the liquidity position of both banks has satisfactory. The Ratios are homogeneous. NIBL has the highest cash and bank balance to total deposit ratio and loan and advances to current assets ratio than NABIL. But NABIL investing position of current assets as govt. securities is higher than NIBL. At last we can conclude that NIBL has maintained moderate investment policy in liquidity position.

b. The analysis also depicts that the total investment to total deposit, investment on govt. securities to working fund and investment on shares and debentures to total working funds ratio are highest in NABIL's capacity to mobilize its loan and advances to total working fund and loan and advances to total deposit is not so good than NIBL. Finally it can be concluded that asset management position of NABIL is less effective in comparison to NIBL.

c. From this analysis it can be concluded that the profitability position of NABIL is better than NIBL. It has highest return on loan and advances ratio, total interest earned to total deposit asset ratio and return on equity than NIBL. NIBL has not maintained better position in comparison to NABIL.

d. From the risk ratios point of views, it can be concluded that NIBL has higher degree of liquidity risk and credit risk in comparison to NABIL.

e. From the analysis of growth ratio, NABIL has lower growth rate on total deposits, loan & advances, total investment and net profit than NIBL. Therefore NIBL has successfully collected and utilized fund amount of its customer than NABIL.

f. From this study we can be concluded that NABIL and NIBL, there is positive relationship between deposit & loan and advance. The relation between deposit & loan and advances is significant. The both banks are successful to mobilize their deposit in proper way as loan and advance.

g. From the study it can be concluded that the trend analysis of total deposit and total investment of NABIL and NIBL is in increasing trend and loan and advances &net profit of both banks are also in increasing trend.

5.3 Recommendations

On the basis of the findings of the study, following recommendations can be drawn:

1) The bank is recommended to make strong liquidity postion. NIBL is recommended to increase its deposits volume to maintain the cash reserve ratio. In the light of the current situation of the commercial bank, the bank should maintain its liquidity position strong enough to meet the short term obligation. Both banks should explore the new deposit schemes to attract the deposits considerably. For this, bank should launch the new schemes like prize schemes, gift schemes, child deposit schemes, low balances a/c schemes etc.

2) From the study it is found that NABIL has invested more funds in government securities than that of NIBL bank. NABIL liquidity position shows that it has kept relatively more cash and bank balance which doesn't earn any return. This ultimately affects profitability of bank. Investment in government securities i.e. TBs development banks saving certificate are free of risk and highly in nature. So NABIL is recommended to invest its fund in government securities instead of keeping them idle "Something is better than nothing".

3) Profit is the life blood of any organization. Profit maximization is the main objectives of any banking industries. The growth ratio of net profit of NABIL Bank is too low in comparison to NIBL. So, NABIL Bank is recommended to diversify its investment on more profitable sector and adopt sound investment policy.

4) In practice joint ventured banks are urban based service quite a few elite, a fluent big customer are heavily dependent on free based activities. To overcome its situation they should be accessible to rural areas and possible loan and advances to its deposit. So the customers is enjoying by getting deposit borrowing and other services.

5) Profitability ratios of banks are not satisfactory. If resources held idle bank have to bearded more cost and result would be lower profit margin. So portfolio condition of a bank should be regularly revised from time to time. It should always try to maintain the equilibrium in the portfolio condition of the bank. The bank should use its funds in more portfolio sectors. It should utilize its risky assets and share holders' funds and it should reduce its expenses and should try to collect cheaper fund being more profitable.

6) In the light of growing competition in the banking sector the business of the bank is customer oriented. It should strengthen and active its marketing function as it is an effective tool of attracting and retaining customers. The bank should develop on "Innovative approach to bank marketing and formulate new strategies of serving customers in a more convenient way.

7) The investment policy of NABIL is good in every aspect as studied above but the consistency in the above investment sectors is in equalities states. It is found that at time bank focuses much of its attention to one sector leaving other sector untouched, so it is recommended to touch all the sectors and balance it effectively as to have the optional performance of the bank.

8) The sample bank should follow the directives of NRB, the bank is also recommended to follow NRB directions regarding the lending practices to different sectors. NRB has also formulated the policies for loan loss provision which should be followed by the banks, it helps to maintain its credibility and protect frame solvency.

To get success itself and to encourage financial and economic development of the country through industrialization and commercialization a commercial bank must mobilize its fund and debentures of other financial and non financial companies. And if other sectors go up positively than bank can utilize its fund more and more by providing them loan or getting sufficient dividend on their share or interest on their debentures. Commercial banks needed to strengthen its economic structure to achieve piped overall development. They have to resort to innovative approach of banking there by bringing professionalism in their business. If they follow those suggestions they can have better reach to the modern innovative and competitive banking markets.

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APPENDICES

Liquidity ratios:

Appendix: 1

Current Ratio

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Current Assets	Current Liabilities	Ratio (Times)	Current Assets	Current Liabilities	Ratio (times)
2005/06	14244.04	115263.80	0.93	11144.3	12526.45	0.89
2006/07	14969.38	15528.69	0.96	13967.78	15093.89	0.92
2007/08	20640.70	20420.37	1.01	17906.12	19364.69	0.92
2008/09	20322.65	25196.34	0.80	23582.10	24912.72	0.94
2009/010	24322.2	27024.6	0.90	25940.2	28649.6	0.87

Sources: www.nabilbank.com, www.nibl.com.np

Mean Calculation (NABIL):

Fiscal Year	Current ratio(X)	$(X-\overline{X})^2$
2005/06	0.93	0.0001
2006/07	0.96	0.009
2007/08	1.01	0.0064
2008/09	0.80	0.0169
2009/010	0.90	0.0009
N=5	X=4.60	$(X-\overline{X})^2 = 0.0252$

Mean= Total Current ratio/N

Where, N= No. of study years

$\overline{X} = $ X/N

=4.60/5

=0.92

Standard Deviation Calculation (NABIL)

standard deviation= $(X - \overline{X_1})^2 / N-1$

$= 0.0252/5-1$

$=0.0793$

Coeffcient of variation calculation (NABIL)

C.V. = standard deviation/Mean

$= \quad / \overline{X} \quad *100$

$=(0.0793/0.92)*100$

$=8.61\%$

All other means, standard deviation and cofficient of variation are calculated as above respectively.

Appendix: 2

Cash and Bank Balance to Total Deposit Ratio

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Cash & Bank Balance	Total Deposit	Ratio%	Cash & Bank Balance	Total Deposit	Ratio %
2005/06	970.49	14119.03	6.87	1,226.92	11,524.67	10.65
2006/07	559.38	14586.61	3.83	1,340.50	14,254.60	9.40
2007/08	630.238	19347.40	3.26	2336.521	18927.30	12.34
2008/09	1399.825	23342.28	5.99	2441.514	24488.85	9.97
2009/010	1623.3	27310.14	5.94	3917.23	31312.45	12.51

Sources: www.nabilbank.com, www.nibl.com.np

Appendix:-3

Cash and Bank Balance to Current Assets Ratio

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Cash & Bank Balance	Current Assets	Ratio%	Cash & Bank Balance	Current Assets	Ratio %
2005/06	970.49	14244.04	6.81	1,226.92	11144.30	11.01
2006/07	559.38	14969.38	3.73	1,340.50	13967.78	9.60
2007/08	630.238	20640.70	3.05	2336.521	17906.12	13.05
2008/09	1399.825	20322.65	6.89	2441.514	23582.10	10.35
2009/010	1623.3	24322.2	6.67	3917.23	25940.2	15.10

Sources: www.nabilbank.com, www.nibl.com.np

Appendix: 4

Investment on Government Securities to current assets Ratio

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Investment on Govt. Securities	Current Assets	Ratio%	Investment on Govt. Securities	Current Assets	Ratio %
2005/06	3672.63	14244.04	25.78	2001.10	11144.3	17.96
2006/07	2413.94	14969.38	16.13	1948.50	13967.78	13.95
2007/08	2301.463	20640.70	11.15	2522.30	17906.12	14.09
2008/09	4808.348	20322.65	23.66	3256.40	23582.10	13.81
2009/010	3645.23	24322.2	14.99	2612.34	25940.2	10.07

Sources: www.nabilbank.com, www.nibl.com.np

Appendix: 5

Loan and Advances to Current Assets Ratio

(Rs. In Millions)

Banks	NABIL			NIBL		
Fiscal Year	Loan & Advance	Current Assets	Ratio%	Loan & Advance	Current Assets	Ratio %
2005/06	8189.99	14244.04	57.40	7130.13	11144.3	63.99
2006/07	10586.17	14969.38	70.72	10126.05 1	13967.78	72.50
2007/08	12922.54	20640.70	62.61	12776.208	17906.12	71.35
2008/09	15545.78	20322.65	76.05	17286.43	23582.10	73.30
2009/010	19784.73	24322.2	81.34	23048.57	25940.2	88.85

Sources: www.nabilbank.com, www.nibl.com.np

Appendix: 6

Loan and Advances to Total Deposit Ratio

(Rs. In Millions)

Banks	NABIL			NIBL		
Fiscal Year	Loan & Advance	Total Deposit	Ratio%	Loan & Advance	Total Deposit	Ratio %
2005/06	8189.99	14119.03	58.01	7130.13	11,524.67	61.87
2006/07	10586.17	14586.61	72.57	10126.05 1	14,254.60	71.04
2007/08	12922.54	19347.40	66.79	12776.208	18927.30	67.45
2008/09	15545.78	23342.28	66.60	17286.43	24488.85	70.59
2009/010	19784.73	27310.14	72.44	23048.57	31312.45	73.61

Sources: www.nabilbank.com, www.nibl.com.np

Appendix-7

Total Investment to Total Deposit Ratio

(Rs. in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Total Investment	Total Deposit	Ratio%	Total Investment	Total Deposit	Ratio %
2005/06	5836.07	14119.03	41.33	3934.18	11,524.67	34.14
2006/07	4269.66	14586.61	29.27	5602.86	14,254.60	39.31
2007/08	6178.533	19347.40	31.93	6506.67	18927.30	34.38
2008/09	8945.31	23342.28	38.32	6874.03	24488.85	28.07
2009/010	9826.37	27310.14	35.98	7399.81	31312.45	23.63

Sources: www.nabilbank.com, www.nibl.com.np

Appendix-8

Loan and Advances to Total Working Ratio

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Loan & Advance	Total working fund	Ratio%	Loan & Advance	Total working fund	Ratio %
2005/06	8189.99	16 745.61	48.91	7130.13	13255.50	53.79
2006/07	10586.17	17186.33	61.60	10126.05 1	16274.06	62.22
2007/08	12922.54	22329.97	57.87	12776.208	21330.137	59.90
2008/09	15545.78	27253.39	57.04	17286.43	27590.85	62.65
2009/010	19784.73	30253.83	65.40	23048.57	28532.22	80.78

Sources: www.nabilbank.com, www.nibl.com.np

Appendix-9

Investment on Government Securities to Total Working Fund Ratio.

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Investment on Govt. Securities	Total Working Fund	Ratio%	Investment on Govt. securities	Total Working Fund	Ratio %
2005/06	3672.63	16 745.61	21.93	2001.10	13255.50	15.10
2006/07	2413.94	17186.33	14.05	1948.50	16274.06	11.97
2007/08	2301.463	22329.97	10.31	2522.30	21330.137	11.83
2008/09	4808.348	27253.39	17.64	3256.40	27590.85	11.80
2009/010	3645.23	30253.83	12.05	2612.34	28532.22	9.16

Sources: www.nabilbank.com, www.nibl.com.np

Appendix-10

Investment on Share and Debentures to Total Working Fund

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Investment on Share and Debentures	Total Working Fund	Ratio%	Investment on Share and Debentures	Total Working Fund	Ratio %
2005/06	22.22	16 745.61	0.13	17.73	13255.50	0.13
2006/07	27.36	17186.33	0.16	17.78	16274.06	0.11
2007/08	27.56	22329.97	0.12	35.25	21330.137	0.17
2008/09	57.85	27253.39	0.21	54.54	27590.85	0.20
2009/010	82.50	30253.83	0.27	60.97	28532.22	0.21

Sources: www.nabilbank.com, www.nibl.com.np

Appendix-11

Return on Total Working Fund Ratio

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Net Profit	Working Fund	Ratio%	Net Profit	Working Fund	Ratio %
2005/06	455.31	16 745.61	2.72	232.57	13255.50	1.75
2006/07	518.63	17186.33	3.02	350.38	16274.06	2.15
2007/08	673.26	22329.97	3.02	501.23	21330.137	2.35
2008/09	746.95	27253.39	2.74	697.36	27590.85	2.53
2009/010	1031.72	30253.83	3.41	900.6	28532.22	3.16

Sources: www.nabilbank.com, www.nibl.com.np

Appendix-12

Return on Loan and Advances Ratio

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Net Profit	Loan & Advance	Ratio%	Net Profit	Loan & Advance	Ratio %
2005/06	455.31	8189.99	5.56	232.57	7130.13	3.26
2006/07	518.63	10586.17	4.90	350.38	10126.05 1	3.46
2007/08	673.26	12922.54	5.21	501.23	12776.208	3.92
2008/09	746.95	15545.78	4.80	697.36	17286.43	4.03
2009/010	1031.72	19784.73	5.21	900.6	23048.57	3.91

Sources: www.nabilbank.com, www.nibl.com.np

Appendix-13

Total Interest earned to Total Working Fund Ratio

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Interest Earned	Working Fund	Ratio%	Interest Earned	Working Fund	Ratio %
2005/06	1001.61	16 745.61	5.98	886.79	13255.50	6.68
2006/07	1068.74	17186.33	6.21	1172.74	16274.06	7.20
2007/08	1587.87	22329.97	7.11	1584.98	21330.137	7.43
2008/09	1978.70	27253.39	7.26	2194.74	27590.85	7.95
2009/010	2798.48	30253.83	9.25	3267.94	28532.22	11.45

Sources: www.nabilbank.com, www.nibl.com.np

Appendix-14

Total Interest Pain to Total Working Fund Ratio

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Interest Paid	Working Fund	Ratio%	Interest Paid	Working Fund	Ratio %
2005/06	335.42	16 745.61	2.0	354.54	13255.50	2.67
2006/07	446.48	17186.33	2.60	490.94	16274.06	3.02
2007/08	555.70	22329.97	2.49	685.53	21330.137	3.21
2008/09	758.40	2253.39	2.78	992.15	27590.85	3.59
2009/010	1553.28	30253.83	5.13	1686.97	28532.22	5.91

Sources: www.nabilbank.com, www.nibl.com.np

Appendix-15

Liquidity Risk Ratio

(Rs in Millions)

Banks	NABIL				NIBL			
Fiscal Year	Current Assets	Current Liabilities	Prepaid Expanses	Ratio (Times)	Current Assets	Current Liabilities	Prepaid Expanses	Ratio (times)
2005/06	14244.04	11526.4	1058	1.143	11144.3	12526.5	950	0.813
2006/07	14969.38	15528.7	1152	0.889	13967.78	15093.9	1010	0.858
2007/08	20640.7	20420.4	1220	0.951	17906.12	19364.7	1150	0.865
2008/09	20322.65	25196.3	950	0.768	23582.1	24912.7	850	0.912
2009/010	24322.2	27024.6	920	0.865	25940.2	28649.6	970	0.871

Sources: www.nabilbank.com, www.nibl.com.np

Appendix-16

Credit Risk Ratio

(Rs in Millions)

Banks	NABIL			NIBL		
Fiscal Year	Loan & Advance	Total Assets	Ratio%	Loan & Advance	Total Assets	Ratio %
2005/06	8189.99	16745.48	48.91	7130.13	13255.5	53.79
2006/07	10586.17	17186.33	61.60	10126.05	16274.06	62.22
2007/08	12922.54	22329.97	57.87	12776.208	21330.14	59.90
2008/09	15545.78	27253.39	57.04	17286.43	27590.85	62.65
2009/010	19784.73	32317.48	61.22	23048.57	29687.12	77.64

Sources: www.nabilbank.com, www.nibl.com.np

Appendix-17

Calculation of Growth Ratio

Let,

D_n= Variable in the 5th year

D_o= Variable in the initial year

n= no of period study

total deposit growth ratio of NABIL

$D_n = D_o (1+g)^{n-1}$

$27310.14 = 14119.03 (1+g)^{5-1}$

$1+g = \left(\dfrac{27310.14}{14119.03} \right)^{1/4}$

g = 17.93%

Total deposit growth ratio of NIBL

$D_n = D_o(1+g)^{n-1}$

$31312.45 = 11,524.67 (1+g)^{5-1}$

$1+g = \left(\dfrac{31312.45}{11524.67} \right)^{1/4}$

g= 28.39%

Total Loans and Advance Growth rate of NABIL

$D_n = D_o (1+g)^{n-1}$

$19784.73 = 8189.99 (1+g)^{5-1}$

$1+g = \left(\dfrac{19784.73}{8189.99} \right)^{1/4}$

g = 24.66%

Total deposit growth ratio of NIBL

$D_n = D_o(1+g)^{n-1}$

$31312.45 = 11,524.67 (1+g)^{5-1}$

$$1+g = \left[\frac{31312.45}{11524.67}\right]^{1/4}$$

g= 28.39%

Total Investment Growth ratio of NABIL

$D_n = D_o (1+g)^{n-1}$

$9826.37 = 5836.07 (1+g)^{5-1}$

$$1+g = \left[\frac{9826.37}{5836.07}\right]^{1/4}$$

g = 13.91%

Total Net Profit growth Ratio of NABIL

$D_n = D_o (1+g)^{n-1}$

$1031.72 = 455.31(1+g)^{5-1}$

$$1+g = \left[\frac{1031.72}{455.31}\right]^{1/4}$$

g = 22.69%

Total Deposit Growth Ratio of NIBL

$D_n = D_o(1+g)^{n-1}$

$24488.85 = 11524.67(1+g)^{5-1}$

$$1+g = \left[\frac{24488.85}{11524.67}\right]^{1/4}$$

g= 20.73%

Trend Analysis

Appendix: 18

Trend Analysis of Total Deposit of NABIL

(Rs in Millions)

Fiscal Year	Total Deposit	X= t-2006/07	X^2	Xy	y_c =a+bx
2005/06	14119	-2	4	-28238.1	12713.512
2006/07	14586.6	-1	1	-14586.6	16227.301
2007/08	19347.4	0	0	0	19741.09
2008/09	23342.3	1	1	23342.28	23254.879
2009/010	27310	2	4	54620.28	26768.668
Total	98705.46		10	35137.89	

Sources: www.nabilbank.com,

$$a = \frac{y}{n} \text{X} \frac{98705.46}{5} \text{X} 19741.09$$

$$b = \frac{xy}{x^2} \text{X} \frac{35137.89}{10} \text{X} 3513.789$$

Trend Values of Total Deposit for Next Five Years

Fiscal Year	X= t-2006/07	y_c =a+bx
2010/11	3	30282.457
2011/12	4	33796.246
2012/13	5	37310.035
2013/14	6	40823.824
2014/15	7	44337.61

Appendix: 18

Trend Analysis of Total Deposit NIBL

(Rs in Millions)

Fiscal Year	Total Deposit	X= t-2006/07	X^2	Xy	y_c =a+bx
2005/06	11,524.67	-2	4	-23049.3	10139.612
2006/07	14,254.60	-1	1	-14254.6	15120.593
2007/08	18927.3	0	0	0	20101.574
2008/09	24488.85	1	1	24488.85	25082.555
2009/010	31312.45	2	4	62624.9	30063.536
Total	100507.87		19	49809.81	

Sources: www.nibl.com.np

$$a = \frac{y}{n} X \frac{100507.87}{5} X 20101.574$$

$$b = \frac{xy}{x^2} X \frac{49809.81}{10} X 4980.981$$

Project Trend Values of Total Deposit for Next Five Years

Fiscal Year	X=t-2006/07	y_c =a+bx
2010/11	3	35044.517
2011/12	4	40025.498
2012/13	5	45006.479
2013/14	6	49987.46
2014/15	7	54968.44

Appendix: 19

Trend Analysis of Loan and Advance of NABIL

(Rs in Millions)

Fiscal Year	Loan & Advance (y)	X= t-2006/07	X^2	Xy	y_c =a+bx
2005/06	8189.99	-2	4	-16380	7776.022
2006/07	10586.17	-1	1	-10586.2	10590.931
2007/08	12922.54	0	0	0	13405.84
2008/09	15545.78	1	1	15545.78	16220.749
2009/010	19784.73	2	4	39569.46	19035.658
Total	67029.21		10	28149.09	

Sources: www.nabilbank.com

$$a = \frac{y}{n} \ X \frac{67029.21}{5} \ X13405.84$$

$$b = \frac{xy}{x^2} \ X \frac{28149.09}{10} \ X2814.909$$

Project Trend Values of Loan and Advances for Next Five Years

(Rs in Millions)

Fiscal Year	X= t-2006/07	y_c =a+bx
2010/11	3	21850.567
2011/12	4	24665.476
2012/13	5	27480.385
2013/14	6	30295.294
2014/15	7	33110.203

Appendix: 19

Trend Analysis of Loan and Advance of NIBL

(Rs in Millions)

Fiscal Year	Loan & Advance (y)	X= t-2006/07	X^2	Xy	y_c =a+bx
2005/06	7130.13	-2	4	-14260.3	6274.0138
2006/07	10126.05	-1	1	-10126.1	10173.7458
2007/08	12776.21	0	0	0	14073.4778
2008/09	17286.43	1	1	17286.43	17973.2098
2009/010	23048.6	2	4	46097.2	21872.9418
Total	70367.389		19	38997.32	

Sources: www.nibl.com.np

$$a = \frac{y}{n} \; X \frac{70367..389}{5} \; X14073.4778$$

$$b = \frac{xy}{x^2} \; X \frac{38997.32}{10} \; X3899.732$$

Project Trend Values of Loan and Advances for Next Five Years

(Rs in Millions)

Fiscal Year	X= t-2006/07	y_c =a+bx
2010/11	3	25772.6738
2011/12	4	29672.4058
2012/13	5	33572.1378
2013/14	6	37471.8698
2014/15	7	41371.6018

Appendix: 20

Trend Analysis of Total Investment of NABIL

(Rs in Millions)

Fiscal Year	Total Invest (y)	X= t-2006/07	X^2	Xy	y_c =a+bx
2010/11	5836.07	-2	4	-11672.1	4479.918
2011/12	4269.66	-1	1	-4269.66	5745.543
2012/13	6178.533	0	0	0	7011.168
2013/14	8945.31	1	1	8945.31	8276.793
2010/11	9826.37	2	4	19652.74	9542.418
Total	35055.943		10	12656.25	

Sources: www.nabilbank.com,

$$a = \frac{y}{n} \text{ X} \frac{35055.943}{5} \text{ X} 7011.186$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{1265625}{10} = 1265625$$

Project Trend Values of Total Investment for Next Five Years

(Rs in Millions)

Fiscal Year	X= t-2006/07	y_c =a+bx
2010/11	3	10808.043
2011/12	4	12073.668
2012/13	5	13339.293
2013/14	6	14604.918
2014/15	7	15870.543

Appendix: 20

Trend Analysis of Total Investment of NIBL

(Rs in Millions)

Fiscal Year	Total Invest (y)	X=t-2006/07	X^2	Xy	$y_c = a+bx$
2005/06	3934.18	-2	4	-7868.36	4423.034
2006/07	5602.86	-1	1	-5602.86	5243.272
2007/08	6506.7	0	0	0	6063.51
2008/09	6874	1	1	6874	6883.748
2009/10	7399.8	2	4	14799.6	7703.986
Total	30,317.55		10	8202.38	

Sources: www.nibl.com.np

$$a = \frac{y}{n} \; X \frac{30317.55}{5} \; X6063.51$$

$$b = \frac{xy}{x^2} \; X \frac{8202.38}{10} \; X820.238$$

Project Trend Values of Total Investment for Next Five Years

(Rs in Millions)

Fiscal Year	X= t-2006/07	$y_c = a+bx$
2010/11	3	8524.224
2011/12	4	9344.462
2012/13	5	10164.7
2013/14	6	10984.938
2014/15	7	11805.176

Appendix: 21

Trend Analysis of Net Profit of NABIL

(Rs in Millions)

Fiscal Year	Net Profit (y)	X= t-2006/07	X^2	Xy	y_c =a+bx
2005/06	455.31	-2	4	-910.62	408.946
2006/07	518.63	-1	1	-518.63	547.06
2007/08	673.26	0	0	0	685.174
2008/09	746.95	1	1	746.95	823.288
2009/10	1031.72	2	4	2063.44	961.402
Total	3425.87		10	1381.14	

Sources: www.nabilbank.com,

$$a = \frac{y}{n} \ X\frac{3425.87}{5} \ X685.174$$

$$b = \frac{xy}{x^2} \ X\frac{1381.14}{10} \ X138.114$$

Project Trend Values of Net Profit for Next Five Years

(Rs in Millions)

Fiscal Year	X=t-2006/07	y_c =a+bx
2010/11	3	1099.516
2011/12	4	1237.63
2012/13	5	1375.744
2013/14	6	1513.858
2014/15	7	1651.972

Trend Analysis of Net Profit of NIBL

(Rs in Millions)

Fiscal Year	Net Profit (y)	X= t-2006/07	X^2	Xy	y_c =a+bx
2005/06	232.57	-2	4	-465.14	199.82
2006/07	350.38	-1	1	-350.38	368.124
2007/08	501.23	0	0	0	536.428
2008/09	697.36	1	1	697.36	704.732
2009/10	900.6	2	4	1801.2	873.036
Total	2,682.14		10	1683.04	

Sources: www.nibl.com.np

$$a = \frac{y}{n} \; X \frac{2682.14}{5} \; X536.428$$

$$b = \frac{xy}{x^2} \; X \frac{1683.04}{10} \; X168.304$$

Project Trend Values of Net Profit for Next Five Years

(Rs in Millions)

Fiscal Year	X= t-2006/07	y_c =a+bx
2010/11	3	1041.34
2011/12	4	1209.644
2012/13	5	1377.948
2013/14	6	1546.252
2014/15	7	1714.556

Coefficient of Correlation between Deposit between and Loan and Advance of

NABIL

(Rs in Millions)

Fiscal Year	Deposit X	Loan & Advance (y)	$X=x-\bar{x}$	X^2	$y=y-\bar{y}$	y^2	xy
2005/06	14119.03	8189.99	-5622.06	31607581.13	-5215.85	27205112	29323843.33
2006/07	14586.6	10586.2	-5154.48	26568684.69	-2819.67	7950550	14533948.57
2007/08	19347.4	12922.5	-393.692	154993.3909	-483.302	233580.8	190272.131
2008/09	23342.3	15545.8	3601.188	12968555.01	2139.938	4579335	7706319.046
2009/10	27310	19785	7569.048	57290487.63	6378.888	40690212	48282109.46
Total	98705.46	67029.21	0	128590301.8	0	80658790	100036492.5
Mean	19741.092	13405.582					

Sources: www.nabilbank.com

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{100036492.5}{\sqrt{128590301.8}\sqrt{80658790}} = 0.09855$$

Coefficient of Determination(r) $^2 = (0.09855)^2$

$$= 0.00971$$

Probable (P.Er) $= 0.6745 \times \frac{1 Z r^2}{\sqrt{n}}$

$$= 0.6745 \times \frac{1 Z 0.00971}{\sqrt{5}}$$

$$= 0.2985$$

6(P.Er)=1.79097

Appendix: 22

Coefficient of Correlation between Deposit and Loan and Advance of NIBL

(Rs in Millions)

Fiscal Year	Deposit X	Loan & Advance (y)	$X=x-\bar{x}$	X^2	$y=y-\bar{y}$	y^2	xy
2005/06	11,524.67	7130.13	-8,576.90	73563214	-6943.347	48210079	59552400
2006/07	14,254.60	10126.05 1	-5,846.97	34187058	-3947.426	15582178	23080486
2007/08	18927.3	12776.208	-1,174.27	1378910	-1297.269	1682908.9	1523345
2008/09	24488.85	17286.43	4,387.28	19248226	3212.9522	10323062	14096121
2009/10	31312.45	23048.57	11,210.88	125683830	8975.0922	80552280	100618682
Total	100,507.87	70367.389	0.00	254061238		48210079	198871033
Mean	20101.57	14073.4778					

Sources: www.nibl.com.np

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{198871033}{\sqrt{254061238}\sqrt{48210079}} = 0.05430$$

Coefficient of Determination (r^2) = 0.05430×0.05430

$$= 0.00295$$

Probable (P.Er) = $0.6745 \times \frac{1-r^2}{\sqrt{5}} = 0.6745 \times \frac{1-0.00295}{\sqrt{5}}$

$$= 0.30076$$

$$6(P.Er) = 1.80453$$

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Coefficient of Correlation Deposit Between and Total Investment of NABIL

(Rs in Millions)

Fiscal Year	Deposit X	Total Investment (y)	$X=x-\bar{x}$	X^2	$y=y-\bar{y}$	y^2	xy
2005/06	14119.03	5836.07	-5622.06	31607581.1	-1175.12	1380907	6606595
2006/07	14586.61	4269.66	-5154.48	26568684.7	-2741.53	7515987	14131162
2007/08	19347.4	6178.533	-393.692	154993.391	-832.656	693316	327810
2008/09	23342.28	8945.31	3601.188	12968555	1934.121	3740824	6965133
2009/10	27310.14	9826.37	7569.048	57290487.6	2815.181	7925244	21308240
Total	98705.46	35055.943	0	128590302	0	21256278	49338940
Mean	19741.071	7011.1886					

Sources: www.nabilbank.com,

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{49338940}{\sqrt{128590302}\sqrt{21256278}}$$

=0.94372

Coefficient of Determination $(r^2) = (0.94372)^2$

$$=0.89060$$

$$\text{Probable (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 Z 0.89060}{\sqrt{5}}$$

$$=0.03300$$

$$6(\text{P.Er})=0.19800$$

Appendix: 23

Coefficient of Correlation Deposit Between and Total Investment of NIBL

(Rs in Millions)

Fiscal Year	Deposit X	Total Investment (y)	$X=x-\bar{x}$	X^2	$y=y-\bar{y}$	y^2	xy
2005/06	11,524.67	3934.18	-8,576.904	73563282.23	- 2129.33	4534046.249	18263058.99
2006/07	14,254.60	5602.86	-5,846.974	34187104.96	-460.65	212198.4225	2693408.573
2007/08	18927.3	6506.7	-1,174.274	1378919.427	443.16	196390.7856	-520391.2658
2008/09	24488.85	6874	4,387.276	19248190.7	810.52	656942.6704	3555974.944
2009/10	31312.45	7399.8	11,210.876	125683740.7	1336.3	1785697.69	14981093.6
Total	100,507.87	30,317.55	0.00	254,061,238.00	0.00	7,385,275.82	38,973,144.84
Mean	20101.504	6063.51					

Sources: www.nibl.com.np

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{38,973,144.84}{\sqrt{254,061,238.00}\sqrt{7,385,275.82}} = 0.89973$$

Coefficient of Determination $(r^2) = (0.89973)^2$

$$= 0.80952$$

Probable (P.Er) $= 0.6745 \times \frac{1 Z r^2}{\sqrt{5}}$

$$= 0.6745 \times \frac{1 Z 0.809526}{\sqrt{5}}$$

$$= 0.05746$$

$$6(P.Er) = 0.34473$$

Appendix: 24

Coefficient of Correlation between Deposit and Net Profit of NABIL

(Rs in Millions)

Fiscal Year	Deposit X	Net Profit (y)	$X=x-\overset{z}{x}$	X^2	$y=y-\overset{z}{y}$	y^2	xy
2005/06	14119.03	455.31	-5622.06	31607581.13	-229.864	52837.4585	1292310
2006/07	14586.61	518.63	-5154.48	26568684.69	-166.544	27736.90394	858448.1
2007/08	19347.4	673.26	-393.692	154993.3909	-11.914	141.943396	4690.446
2008/09	23342.28	746.95	3601.188	12968555.01	61.776	3816.274176	222467
2009/10	27310.14	1031.72	7569.048	57290487.63	346.546	120094.1301	2623023
Total	98705.46	3425.87	0	128590301.8	0	204626.7101	5000938
Mean	19741.182	685.174					

Sources: www.nabilbank.com,

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{5000938}{\sqrt{128590301.8}\sqrt{204626.7101}}$$

=0.32275

Coefficient of Determination $(r^2) = (0.32275)^2$

$$=0.10417$$

Probable (P.Er) $= 0.6745 \times \frac{1-r^2}{\sqrt{5}}$

$$= 0.6745 \times \frac{1-0.10417}{\sqrt{5}} \quad =0.27022$$

6(P.Er) =1.62134

Coefficient of Correlation between Total Deposit and Net Profit of NIBL.

(Rs in Millions)

Fiscal Year	Deposit X	Net Profit (y)	$X=x-\bar{x}$	X^2	$y=y-\bar{y}$	y^2	xy
2005/06	11,524.67	232.57	-8,576.904	73563282.23	-303.858	92329.68416	2606160.896
2006/07	14,254.60	350.38	-5,846.974	34187104.96	-186.048	34613.8583	1087817.819
2007/08	18927.3	501.23	-1,174.274	1378919.427	-35.198	1238.899204	41332.09625
2008/09	24488.85	697.36	4,387.276	19248190.7	160.932	25899.10862	706053.1012
2009/10	31312.45	900.6	11,210.876	125683740.7	364.172	132621.2456	4082687.135
Total	100,507.87	2,682.14	0.00	254,061,238.00	0.00	286,702.80	8,524,051.05
Mean	20105.574	536.428					

Sources: www.nibl.com.np

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{8,524,051.05}{\sqrt{254,061,238.00}\sqrt{286,702.80}}$$

$$=0.31537$$

Coefficient of Determination $(r^2) = (0.31537)^2$

$$=0.09946$$

Probable $(P.Er) = 0.6745 \times \frac{1\,Z\,r^2}{\sqrt{5}}$

$$= 0.6745 \times \frac{1\,Z\,0.09946}{\sqrt{5}}$$

$$=0.27164$$

$$6(P.Er)=1.62986$$

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Coefficient of Correlation between Total Deposit and interest earned of NABIL.

(Rs in Millions)

Fiscal Year	Total Deposit X	Interest earned (y)	$X = x - \overset{z}{x}$	X^2	$y = y - \overset{z}{y}$	y^2	xy
2005/06	14119.03	1001.6	- 5622.062	31607581.13	- 685.47	469869.121	3853754.839
2006/07	14586.61	1068.7	- 5154.482	26568684.69	- 618.34	382344.356	3187222.4
2007/08	19347.4	1587.9	-393.692	154993.3909	-99.21	9842.6241	39058.18332
2008/09	23342.28	1978.7	3601.188	12968555.01	291.62	85042.2244	1050178.445
2009/10	27310	2798.5	7569.048	57290487.63	1111.4	1235209.96	8412239.947
Total	98705.46	8435.4	0	128590301.8	0	2182308.29	16542453.81
Mean	19741.092	1687.08					

Sources: www.nabilbank.com,

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{16542453.81}{\sqrt{128590301.8}\sqrt{2182308.29}}$$

=0.98750

Coefficient of Determination $(r^2) = (0.98750)^2$

=0.97516

Probable (P.Er) $= 0.6745 \times \frac{1 Z r^2}{\sqrt{5}}$

$= 0.6745 \times \frac{1 Z 0.97516}{\sqrt{5}}$

=0.0487055

6(P.Er)=0.0074

Appendix: 25

Coefficient of Correlation between Total Deposit and interest earned of NIBL.

(Rs in Millions)

Fiscal Year	Total Deposit X	Interest earned (y)	$X=x-\bar{x}$	X^2	$y=y-\bar{y}$	y^2	xy
2005/06	11,524.67	886.79	-8,576.904	73563282.23	-934.648	873566.8839	8016386.17
2006/07	14,254.60	1172.74	-5,846.974	34187104.96	-648.698	420809.0952	3792920.34
2007/08	18927.3	1584.98	-1,174.274	1378919.427	-236.458	55912.38576	277666.4815
2008/09	24488.85	2194.74	4,387.276	19248190.7	373.302	139354.3832	1637778.905
2009/10	31312.5	3267.94	11,210.876	125683740.7	1446.502	2092368.036	16216554.56
Total	100,507.87	9,107.19	0.00	254,061,238.00	0.00	3,582,010.78	29,941,306.45
Mean	20101.5344	1821.42					

Sources: www.nibl.com.np

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{29,941,306.45}{\sqrt{254,061,238.00}\sqrt{3,582,010.78}} = 0.99252$$

Coefficient of Determination $(r^2) = (0.99252)^2$

$$= 0.98509$$

Probable (P.Er) $= 0.6745 \times \frac{1 Z r^2}{\sqrt{5}}$

$$= 0.6745 \times \frac{1 Z 0.98509}{\sqrt{5}}$$

$$= 0.00450$$

6(P.Er)=0.02699

Appendix: 26

Coefficient of Correlation between Loan & advances and interest paid of NABIL.

(Rs in Millions)

Fiscal Year	Loan & Advance X	Interest Paid (y)	$X = x - \bar{x}$	X^2	$y = y - \bar{y}$	y^2	xy
2005/06	8189.99	335.42	-5215.85	27205112	-394.436	155579.8	2057320
2006/07	10586.2	446.48	-2819.67	7950550	-283.376	80301.96	799027.4
2007/08	12922.5	555.7	-483.302	233580.8	-174.156	30330.31	84169.94
2008/09	15545.8	758.4	2139.938	4579335	28.544	814.7599	61082.39
2009/10	19785	1553.28	6378.888	40690212	823.424	678027.1	5252529
Total	67029.21	3649.28	0	80658790	0	945053.9	8254129
Mean	13405.42	729.856					

Sources: www.nabilbank.com,

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{8254129}{\sqrt{80658790}\sqrt{945053.9}} = 0.09454$$

Coefficient of Determination $(r^2) = (0.09454)^2$

$$= 0.00894$$

$$\text{Probable (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 Z 0.00894}{\sqrt{5}}$$

$$= 0.29895$$

$$6(\text{P.Er}) = 1.79369$$

Coefficient of Correlation between Loan & advances and interest Paid of NIBL.

(Rs in Millions)

Fiscal Year	Loan & Advance X	Interest Paid (y)	$X = x - \bar{x}$	X^2	$y = y - \bar{y}$	y^2	xy
2005/06	7130.13	354.54	-6943.35	48210078.67	-487.486	237642.6	3384785
2006/07	10126.05	490.94	-3947.43	15582178.34	-351.086	123261.4	1385886
2007/08	12776.21	685.53	-1297.27	1682908.934	-156.496	24491	203017.5
2008/09	17286.43	992.15	3212.952	10323061.84	150.124	22537.22	482341.2
2009/10	23048.6	1686.97	8975.092	80552280	844.944	713930.4	7583450
Total	70367.389	4210.13	0	156350507.8	0	1121863	13039480
Mean	14073.4778	842.026					

Sources: www.nibl.com.np

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{13039480}{\sqrt{156350507.8}\sqrt{1121863}}$$

=0.98456

Coefficient of Determination $(r^2) = (0.98456)^2$

$$= 0.96935$$

Probable $(P.Er) = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}}$

$$= 0.6745 - \frac{1 Z 0.96935}{\sqrt{5}}$$

=0.66079

6(P.Er)=3.96476

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Appendix: 27

Coefficient of Correlation between Total Working Fund and Net Profit of NABIL.

(Rs in Millions)

Fiscal Year	Working Fund X	Net Profit (y)	$X=x-\bar{x}$	X^2	$y=y-\bar{y}$	y^2	xy
2005/06	16 745.61	455.31	-5999.986	35999832	-229.864	52837.46	1379181
2006/07	17186.33	518.63	-5559.266	30905438.46	-166.544	27736.9	925862.4
2007/08	22329.97	673.26	-415.626	172744.9719	-11.914	141.9434	4951.768
2008/09	27253.39	746.95	4507.794	20320206.75	61.776	3816.274	278473.5
2009/10	30253.83	1031.72	7508.234	56373577.8	346.546	120094.1	2601948
Total	113727.98	3425.87	**0.00**	143771800	0	204626.7	5190417
Mean	22745.596	685.174					

Sources: www.nabilbank.com,

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{5190417}{\sqrt{143771800}\sqrt{204626.7}}$$

=0.95694

Coefficient of Determination $(r^2) = (0.95694)^2$

=0.91573

Probable (P. Er) $= 0.6745 \times \frac{1Zr^2}{\sqrt{n}}$

$= 0.6745 \times \frac{1Z0.91573}{\sqrt{5}}$

=0.02542

6(P.Er)=0.15252

Coefficient of Correlation between Total Working Fund and Net Profit of NIBL**.**

(Rs in Millions)

Fiscal Year	Working Fund X	Net Profit (y)	$X=x-\overset{z}{x}$	X^2	$y=y-\overset{z}{y}$	y^2	xy
2005/06	13255.5	232.57	-8141.054	66276760.23	-303.858	92329.68416	2473724.386
2006/07	16274.06	350.38	-5122.494	26239944.78	-186.048	34613.8583	953029.7637
2007/08	21330.137	501.23	-66.414	4411.217889	-35.198	1238.899204	2337.745566
2008/09	27590.85	697.36	6194.296	38369302.94	160.932	25899.10862	996860.4439
2009/10	28532.22	900.6	7135.666	50917729.26	364.172	132621.2456	2598609.759
Total	106982.767	2682.14	-0.000	181808148.4	0	286702.7959	7024562.098
Mean	21396.554	536.428					

Sources: www.nibl.com.np

Coefficient of correlation(r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

$$= \frac{7024562.098}{\sqrt{181808148.4}\sqrt{286702.7959}}$$

$$=0.97298$$

Coefficient of Determination $(r^2) = (0.97298)^2$

$$=0.94668$$

Probable (P. Er) $= 0.6745 \times \dfrac{1 Z r^2}{\sqrt{n}}$

$$= 0.6745 \times \frac{1 Z 0.94668}{\sqrt{5}}$$

$$=0.01608$$

6(P.Er)=0.09650

Loans and Advances to Total Deposits Ratio between NABIL and NIBL

Fiscal Year	NABIL			NIBL		
	X_1	$x_1 = X_1 - \overline{X_1}$	x_1^2	X_2	$x_2 = X_2 - \overline{X_2}$	x_2^2
2005/06	58.01	-9.272	85.96998	61.87	-7.042	49.58976
2006/07	72.57	5.288	27.96294	71.04	2.128	4.528384
2007/08	66.79	-0.492	0.242064	67.45	-1.462	2.137444
2008/09	66.60	-0.682	0.465124	70.59	1.678	2.815684
2009/010	72.44	5.158	26.60496	73.61	4.698	22.0712
Total	336.41		141.2451	**344.56**		81.14248

We have,

$$\overline{X_1} \, X \frac{X_1}{n} \quad = \frac{336.41}{5} \quad = 67.28$$

$$\overline{X_2} \, X \frac{X_2}{n} \, X \frac{344.56}{5} \, X \, 68.91$$

Again, $x_1 = X_1 - \overline{X_1}$, $x_2 = X_2 - \overline{X_2}$

We have,

Null Hypothesis: H0: There is no significant difference between average of loan and advances to Total deposit ratio of two banks.

Alternate Hypothesis: H1: There is significant difference between average of loan and advances to Total deposit ratio of two banks.

We have, $t = \dfrac{\overline{X_1} \, Z \, \overline{X_2}}{\sqrt{SP^2 \; \frac{1}{n_1} \, \Gamma \, \frac{1}{n_2}}}$,

Where, $sp^2 = \dfrac{1}{n_1 \, \Gamma \, n_2 \, Z2} \int x_1^2 \, \Gamma \quad x_2^2 \,\big/$

$= \dfrac{1}{5 \, \Gamma \, 5 \, Z2} \mid \int 336.41 \, \Gamma \, 344.56 \big/$

$= 85.12$

Now, Test Statistics under H_0 is

$$t = \frac{67.28 \, Z \, 68.91}{\sqrt{85.12 \int \frac{1}{5} \, \Gamma \, \frac{1}{5} A}}$$

$$= \frac{Z 1.63}{4.126} \, X \, Z 0.395$$

…/t/=0.395

With degree of frequency = $n_1 + n_2 - 2 = 5 + 5 - 2 = 8$

The calculated value of (t) =0.359

The tabulated value of 't' at =0.05 of 5% level of significance for two tailed test and for 8 degree of freedom is 2.228 i.e. 0.05 (8) = 2.30

Appendix-29

Test of Hypothesis on Total Investment to Total Deposit Ratio

Fiscal Year	NABIL			NIBL		
	X_1	$x_1 = X_1 - \overline{X_1}$	x_1^2	X_2	$x_2 = X_2 - \overline{X_2}$	x_2^2
2005/06	41.33	13.12	172.13	34.14	-14.76	217.86
2006/07	29.27	5.09	25.91	39.31	3.01	9.10
2007/08	31.93	1.57	2.46	34.38	5.58	31.14
2008/09	38.32	-10.51	110.46	28.07	2.63	6.92
2009/10	35.98	-7.83	61.31	23.63	5.8	33.64
Total	176.33		372.27		159.53	298.66

We have,

$$\overline{X_1} \, X \, \frac{X_1}{n} = \frac{176.83}{5} \, X \, 35.366$$

$$\overline{X_2} \, X \, \frac{X_2}{n} \, X \, \frac{298.66}{5} \, X \, 59.732$$

Again, $x_1 = \mathbf{X_1} - \overline{X_1} \; x_2 = \mathbf{X_2} - \overline{X_2}$

     Null Hypothesis: H0: There is no significant difference between averages of total investment to total deposit ratio of two banks.

Alternate Hypothesis: H1: There is significant difference between averages of total investment to total deposit ratio of two banks.

We have,

$$T= \qquad\qquad s_p^2 =$$

$$\frac{1}{n_1 + n_2 - 2}\left\{ x_1^2 + x_2^2 \right\}$$

$$= \frac{1}{5+5-2}$$

$$= 83.866$$

Now, Test Statistics under H_0 is

$$t = \frac{35.366 - 59.732}{\sqrt{83.866\left\{\frac{1}{5} + \frac{1}{5}\right\}}}$$

$$= \frac{24.366}{5.79} \times 4.21 \qquad t = 4.21$$

The calculated value of t=4.21

Degree of frequency $=n_1+n_2-2= 5+5-2=8$

The tabulated value of 't' at =0.05 of 5% level of significance for two tailed test and for 8 degree of freedom is 2.228 i.e. 0.05 (8) = 2.306

Appendix-30

Investment of Government Securities to Current Assets Ratio of NABIL and NIBL

Fiscal Year	NABIL			NIBL		
	X_1	$x_1 = X_1 - \overline{X_1}$	x_1^2	X_2	$x_2 = X_2 - \overline{X_2}$	x_2^2
2005/06	25.78	7.54	56.85	17.96	-11.96	143.04
2006/07	16.13	2.47	6.10	13.95	0.19	0.036
2007/08	11.15	2.37	5.62	14.09	4.61	21.25
2008/09	23.66	-7.29	53.14	13.81	2.34	5.48
20089/010	14.99	-6.8	46.24	10.07	9.09	82.63
Total	**91.71**		**167.95**	**69.88**		**252.436**

We have

$$\overline{X_1} \times \frac{X_1}{n} = \frac{91.71}{5} \times 18.342, \qquad \overline{X_2} \times \frac{X_2}{n} \times \frac{69.88}{5} \times 13.976$$

Again, $x_1 = \mathbf{X_1} - \overline{X_1}$ $x_2 = \mathbf{X_2} - \overline{X_2}$

Null Hypothesis:	H0: There is no significant difference between averages of government securities to current assets ratio of two banks.
Alternate Hypothesis:	H1: There is significant difference between averages of government securities to current assets ratio of two banks.

$$t = \frac{X_1^Z Z \overline{X_2}}{\sqrt{S_p^2 \ 1\!\!\!/ n_1 \ \Gamma \ 1\!\!\!/ n_2}}$$

With degree of freedom = $n_1 + n_2 - 2$

Where, $Sp^2 = \dfrac{1}{n_1 \ \Gamma n_2 \ Z2} \int x_1^2 \ \Gamma \quad x_2^2 \ A$

$$= \frac{1}{5 \ \Gamma 5 \ Z2} \mid f 167.95 \ \Gamma 252.436 A$$

$$= 52.55$$

Now, Test statistics under null hypothesis is H0 is,

$$t = \frac{18.342 \ Z 13.976}{\sqrt{52.55 \int 1\!\!\!/_5 \ \Gamma \ 1\!\!\!/_5 A}} = \frac{4.366}{4.585} \times 0.9522$$

Degree of frequency $= n_1 + n_2 - 2 = 5 + 5 - 2 = 8$

The tabulated value of 't' at $=0.05$ of 5% level of significance for two tailed test and for 8 degree of freedom is 2.228 i.e. $0.05 (8) = 2.306$

Loans and Advances to Current Assets Ratio of NABIL and NIBL

Fiscal Year	NABIL			NIBL		
	X_1	$x_1 = X_1 - \overline{X}_1$	x_1^2	X_2	$x_2 = X_2 - \overline{X}_2$	x_2^2
2005/06	57.40	-13.22	174.77	63.99	6.36	40.45
2006/07	70.72	-13.16	173.19	72.50	-5.27	27.77
2007/08	62.61	-11.59	134.33	71.35	-7.85	61.62
2008/09	76.05	1.62	2.62	73.30	-4.64	21.53
2009/010	81.34	24.16	583.71	88.85	13.24	175.30
Total	348.12			369.99		326.67

We have,

$$\overline{X}_1 \text{ X} \frac{X_1}{n} = \frac{348.12}{5} \text{ X} 69.624, \quad \overline{X}_2 \text{ X} \frac{X_2}{n} \text{ X} \frac{369.99}{5} \text{ X} 73.998$$

Again, $x_1 = X_1 - \overline{X}_1 \ x_2 = X_2 - \overline{X}_2$

Null Hypothesis: H0: There is no significant difference between average of loan and advances to current assets ratio of two banks.

Alternate Hypothesis: H1: There is significant difference between average of loan and advances to current assets ratio of two banks.

$$t = \frac{X_1^Z \text{ Z} \overline{X}_2}{\sqrt{S_p^2 \ {1}/{n_1} \ \Gamma \ {1}/{n_2}}}$$

With degree of freedom = $n_1 + n_2 - 2$

Where, $Sp^2 = \frac{1}{n_1 \ \Gamma \ n_2 \ Z2} \int \ x_1^2 \ \Gamma \ x_2^2 Å$

$$= \frac{1}{5 \ \Gamma \ 5 \ Z2} | \int 1068.62 \ \Gamma \ 326.67 Å$$

$= 174.41$

Now,

Test statistics is

$$t = \frac{69.624 \ Z \ 73.998}{\sqrt{174.41 \left[\frac{1}{5} \ \Gamma \ \frac{1}{5} \right]}} = \frac{Z \ 4.374}{8.352} \ X \ Z \ 0.52378$$

.../t/=0.52378

The calculated value of t= 0.52378

Degree of frequency $= n_1 + n_2 - 2 = 5 + 5 - 2 = 8$

The tabulated value of 't' at =0.05 of 5% level of significance for two tailed test and for 8 degree of freedom is 2.228 i.e. 0.05 (8) = 2.306

Appendix-32

Return on Loans and Advances Ratio of NABIL and NIBL

Fiscal Year	NABIL			NIBL		
	X_1	$x_1 = X_1 - \overline{X}_1$	x_1^2	X_2	$x_2 = X_2 - \overline{X}_2$	x_2^2
2005/06	5.56	-1.14	1.30	3.26	-1.835	3.37
2006/07	4.90	0.58	0.34	3.46	-0.225	0.051
2007/08	5.21	0.77	0.593	3.92	0.225	0.051
2008/09	4.80	0.11	0.012	4.03	0.325	0.106
2009/010	5.21	0.13	0.017	3.91	0.755	0.57
Total	25.68		2.262	18.58		4.148

We have,

$$\overline{X}_1 \ X \ \frac{X_1}{n} = \frac{25.68}{5} \ X \ 5.136$$

$$\overline{X}_2 \ X \ \frac{X_2}{n} \ X \ \frac{18.58}{5} \ X \ 3.716$$

Again, $x_1 = X_1 - \overline{X}_1 \ \ x_2 = X_2 - \overline{X}_2$

Null Hypothesis: H0: There is no significant difference between average of return on loan and advances ratio of two banks.

Alternate Hypothesis: H1: There is significant difference between average of return on loan and advances ratio of two banks.

$$t = \frac{\overline{X_1^Z} \, Z \, \overline{X_2}}{\sqrt{S_p^2 \, {1}/{n_1} \, \Gamma \, {1}/{n_2}}}$$

With degree of freedom = $n_1 + n_2 - 2$

Where, $Sp^2 = \dfrac{1}{n_1 \, \Gamma n_2 \, Z2} \int x_1^2 \, \Gamma \quad x_2^2$

$= \dfrac{1}{5 \, \Gamma 5 \, Z2} \, | \, f2.262 \, \Gamma \, 4.148$

$= 0.80125$

Now, Test statistics of (H_0) is

$$t = \frac{5.136 \, Z \, 3.716}{\sqrt{0.80125 \, {1}/{5} \, \Gamma \, {1}/{5}}} = \frac{1.42}{0.3205} \, X \, 4.431$$

The calculated value of t= 4.431

Degree of frequency $= n_1 + n_2 - 2 = 5 + 5 - 2 = 8$

The tabulated value of 't' at =0.05 of 5% level of significance for two tailed test and for 8 degree of freedom is 2.228 i.e. 0.05 (8) = 2.306