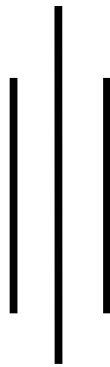


**FINANCIAL PERFORMANCE OF
NABIL BANK LIMITED,
NEPAL INVESTMENT BANK LIMITED &
NEPAL INDUSTRIAL AND COMMERCIAL BANK
LIMITED**



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A Thesis Submitted to:

Office of the Dean

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In the partial fulfillment of the requirement for the Degree of Master of
Business Studies (MBS)

April 2010

Date:

RECOMMENDATION

This is to certify that the thesis

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**“FINANCIAL PERFORMANCE OF NABIL BANK LTD., NEPAL
INVESTMENT BANK LTD. & NEPAL INDUSTRIAL AND
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DECLARATION

I hereby, declare that the work reported in this thesis entitled "*Financial Performance of Nabil Bank Ltd., Nepal Investment and Commercial Bank Ltd. & Nepal Industrial and Commercial Bank Ltd.*" submitted to Research Department of Shanker Dev Campus, Putalisadak, Kathmandu T.U., is my original work done in the form of partial fulfillment of the requirement of the Degree of Masters of Business Studies (MBS) under the guidance and supervision of **Mr. Priti Raj Adhikari** and **Mrs Sneha Lata Kafle**, Shanker Dev Campus, Putalisadak, Kathmandu.

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This thesis entitled “Financial Performance of Nabil Bank Ltd, Nepal Investment and Commercial Bank Ltd. & Nepal Industrial and Commercial Bank Ltd.” is a Masters Degree thesis prepared as practical fulfilled of MBS course under Tribhuvan University of Nepal. It aims to analysis the comparative financial position of these banks.

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Rabindra Maharjan

TABLE OF CONTENTS

	Page no.
RECOMMENDATION LETTER	
VIVA-VOCE SHEET	
DECLARATION	
ACKNOWLEDGEMENT	
LIST OF CONTENT	
LIST OF TABLE	
LIST OF FIGURE	
ABBREVIATION	
CHAPTER I: INTRODUCTION	1-19
1.1 General Background	1
1.1.1 Background of the study	1
1.1.2 Evolution of the banking	3
1.1.3 Development of Banking in Nepal	4
1.1.4 Role of Commercial banks in the National economy	9
1.2 An introduction of Sampled banks	10
1.2.1 Nabil Bank Limited	10
1.2.2 Nepal Investment Bank Limited	11
1.2.3 Nepal Industrial and Commercial Bank Limited	12
1.3 Statement of the problem	14
1.4 Objectives of the Study	17
1.5 Limitation of the Study	18
1.6 Organization of the Study	19

CHAPTER II: REVIEW OF LITERATURE	20-51
2.1 Conceptual framework	20
2.1.1 Concept of Joint Venture Banks	21
2.1.2 Concept of Commercial Banks	22
2.1.3 Review of Policies Related to Commercial Banks	23
2.1.4 Concept of Financial Performances	34
2.1.4.1 Method of Financial Performance Analysis	36
2.1.4.2 Tools & Techniques of Financial Performance Analysis	36
2.1.4.3 Limitations of Financial Performance Analysis	44
2.2 Review of Related Articles	46
2.3 Review of previous thesis	47
CHAPTER III: RESEARCH METHODOLOGY	57-76
3.1 Research Design	57
3.2 Population and Sample	58
3.3 Natures and Source of Data	58
3.4 Data processing procedure	58
3.5 Tools and Techniques of Analysis	59
3.5.1 Financial Tools	59
3.5.1.1 Ratio Analysis	59
3.5.1.1.1 Liquidity Ratios	59
3.5.1.1.2 Efficiency /Activity / Turnover Ratios	63
3.5.1.1.3 Profitability Ratios	66
3.5.1.1.4 Capital Structure/Leverage/Solvency Ratios	69
3.5.1.1.5 Capital Adequacy Ratio	71
3.5.1.1.6 Assets Quality Ratios	72
3.5.1.1.7 Others Indicators	74
3.5.1.1.8 Income & Expenditure Analysis	75
3.5.2 Statistical Tools	76
3.5.2.1 Arithmetic Mean	76

3.5.2.2 Standard Deviation	76
3.5.2.3 Correlation Coefficient Analysis	78
3.5.2.4 Trend Analysis	80
3.5.2.5 Diagrammatic & Graphical Representation	81
3.6 Period Covered	81
CHAPTER IV: PRESENTATION AND ANALYSIS OF DATA	82-161
4.1 Ratio Analysis	82
4.1.1 Liquidity Ratios	83
4.1.1.1 Current Ratio	83
4.1.1.2 Quick Ratio	85
4.1.1.3 Cash and Bank Balance to Current Assets Ratio	87
4.1.1.4 Cash and Bank Balance to Deposits Ratio	89
4.1.1.5 Cash and Bank Balance to Total Deposits Ratio	91
4.1.1.6 NRB Balance to Current and Saving Deposit Ratio	93
4.1.1.7 NRB Balance to Fixed Deposit Ratio	95
4.1.2 Efficiency /Activity/ Turnover Ratios	96
4.1.2.1 Loans and Advances to Total Deposit Ratio	97
4.1.2.2 Loans and Advances to Saving Deposit Ratio	98
4.1.2.3 Loans and Advances to Fixed Deposits Ratio	100
4.1.2.4 Investment to Total Deposit Ratio	101
4.1.2.5 Performing Assets to Total Assets Ratio	103
4.1.3 Profitability Ratios	104
4.1.3.1 Return on Assets (ROA)	105
4.1.3.2 Return on Net Worth / Shareholders' Equity (ROE)	106
4.1.3.3 Return on Total Deposits	108
4.1.3.4 Total Interest Expenses to Total Interest Income Ratio	109
4.1.3.5 Interest Earned to Total Assets Ratio	111
4.1.4 Capital Structure/ Leverage/ Solvency Ratios	112

4.1.4.1 Debt-Equity Ratio	113
4.1.4.2 Debt Assets Ratio	114
4.1.4.3 Interest Coverage Ratio	115
4.1.5 Capital Adequacy Ratios	117
4.1.5.1 Net Worth to Total Deposits Ratio	117
4.1.5.2 Net Worth to Total Assets Ratio	119
4.1.5.3 Net Worth to Total Credit Ratio	120
4.1.6 Assets Quality Ratios	122
4.1.6.1 Loan Loss Coverage Ratio	122
4.1.6.2 Loan Loss Provision to Total Income Ratio	124
4.1.6.3 Loan Loss Provision to Total Deposit Ratio	125
4.1.6.4 Accrued Interest to Total Interest Income Ratio	127
4.1.7 Other Indicators	128
4.1.7.1 Earning Per Share (EPS)	128
4.1.7.2 Price-Earning Ratio (P/E ratio)	130
4.1.7.3 Market Value Per Share to Book Value Per Share	131
4.2 Incomes and Expenditure Analysis	132
4.2.1 Operating Income Analysis	132
4.2.2 Operating Expenses Analysis	138
4.2.3 Operating Profit/Loss Analysis	143
4.3 Correlation Analysis	145
4.3.1 Correlation Analysis between Total Deposit & Loans & Advances	146
4.3.2 Correlation Analysis between Total Deposit and Net Profit	147
4.3.3 Correlation Analysis between Loans & Advances & Net Profit	148
4.3.4 Correlation Analysis between Performing Assets & Net Profit	149
4.3.5 Correlation Analysis between Total Deposit & Performing Assets	150
4.3.6 Correlation Analysis between EPS and MVPS	151
4.3.7 Correlation Analysis between MPS and NWPS	151

4.4	Trend Analysis	152
4.4.1	Trend Analysis of Total Deposits	153
4.4.2	Trend Analysis of Loans & Advances	154
4.4.3	Trend Analysis of Performing Assets	155
4.4.4	Trend Analysis of Net Worth	156
4.4.5	Trend Analysis of Net Profit	156
4.4	Major Findings	157

CHAPTER V: SUMMARY, CONCLUSIONS AND

RECOMMENDATIONS

162-168

5.1	Summary	162
5.2	Conclusions	164
5.3	Recommendations	166

BIBLIOGRAPHY

APPENDICES

LIST OF TABLES

Table no.	Page no.
1.1 List of Financial Institutions in Nepal	7
1.2 List of Commercial Banks in Nepal	8
2.1 Minimum paid up Capital requirement	28
2.2 Loan Classifications and Provision for Doubtful Loan	30
4.1 Current Ratio	84
4.2 Quick Ratio	86
4.3 Cash and Bank Balance to Current Assets Ratio	88
4.4 Cash and Bank Balance to Total Deposit (Except Fixed Deposits) Ratio	90
4.5 Cash and Bank Balance to Total Deposit Ratio	92
4.6 NRB Balance to Current and Saving Deposit Ratio	94
4.7 NRB Balance to Fixed Deposit Ratio	95
4.8 Loan and Advances to Total Deposits Ratio	97
4.9 Loan and Advances to Saving Deposit Ratio	99
4.10 Loan and Advances to Fixed Deposits Ratio	100
4.11 Investment to Total Deposits Ratio	102
4.12 Performing Assets to Total Assets Ratio	103
4.13 Return on Asset (ROA)	105
4.14 Return on Net Worth/ Shareholders' Equity (ROE)	107
4.15 Return on Total Deposit	108
4.16 Total Interest Expenses to Total Interest Income Ratio	110
4.17 Interest Earned to Total Assets Ratio	111
4.18 Debt- Equity Ratio	113
4.19 Debt- Assets Ratio	114
4.20 Interest Coverage Ratio	116
4.21 Net Worth to Total Deposit Ratio	118

4.22 Net Worth to Total Assets Ratio	119
4.23 Net Worth to Total Credit Ratio	121
4.24 Loan Loss Coverage Ratio	123
4.25 Loan Loss Provision to Total Income Ratio	124
4.26 Loan Loss Provision to Total Deposit Ratio	126
4.27 Accrued Interest to Total Interest Income Ratio	127
4.28 Earning Per Share (EPS)	129
4.29 Price-Earning Ratio (P/E ratio)	130
4.30 Market Value Per Share to Book Value Per Share (MVPS/BVPS)	131
4.31 Operating Income Analysis of Nabil bank	133
4.32 Operating Income Analysis of NIB	134
4.33 Operating Income Analysis of NIC	134
4.34 Operating Expenses Analysis of Nabil bank	139
4.35 Operating Expenses Analysis of NIB	139
4.36 Operating Expenses Analysis of NIC	140
4.37 Operating Profit /Loss Analysis of Nabil, NIB & NIC	144
4.38 Correlation coefficient and Probable Error between Total Deposits and Loans and Advances of Nabil, NIB & NIC	146
4.39 Correlation coefficient and Probable Error between Total Deposits and Net Profit of Nabil, NIB & NIC	147
4.40 Correlation coefficient and Probable Error between Loans and Advances and Net Profit of Nabil, NIB & NIC	148
4.41 Correlation coefficient and Probable Error between Performing Assets and Net Profit of Nabil, NIB & NIC	149
4.42 Correlation coefficient and Probable Error between Total Deposits and Performing Assets of Nabil, NIB & NIC	150
4.43 Correlation coefficient and Probable Error between EPS and MVPS of Nabil, NIB & NIC	151
4.44 Correlation coefficient and Probable Error between	

MPS and NWPS of Nabil, NIB & NIC	152
4.45 Least Square Trend Equation & Its determinant of Total Deposit	153
4.46 Least Square Trend Equation & Its determinant of Loan &Advances	154
4.47 Least Square Trend Equation & Its determinant of Performing Assets	155
4.48 Least Square Trend Equation & Its determinant of Net Worth	156
4.49 Least Square Trend Equation & Its determinant of Net Profit	156

LIST OF FIGURE

Figure no.	Page no.
4.1 Current Ratio	84
4.2 Quick Ratio	86
4.3 Cash and Bank Balance to Current Assets Ratio	88
4.4 Cash and Bank Balance to Total Deposit (Except Fixed Deposits) Ratio	90
4.5 Cash and Bank Balance to Total Deposit Ratio	92
4.6 NRB Balance to Current and Saving Deposit Ratio	94
4.7 NRB Balance to Fixed Deposit Ratio	96
4.8 Loan and Advances to Total Deposits Ratio	98
4.9 Loan and Advances to Saving Deposit Ratio	99
4.10 Loan and Advances to Fixed Deposits Ratio	101
4.11 Investment to Total Deposits Ratio	102
4.12 Performing Assets to Total Assets Ratio	104
4.13 Return on Asset (ROA)	105
4.14 Return on Net Worth/ Shareholders' Equity (ROE)	107
4.15 Return on Total Deposit	109
4.16 Total Interest Expenses to Total Interest Income Ratio	110
4.17 Interest Earned to Total Assets Ratio	112
4.18 Debt- Equity Ratio	113
4.19 Debt- Assets Ratio	115
4.20 Interest Coverage Ratio	116
4.21 Net Worth to Total Deposit Ratio	118
4.22 Net Worth to Total Assets Ratio	120
4.23 Net Worth to Total Credit Ratio	121
4.24 Loan Loss Coverage Ratio	123
4.25 Loan Loss Provision to Total Income Ratio	125

4.26 Loan Loss Provision to Total Deposit Ratio	126
4.27 Accrued Interest to Total Interest Income Ratio	128
4.28 Earning Per Share (EPS)	129
4.29 Price-Earning Ratio (P/E ratio)	130
4.30 Market Value Per Share to Book Value Per Share (MVPS/BVPS)	131

ABBREVIATIONS

NRB	:	Nepal Rastra Bank
NBL	:	Nepal Bank Limited
NIDC	:	Nepal Industrial Development Corporation
QMS	:	Quality Management System
IFC	:	International Finance Corporation
ATM	:	Automated Teller Machine
B.S.	:	Bikram Sambat
EBL	:	Everest Bank Limited
HBL	:	Himalayan Bank Limited
NBBL	:	Nepal Bangladesh Bank Limited
SCBNL	:	Standard Chartered Bank Nepal Limited
NIB	:	Nepal Investment Bank Limited
NIC	:	Nepal Industrial & Commercial Bank
BOK	:	Bank of Kathmandu
CRR	:	Cash Reserve Ratio
JVBs	:	Joint Venture banks
F.Y.	:	Fiscal Year
i.e.	:	That is
Ltd.	:	Limited
NGOs	:	Non-Government Organizations
S.N.	:	Serial Number
NPA	:	Non-Performing Assets
SWOT	:	Strength, Weakness, Opportunity & Threats (Analysis)
EPS	:	Earning Per Share
MPS	:	Market Value Per Share
BVPS	:	Book Value Per Share

NWPS	:	Net Worth Per Share
NPAT	:	Net Profit After Tax
P/E Ratio	:	Price-Earning Ratio
ROA	:	Return on Assets
ROE	:	Return on Net worth / Shareholder's Equity
S.D.	:	Standard Deviation
C.V.	:	Co-efficient of Variation
P.E.	:	Probable Error
EBIT	:	Earning Before Interest and Tax

CHAPTER I

INTRODUCTION

1.1 General Background

1.1.1 Background of the study

The role of money in an economic is very important. Proper and well-planned management of money directs, determines and enhances the health and productivity of total financial sector and the performance financial sector affects the growth of economy. The economy of a country indicates the development of the country. The financial sector plays an important role in the development of the country and mobilization of financial resources. Hence, money is a subject to manage, and banks are the manager. Therefore, bank as manager collects, disperse and controls the flow of money. Banks collect the fund from financial sector organizes the scattered domestic financial resources and invests them in different sectors. Economic development depends upon various factors however, the major are capital formation and proper utilization of the capital. The organized financial sector collects the fund, mobilize and invest the fund in the best possible manner.

Banks play an important role in the economic growth of a country. Banking, when properly organized, aids and facilitates the growth of trade and industry. The issue of development always rests upon the mobilization of resources. Banks function of lending ensures required volume of capital to resources mobilization. In the modern economy, banks are to be considered not as dealers in money but as the leaders of development. “Banks are not just the storehouse of the country’s wealth but are the reservoirs of resources necessary for economic development. Bank renders valuable services to trade and industry. The economic growth of a country depends on the growth and development of trade and industry, Industrial development can take place only if sufficient money is invested in industries. Banks undertake the stupendous task by mobilizing the savings of the people and

lending the same to the trades and industrialists. The banks help in the uniform development of the different regions in the country.

Therefore, a bank is an institution that deals with money by accepting various types of deposits, disbursing loan and rendering other financial services. Since banks are rendering a wide range of services to the people from different walk of life, they have become an essential part of modern society. In other words, bank is an institution that accepts the deposits from people and in turn advance loan by creating credit. In this process, they earn interest and commission, out of which they pay interest to the depositors i.e. People who deposits fund with them. Banks have opened their branches in towns and villages offering different types of services to the different level of people. Banks' debt-usually referred as 'Bank Deposit' that is commonly accepted in final settlement of debt of other people. It is different from other financial institution in the sense that they cannot create credit though they may be accepting deposits and making advances. Thus, bank's business was basically to buy and sale of credit. Credit instruments are kept on stock-in-trade also on the basis of its own credit and banks create money transferred by credit instruments. They must gain the confidence and trust of the people to create credits. It is said that the flow of credit is very much important like the circulation of blood in human life. If the circulation of blood is not smooth it will do irreparable harm to the body. Similarly, unsteady and unevenly flow of credit harms the economy. Bank came in existence mainly with the objectives of collecting the idle funds, mobilizing them into productive sectors and causing an overall economic development. That mobilized deposits contribute to the development of economic infrastructure of the nation. Banks are not just storehouses of the wealth but are reservoir of resources. The contribution of the bank has been very substantial in increasing production and employment by motivating people to save and in collecting the scattered saving in the form of

deposits. The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they are serving.

1.1.2 Evolution of Banking:

Economists do not have exact records about the origin of the word “Banking”. The term bank is derived from the Latin word “Bancus” which refers to the bench on which the banker would keep his money and records. Some Economists says its origin to the French word” Banque” and the Italin word “Banco” which means a bench for keeping, lending and exchanging of money or coins in the market place by money lenders. The invention of money was a milestone in the history of economy and developing the banking as a habit people. It has made economic and business activity more precise and efficient. This gave the emergence of non-institutional banking activities. Merchants, Money Lender and Goldsmith were the ancestors of modern bankers. During the early periods, although the banking business was mostly done by private individuals, many countries established public banks either for the purpose of facilitating, commerce or to serve the government. The Bank of Venice established in 1157, is supposed to be the most ancient bank. Originally, it was not a bank in modern sense being simply an office for the transfer of public debt.

During 1401, a public bank was established in Barcelona. It used to exchange money, receive deposits and discount bill of Exchange, both for the citizen and foreigners. During 1407, the Bank of Geneva was established. In 1609, The Bank of Amsterdam was established. It was established to meet the needs of merchants of the city. The Bank also adopted a plan by which depositors receive a kind of certificate entitling them to withdraw his deposit within six months. The most of European banks now in existence were found on the model of Bank of Amsterdam.

1.1.3 Development of Banking in Nepal:

The development of banking is relatively recent in Nepal. In case of Nepal too there were merchants, goldsmiths and moneylenders working as ancestors of modern banking. In Nepal, the origination of banks started through Sahu (Goldsmith). Even though the specific date of the beginning of money and banking deal in Nepal is not obvious, it is speculated that during the Lichhavi period, King Gunkamdev had borrowed money from the rich people to build the city. The historical record shows that Gunkamdev, the king of Kathmandu, borrowed money to rebuild his kingdom in 723AD. Some fifty-seven years thereafter, a merchant 'Shankhadhar' introduced 'Nepal Sambat' by clearing all the indebtedness of the people in 880AD. This clearly proved that money-lending practices were prevalent at that time. Later, during the regime of Mallas, money-lending business became more penetrating and popular. Towards the end of the 14th century, Jayasthiti Mallas, the ruler of Kathmandu, divided the people in sixty-four classes on the basis of their occupation. Among them one was Tankadhari and the people belonging to this class were engaged in money lending business. It is believed that the money lending business became quite popular in the reign of Mallas, particularly in financing the trade with Tibet and India. Thus, the role of Tankadhari was akin to that of a banking agent. However, these moneylenders advanced loan against personal security of land, building etc. As they were free to charge any amount as interest and other charges on the loan advances. Naturally, the interest rate was higher, discriminatory and unfair. Of course, this gave birth to malpractices, frauds and exploitation in the whole Nepalese society. Even today, such practices of usury are prevalent in Nepalese village, which are beyond the purview of modern banking system. Thus, it was the duty of government to control the malpractices of the moneylenders and to set up a financial institution to make easy credit facilities for the general people. As a result, with growing consciousness and awareness of this, 'Tejarath Adda' had been established as an

institution, during the period of Rana , under the Prime Minister of Ranodip Singh in 1933 B.S.

As a result, with growing consciousness and awareness of this, during the time of the Prime Minister Ranodip Singh in 1933 B.S an institution called "Tejarath Adda" was established for simple banking against the security of gold, silver and ornaments. However, it accepted no deposit from public. For the development of commercial sector "Tejarath Adda" was converted into Nepal Bank Ltd. in 1994 B.S.

Modern banking started with the inception of NBL under the Nepal Bank Act 1936 in 1994 B.S. NBL had Herculean responsibilities of attracting people towards the banking system from pre-dominant moneylenders and to expand banking services. Being a first Commercial Bank it was natural that NBL paid more attention to profit generating business and opened branches at urban centers. So, the establishment of central bank had become immensely an urgent task. The Government however, has onus of stretching banking services to the nook of the country and also managing financial system in a proper way. Thus, Nepal Rastra Bank (NRB) was set up in 14th Baishk 2012 B.S. as a central bank with an authorized capital of Rs 10 million fully subscribed by the HMG under Nepal Rastra Bank Act 2012 B.S. It has been functioning as the government's bank and has contributed to the growth of financial sector. The major challenge before Nepal Rastra bank today is to ensure the robust health of financial institutions. Nepal Rastra Bank, the central bank of Nepal regulates, inspects, supervise and monitor the whole functions of bank and financial companies of Nepal. The second commercial bank Rastriya Banijaya Bank was established in 2022 B.S. The two commercial banks extended their operation extensively throughout the country.

Nepal Industrial Development Corporation (NIDC) and Agriculture Development Bank were established to facilitate development activities by providing loans and

equity capital. The former Industrial Development Center was established in 2013 B.S. and was converted into NIDC in 2016 B.S. to finance equity and loan capital to industries that are going to be established in the country. Agricultural Development Bank Nepal was established in 2004 to finance agricultural sector as well as agro-based industries within the country.

In modern times, commercial banks, which are facilitated, regulated and supervised by the Central bank, confined them and concentrated in their activities of fulfilling the financial needs of their customers. With the opening of NABIL bank in 1985 A.D. the door of opening commercial banks was opened to the private sector. Then whole lot of commercial banks was opened in Nepal. Today all the banks except Nepal Bank Ltd. and Rastriya Banijya Bank are making profit. The inefficiency of these two public sector banks has led to the success of other private banks. As the commercial banks grew they stopped entertaining small projects. Thus a scope for opening finance companies emerged. In 2042 B.S., finance company Act was passed; but private sector kept stony silence till 2049 B.S. The first break came in the month of Shrawan of that year, when the first company Nepal Housing and Finance Company came. The second came in the Poush of the same year, Nepal Finance and Saving Company. Now there are altogether 46 finance companies operating in Nepal.

After the financial liberation in the 1980's the reform measure were undertaken. Such measures include deregulation in interest rate determination, portfolio management, market-based tenders for government securities sales, non-subsidized credits etc. the market would determine the cost of funds and rate of lending. Better use funds, easy availability of funds to the entrepreneurs, better returns to the depositors, professional approach towards customer satisfaction.

For any sector to function smoothly a well-defined law governing the organization in that sector should be there. But there are many flaws in these laws giving opportunity for manipulation. All banks basically function the same functions

without regards their names, like-Business banks, Retail banks, clearing banks, Joint Venture banks, merchant Banks etc. Obviously, like other business organizations the sole objective of the banking industries is the profit maximization as well as wealth maximization.

Altogether there are 27 Commercial Banks, 58 Development Banks, 78 Finance Companies and 17 cooperatives. They all have got their own rules and regulations and own vision but ultimately they are serving the nation to build a huge financial resource and mobilize in the best possible way. The banking Sector remained still for a long period of time but as the time passed on many developments occurred. In the present scenario, Nepalese banking system is evolving itself as a powerful instrument of planning and economic growth of all the developed and underdeveloped sectors. The scope and scale of banking too have undergone substantial change in response to the saving and credit needs of people.

Nepal's financial institutions and commercial banks are listed below:

Table 1.1: List of Financial Institutions in Nepal

S.N	List of Financial Institutions	Numbers
1	Nepal Rastra Bank	1
2	Commercial Bank	27
3	Development Bank	58
4	Finance companies	78
5	Micro- finance Institutions	12
6	Co-operatives (License by NRB)	17
7	NGO(License by NRB)	47
8	Insurance companies	21
9	Employee Provident Fund	1
10	Citizen Investment Trust	1
Total		263

Source : Website of Nepal Rastra bank

Table 1.2: List of Commercial Banks in Nepal

S.N	Banks	Operation Year in A.D
1	Nepal Bank Ltd.	1937
2	Rastriya Banijaya Bank Ltd.	1966
3	Agriculture Development Bank Ltd.	1968
4	Nabil Bank Ltd	1984
5	Nepal Investment Bank Ltd.	1986
6	Standard Chartered Bank Ltd.	1987
7	Himalayan Bank Ltd.	1993
8	Nepal SBI Bank Ltd.	1993
9	Nepal Bangladesh Bank Ltd.	1993
10	Everest Bank Ltd	1994
11	Bank of Kathmandu Ltd.	1994
12	Nepal Credit & Commercial Bank Ltd.	1996
13	Lumbini Bank Ltd	1998
14	Nepal Industrial and Commercial Bank Ltd.	1998
15	Machhapuchhre Bank Ltd.	2000
16	Kumari Bank Ltd	2001
17	Laxmi Bank Ltd	2002
18	Siddhartha Bank Ltd.	2007
19	Global bank Ltd.	2007
20	Citizen Bank Ltd.	2007
21	Prime Commercial Bank Ltd.	2007
22	Bank f Asia Nepal Ltd.	2007
23	Sunrise Bank Ltd.	2007
24	NMB Bank Ltd.	2008
25	Development Credit Bank	2008
26	Kist Bank	2009
27	Janata Bank Limitd	2010

Source : Website of Nepal Rastra bank

1.1.4 Role of Commercial Banks in the National Economy

Commercial banks are the major component in the financial system. They work as the intermediary between depositors and lenders and facilitate in overall development of the economy, with major thrust in industrial development. So, commercial banks are those that accept deposits and finance to the business and finance to the business and project. They provide short term and long-term finance. As per Commercial Bank Act 2031 B.S, “*A commercial Bank means the bank which deals in exchanging currency, accepting deposits, giving loans and doing commercial transactions.*”

Commercial Banks play the role of financial intermediary collecting the fund from surplus unit and supplying the to deficit units (investors). Commercial banks help the process of saving and of the holding of saving in a socially describe form. Though their advances bank also help the creation of the incomes which further saving by the community and further growth potentials emerge for the good of economy. In a planned economy, bank emerges for the good economy and makes the entire planned productive process possible by providing funds for all types of production incorporated in the plan, regardless of whether the production is in the public sector or whether the production is undertaken by one type of organization or another. All employment income distribution and other objectives of plan are as far as possible subsumed into production plan which banks finance. The importance of commercial banks is directing the economic activities in the system is indeed overwhelming with the establishment of commercial banks the flood gates of development promising great hopes for people in the life open.

However, poor economy may be there will be needed for institution, which allows such saving as are currently forthcoming to be invested conveniently and safely and which ensure that they are channeled into the most useful purpose. Therefore, the tasks of commercial banks in underdeveloped countries are almost self-evident. Their purpose is to provide a collecting point for saving of a relatively

small average amount from a large number of individual sources so long as the means to utilize saving safely and profitably are not available within an economy, funds will either to be directed abroad, sterilized in useless hoards of cash or precious metals or more likely still will not accumulated all.

1.2 An Introduction of Sampled Banks

Nabil Bank Limited, Nepal Investment Bank Limited (NIB) and Nepal Industrial and Commercial Bank Ltd (NIC bank) are taken as samples of study out of 27 commercial banks. These three banks were formerly established with the motive of commercial nature.

1.2.1 Nabil Bank Limited

Nabil Bank which previously known as Nepal Arab Bank Limited is the first private commercial bank of Nepal and major joint venture Bank commenced operation on July 12, 1984 A.D. Under the technical service agreement approved by Nepal Rastra Bank, Joint venture operation in Nepal was started by Nabil Bank after Nepal encouraged foreign investment and joint venture operation with Nepalese investors or in certain circumstances as fully owned subsidiary. Nabil Bank has worldwide correspondent network, which enables it to conduct International Trade Business with high level of accuracy and efficiency. Nabil Bank has Head office in Kamaladi, Kathmandu has 37 branches of joint venture Bank in Nepal. Nabil Bank is the only authorized Bank to operate inside the International Airport at arrival and departure lounges. In addition, Nabil Bank is authorized to collect embarkation fee of departing passengers. Nabil Bank provides the issuance of international Bank guarantee and letter of credit and any other Banking services anywhere in the world. Operations of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology

which includes ATMs, credit cards, state-of-art, world-renowned software from Infosys Technologies System, Banglore, India, Internet banking system and Telebanking system. In 2004 A.D., NABIL Bank has awarded for “Bank of the Year”.

The mission of Nabil bank is to be the “Bank of the 1st Choice”. The slogan of Nabil Bank is “Your Bank at Your Service”. The value of NABIL Bank is CRISP.

C=Customer Focus I= Innovation P=Professional

R= Result Oriented S=Synergistic

Its share capital distribution is as follows

Authorized Capital (16,000,000 shares of Rs. 100) Rs 1,600,000,000

Issued Capital (9,657,470 shares of Rs. 100) Rs 965,747,000

Paid up Capital (9,657,470 shares of Rs. 100) Rs 965,747,000

1.2.2 Nepal Investment Bank Limited

Nepal Investment bank limited (NIB), previously Nepal Indosuez Bank Ltd., was established in 1980 as a joint venture between Nepalese and French partners which was the second private commercial bank of Nepal. The French partners (holding 50 % of the capital of NIB) were Credit Agricole Indosuez, a subsidiary of one of the largest banking group in the world.

With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of banks, professionals, industrialists and businessmen, has acquired on April 2002 the 50% share holding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd.

The name of the bank has been changed to Nepal Investment Bank Limited upon approval of bank’s Annual General Meeting, NRB, and Company Registrar’s office with the following shareholding structure.

- A group of company’s holding 50% of the capital
- RBB holding 15% of the capital

- Rastriya Beema Sansthan holding 15% of capital
- Remaining 20% being held by the general public

NIB has Head office in Durbar Marg, Kathmandu and has 34 branches in Nepal. NIB, which is managed by a group of experienced bankers and professionals having proven track record, are offering customers what they are looking for. The bank claims to ensure that the customer's choice of the bank will be guided among other things by its reliability and professionalism as the slogan states that "Our vision is to be the most preferred provider of financial service in Nepal."

The mission of Nepal Investment bank is to be the leading Nepali Bank, delivering world class service through the blending of state of the art technology and visionary management in partnership with competent and committed staff, to achieve sound financial health with sustainable value addition to all our stakeholders. We are committed to do this mission while ensuring the highest level of ethical standards, professional integrity, corporate governance and regulatory compliance. In 2003, 2005 & 2008, NIB has awarded for "Bank of the Year".

Its share capital distribution is as follows

Authorized Capital (40,000,000) shares @ Rs 100) Rs 4,000,000,000

Issued Capital (24,090,977 shares @ Rs 100) Rs 2,409,097,700

Paid up Capital (24,090,977 shares @ Rs 100) Rs 2,409,097,700

The main focus of NIB is to become most preferred provision of financial services. It is operating with a motto: "Truly a Nepali Bank". Mobile Recharging Facility Through ATM, Savings A/c in Re 1, Family Saving A/c, NTC- Recharge through internet (1st in Nepal) etc are some focuses of this bank.

1.2.3 Nepal Industrial and Commercial Bank Limited

Nepal Industrial & Commercial Bank Limited (NIC Bank) was established in 21st July 1998. NIC Bank had started its operation from Biratnagar. The Bank was

promoted by some of the prominent business houses of the country. The current shareholding pattern of the Bank constitutes of promoters holding 65% of the shares while 35% is held by general public. NIC Bank is one of the most widely-held Banking companies in Nepal, with over 32,000 shareholders. The shares of the Bank are actively traded in Nepal Stock Exchange with current market capitalization of about Rs. 10,699 million. Having crossed 10 years of commencing business, this bank has grown rapidly. The Bank now has a network of 24 branches across the country from the east to the far west including 9 branches in Kathmandu valley, and still planning to open new branches near future. All branches are connected through a V- Sat /Optical fibre network enabling real-time on-line connectivity.

This Bank is the first commercial bank in Nepal to be ISO 9001:2000 certified for QMS (Quality Management System). Furthermore, NIC Bank became the 1st bank in Nepal to be provided a line of credit by International Finance Corporation (IFC), an arm of World Bank Group under its Global Trade Finance program enabling our letters of credit to be accepted /confirmed by more than 200 banks worldwide. The bank has also been awarded the “Bank of the year 2007- Nepal” by the world renowned financial publication of The Financial Times,” U.K. -“The Banker.”

The Bank believes that this recognition in the market is a testimony for its success, robust growth and the transparency along with the professionalism it has consistently displayed in its business. It is run by professionals in Banking and believes in the highest standards of “Corporate governance”.

NIC Bank’s organizational structure is designed to support its business goals. And for the purpose, organizational structure is divided into five major areas:

1. Consumer Banking
2. Business Banking
3. Risk Management

4. Treasury

5. Liabilities Marketing and Transaction Banking.

The vision of NIC is to become one of the most respectable banks in Nepal based on honorable conduct and long term financial performance. The mission of NIC is to become a leading bank in Nepal by providing complete financial solutions to the costumers, superior value to the shareholders and promising growth opportunities to the employees working in the NIC chain branches throughout the country.

Its share capital distribution is as follows

Authorized Capital (16,000,000 shares @ Rs 100) Rs 1,600,000,000

Issued Capital (11,404,800 shares@ Rs 100) Rs 1,140,480,000

Paid up Capital (11,404,800 shares @ Rs 100) Rs 1,140,480,000

The Bank is committed towards providing financial services to its patrons by the means of efficient and cost effective service delivery through its Transaction Banking, Consumer Banking, Business Banking and Treasury divisions. Consumer Banking comprises of consumer lending, retail credit products and banking services for individuals with dedicated teams. Consumer Banking services include home loans, auto loans, personal loans, education loans, travel loans, etc. Liability Marketing & Transaction Banking comprises of institutional and personal deposit products and transaction banking services including debit cards, ATMs, safe deposit lockers, payment services, drafts, remittance, SMS Banking, Travelers' Cheques, etc.

1.3 Statement of Problem

Financial Performance Analysis or Financial Management is the main indicator of the success or failure of any financial institution and commercial banks. Financial condition of the business firm should be sound from the viewpoint of shareholders, debenture holders, financial institution and nation as a whole. The

survival of the existing commercial bank and other financial institutions depend upon how they manage their assets and liabilities to maximize their profits with the minimum exposure of assets to risk, and are guided by three important conflicting criteria of solvency, liquidity and profitability. Commercial banks deal with other people's deposits, adequate cash flow, liquidity, and better utilization of assets.

Joint venture Banks and Nepalese Promoters bank are being increased in response to the economic liberalization policies of government. Besides joint venture banks, Nepalese promoters are also registering numbers of commercial banks. Other institutes offering similar services are finance company, saving & co-operative societies and development banks. These institutions have the tendency to centralize in major cities focusing the activities among the industrialists, traders & entrepreneurs. Because of number of banks & financial institutions are come into existence, in the recent years that creates intense competition in the banking sectors. Banks have been facing the considerable pressure to lower the lending rates, which has been adversely affecting the profitability of banks. The commercial banks are competing with limited opportunity, narrow clientele base and barring investment in the economic activities in the country, the demand for credit has not picked up. Besides, competition in the banking sectors has turned intense and lending opportunity in the good projects is very limited. Government policies on economic liberalization have further intensified the competition. Every banks shows their huge amount of profit & high technology, however, the profit is not the instrument to measure good health of that institution. There should also be the proper examination of their performance in term of overall management of the banks. Financial plans may take many forms, but any good plan must be related to the firms exciting strength & weakness. The strength must be understood if they are to be used to proper advantage & the weakness must be recognized if effective action is to be taken.

Saving mobilization and effective credit management system is must for economic development especially for a country like Nepal where the economic growth rate is very low. In this regard, the good banking system can play a vital role in accelerating the pace of economic development through the mobilization of scattered savings and channeling it in the productive sector of the economy. The adaptation of open and free market economic and financial policies is believed to generate more savings as well as improve investment opportunities. Adequate infrastructure development in saving mobilization and investment is therefore the demand of the day. Therefore the bank can contribute a lot by savings and investing it in the productive and development sector of the economy of Nepal through bringing in appropriate and new innovative banking technologies. Keeping in pace with the development in the banking industry, the leading commercial banks NABIL, NIB & NIC have been regularly coming up with new and innovative service to attract customers as well as doing its level best to satisfy the existing customers. They have been able to maintain the position as the market leaders in the banking industry. In compare to other commercial banks, they are getting success in terms of recognize and profitability.

Nepal has become 147th member of World Trade Organization (WTO). In general, there is much curiosity in people about the opportunities and threats after the accession of membership of WTO. Many questions may arise at once. It is crystal clear that Nepal as to face various challenges in different aspects in coming days. Liberalization in services sector is inevitable. We cannot escape from the ground reality of globalization, widespread acceptance of WTO and necessity of membership in this international trade institution. It should not be opposed to hide our inefficiencies or governance problems. Rather it is right time to find out the impacts, continue and finish the reform process making the service sector really competitive. Otherwise, we will lose the opportunities. Transparency and disclosure practices are must for the sustainable liberalization process and for the

growth and development of financial services sector especially commercial banks. In short, SWOT analysis is necessary in this sector.

There are altogether 27 commercial banks among them two banks are state owned and remaining 24 are in private sectors. Recently others new banks are in pipeline to operate in the country like Janata Bank, Mega Bank, Century Bank etc. They had used customers' oriented marketing concepts as well as modern technology as required by the present competitive environments. The problem of the study on the issues related to the comparative strength & weakness of Nabil Bank Ltd, NIB & NIC Bank Ltd. Thus, this study is strived to find the answer of the following question:

- What is the comparative position of three Banks in term of liquidity, profitability, turnover, leverage and capital adequacy?
- Is there any difference in financial performance between these three banks?
- What is the relation between the major financial indicators and the future trend of them in three banks?
- How sound the operational result in relation their profitability?
- What was all the overall financial status of Nabil Bank, NIB & NIC Bank running their business?

1.4 Objectives of the study

The basic objectives of this study is to analyze, examine, compare and interpret the financial performance of Nabil Bank Ltd, Nepal Investment Bank Ltd & Nepal Industrial and Commercial Bank Ltd by using financial & statistical tools, and to recommend the suitable suggestion for improvement of those banks to management team owners.

Besides this, the following objectives of the study have enlightened the progress and efficiency of the bank:

- To determine the liquidity, profitability, leverage, efficiency of capital adequacy position of Nabil Bank, NIB & NIC Bank.
- To analyze the comparative financial position of these three banks.
- To examine the trend of financial performance of three banks.
- To explore the relationship of financial performance of three commercial banks.

1.5 Limitations of the Study

The study has been conducted for the requirement of the master degree in business study and it has been limited in terms of period of study as well as source & nature of data. Every study has its own limitations. This study is also not an exception. Thus, the limitations of this study are:

- There are more than 27 commercial banks operating with in Nepal. Since the study deals with only three commercial banks namely Nabil Bank, NIB & NIC Bank. The conclusion drawn from the study may not applicable to other banks.
- The study covers the period of five years starting from FY 2004/05 to 2008/09 of three banks. Hence conclusions drawn are confined only the above period.
- The study is mainly focused on the financial performance of three banks among various commercial banks. It does not cover the other areas of the banks.
- Many financial & statistical tools are used to study the financial performance. But this study has used limited tools.
- The study is carried out on based of secondary data from the annual report of the banks. Similarly, the study focused on Balance Sheet & Profit And Loss A/C maintained by banks & published in annual reports.

1.6 Organization of the Study

The study has been divided into five sequential Chapters and at the end bibliography & appendices have been maintained. Chapter one deals with Introductory aspects like general background of the study, introduction of sampled banks, statement of problems, objective of study, and limitation of the study and organization of the study. The Second chapter presents the Review of Literature which contains conceptual review/ review of related books, journals & articles, and past research works. The third Chapter contains Research Methodology which includes research design, population & sample, nature & source of data, data processing procedure, tools & techniques for analysis, period covered and diagram & graphical representation. The fourth chapter deals with presentation, analysis and interpretation of data which attempt to analysis and evaluate the data with the help of analytical tools, i.e. ratio analysis, income and expenditure analysis, bankruptcy test, correlation analysis and trend analysis and interpretation of the results obtained. Finally, the fifth chapter contains summary, conclusion and recommendation which includes summary of whole study, main conclusion that flow from the study, and offers suggestions & recommendations for the improvement in future.

CHAPTER II

REVIEW OF LITERATURE

“Review of literature refers the survey of materials which means reviewing research studies or other relevant propositions in the related area of the study. So that all past studies, their conclusion and deficiencies may be known and the further research can be conducted. It is an integral and mandatory process in research work.” (Joshi P.R, 2003:107)

In other words, review of literature is finding the pertinent fact with the available literature in ones fields of research. The study of the material available on research topics is called review of literature. Review of literature not only provides solid information on the topic but also guides along the future stream of action. The textual constraints would help it to support area of research in order to explore the relevant and true facts for the reporting purpose.

The study aims to analyze and compare the financial performance of Nabil Bank, NIB & NIC Bank. For the purpose it needs to review of literatures on the concern area. There are several studies have been already done from which the researches can make clear ideas and concepts. What is other opinion and concepts? What is the outcome of others researches? What has done and written? These all and other related questions are reviewed in this chapter, which is the guideline and inputs of the study. This chapter has been organized into three headings i.e. conceptual framework, review of related articles and review of different masters’ theses.

2.1 Conceptual Framework (*Review of Books*)

The concept of derived from the review of text books have presented in this section. It gives an overview of the concept of joint venture banks and commercial bank. In addition, concept of financial analysis & its methods and steps have been

described in this section.

Banks are financial institutions play significant role in the development of country. Bank is an intermediary of lender and borrower. It collects funds from surplus unit of the society and provides to deficit unit. A bank is a business organization that receives and holds deposits of funds from others makes loans or intends credit and transfers fund by written orders of deposit. (Encyclopedia, 1984: Vol 3)

Traditionally, banks act as financial intermediaries to channel funds from surplus units to deficits units. Unlike other non-banking financial companies, commercial banks do not produce loans and financial innovations to facilitate trade transactions, because of especial role they play in the economy concerned authorities have regulate them. Analysis of banks' financial statement is different from threat of other companies due to especial nature of assets and liabilities.

2.1.1 Concept of Joint Venture Banks

Joint venture means two or more persons or parties or organization carried out their business or work for specific objectives. They use and do work by using each other's resources, technologies or services etc. Joint venture is a single deal, which is jointly undertaken by two or more person to fulfill their objectives such as profit or wealth maximization by optimum use of resources etc. It takes place at that time when they have exceptional profit or advantages in relation to business deal.

Joint venture is a general model for direct foreign investment. A joint venture bank is the joining of forces between for the purpose of carrying out a specific operation (Gupta D.P., 1984:15). Joint venture is a new organization two or more independent firms mutually decide to participate in a business by contribution their resources, capital establishes.

Their objectives is fulfilling the shortage of funds required to investment in development works and to make competence in the field of resources, they share

new methods, new technology and services of management and get advantages from foreign investors.

To establish a new bank requires capital, technology, experience and new market etc. For the purpose, a new bank and an established bank enters into technical services agreement in which old bank provides channel of global network disputes its experts to help the new bank in technical aspects. Sometimes old bank provides management services and investment also.

The joint venture banks are playing, increasing dynamic and vital role in the economic development of the country that will undoubtedly increase with time.

2.1.2 Concept of Commercial Banks

Commercial banks are those financial institutions that accept the deposit from saver and provide short term and long-term loan to productive sector or different forms. They purchase and discount the bills for exchange, promissory notes, exchange foreign currency, issue bank guarantee, bills of exchange, sales and purchase of shares etc. Commercial bank obtain deposit from the customers as saving and distributes it to trade industry and agriculture a need of short-term finance. Principally commercial banks accept deposits and provide loans, primary to business firms, there by facilitating the transfer of funds in the economy.

Commercial bank is a corporation, which accepts demand deposits subjects to check and make short-term loan to business entreaties regardless of the scope of its other services (American Institute of Banking , 1972:45).

Unlike the past where major activities of banks were confined to accepting deposits and providing loans banks today offers a wide range of products and services to its clients like trade finance, remittances, and export credit, tele-banking, ATM debit card, Credit card etc. Banks have made significant stride in the use of modern technology to provide improved services to its clients.

Highly qualified, experienced and energetic management team manages banking operations including day-to-day operations and risk management.

Main function of commercial bank is accepting deposit and provides loan or formation of capital, collection of small savings. Vaidya (1999) says the functions of commercial banks are: credit creation, accepting deposits and advancing loans, promoting foreign trade, safeguarding valuables, agency services.

2.1.3 Review of Policies Related to Commercial Banks

Nepal Rastra Bank is the apex authority responsible for financial stability of the country. NRB is authorized and also responsible for the supervision of commercial banks and similar financial institutions. For the establishment and operation of commercial banks, smoothly legal provisions for commercial banks at the country should be reviewed.

1) Review of Nepal Rastra Bank Act 2058

All the financial institutions undertaking banking activities are licensed and supervised by NRB. Among the financial intermediaries; commercial banks, development banks, finance companies, micro-finance development banks and other micro-finance institutions that are licensed to perform limited banking activities are under the supervision of NRB. To ensure that the overall financial system in the country is safe and sound and threats to financial stability are identified and reduced, NRB is currently using CAMELS based approach for supervision. Similarly, CAMELS based offsite surveillance with early warning measures are also adopted to meet the supervisory objectives. NRB is conducting risk assessment and risk reduction approaches to ensure financial stability. NRB is gradually moving towards risk-based approach for supervision. NRB has initiated the implementation of Basel II.

All these plans and programs are initiated by the NRB falls under the objectives of the Nepal Rastra bank Act, 2002. The act has specified the

objectives of NRB as: to formulate necessary monetary and foreign exchange policies in order to maintain the stability of price and balance of payment for sustainable development of economy, and manage it; to promote stability and liquidity required in banking and financial sector; to develop a secure, healthy and efficient system of payment; to regulate, inspect, supervise and monitor the banking and financial system; and to promote entire banking and financial system of Nepal and to enhance its public credibility.

NRB act, 2002, chapter-9 has specified the regulation, inspectors and supervisory role for the Nepal Rastra Bank. It consists that the commercial banks must obtain a license from NRB in order to conduct banking and financial transaction while issuing license the NRB may fix necessary terms and conditions. NRB's approval is required for commercial banks to accept deposits or giving credits.

In the regulatory part the NRB have full powers to regulate the functions and activities of commercial banks and financial institutions. For the purpose of the regulation the NRB may frame rules and bye-laws on the matters which the NRB deems appropriate and issue necessary order, directives and circular and it shall be the duty of the concerned commercial bank and financial institution to obey by such rules, bye-laws, order, directives and circular. The NRB can issue appropriate directives to commercial banks and require them to submit the following particulars: its balance sheet accounts, off balance sheet commitments, statements of income and expenditures and their ratio among accounts or items; prohibitions, restriction or conditions concerning specific types or forms of credit or investments, or of credit or investments, form of commitments of risk bearing nature which are not matching as to maturity of assets and liabilities and off-balance-sheet items, foreign currency, spot or advance, swap, option or similar instruments or access to the payments system through electronic or other means; other particulars and documents

prescribed by the NRB. In addition, NRB may issue necessary directives to commercial banks on the following subjects and require to submit particulars on the following subjects: books and accounts, profit and loss account, balance sheet and off-balance-sheet transaction and commitments, statements of income and expenses and their accounts ratio; prohibitions, restriction or conditions concerning specific types or forms of credit or investments, loan and investment in excess of the ceiling prescribed by the bank, risk bearing commitment, position of foreign exchange, payment and electronic payment and other process; other statement and documents prescribed by the NRB.

Moreover, the NRB have the following powers with regard to commercial banks and financial institutions:

- To enforce authority and responsibility granted under this Act any other Act enacted for licensing, supervising and regulating commercial banks and financial institutions and to revoke the license of commercial banks and financial institutions and to take over or to give in trusteeship the commercial banks or financial institutions which have been declared insolvent or are on the verge of insolvency;
- To investigate or inspect, or supervise or to cause to investigate, inspect or supervise by any official of the NRB or the person designated by the NRB the books and accounts, records, documents or register of commercial banks or financial institution has conducted business and transaction in accordance with the provision made under this Act or the rules, bye-laws framed there under and an order or directive issued there under;
- To give order to the member of the board of directors, official or employee of a commercial bank or financial institution to provide necessary information about the bank or institution in cases where it is necessary to inspect and supervise the transaction of such bank or financial institution.

The Nepal Rastra Bank act, 2002 has also given a power for Nepal Rastra Bank to control over commercial banks and financial institutions, when necessary. The NRB may take such commercial bank or financial under its control after suspending the board of directors of such commercial bank or financial institution where the bank is convinced that any commercial bank or financial institution has violated this Act or Rules and bye-laws framed there under or orders or directives issued there under or from the Bank's inspection and supervision report, any commercial bank or financial institution has failed to honor its liability or there are probability of such failure or it has been properly operated or has acted prejudicial to the interest of shareholders or depositors.

In addition, the Nepal Rastra Bank has also authority to declare problematic commercial bank and financial institution. NRB can declare any commercial bank or financial institution problematic by providing written notice to it when bank is convinced that the following conditions are prevailing in any commercial bank or financial institution on the basis of information received under section 86A or from the report of inspection and supervision conducted under section 84 or from any other means:

- In case of any action which is against the interest of the depositors, shareholders, creditors, or general public,
- In case of not fulfillment of any financial liabilities or not having probability to do that or not payment of due amount,
- In case of insolvency or going to fall under insolvency or facing material financial difficulties,
- In case of discredit or breach of this Act, prevailing law related to bank and financial institution, other prevailing law, terms of license or regulation, directives or order of bank,
- In case the license obtained on the basis of submitting false, fraudulent, wrong document or data,

- In case of unable to maintain the capital fund as per this Act, prevailing law related to bank and financial institution and directives issued by NRB at time to time,
- In case of the initiation of the process of liquidation or insolvency of any commercial bank or financial institution under the prevailing law,
- In case of undue delay in the process of voluntary liquidation,
- For the commercial bank or financial institution established with the joint venture of the foreign commercial bank or financial institution while such foreign commercial bank or financial institution is in insolvent or liquidator is appointed for the liquidation or the license of such commercial bank or financial institution is terminated under the provision of the law of respective country or transaction is banned either full or partial or in case of operation of banking transaction being involved with such commercial bank or financial institution, or
- If NRB is convinced that commercial bank or financial institution is unable to pay it's due or can make negative effect in its liability or duties, which it has to perform.

Moreover, the NRB can take action against problematic commercial bank or financial institution. Whatever may be mentioned in the Companies Act or other prevailing law, NRB can take any or all of the actions specified in section 47 against the commercial bank or financial institution, which is declared problematic under the provision of section 86B. Furthermore, for the problematic commercial banks, the act has provided NRB or the official appointed by NRB can use the reformative measures and rights; right for NRB for corrective action authority to application for the dissolution, authority to decrease of the capital of problematic commercial bank or financial institution, authority to transfer the assets and liabilities of the problematic commercial bank or financial institutions.

NRB has also authority to application for the dissolution in case NRB is convinced that any problematic commercial bank or financial institution even after the action under section 86C, reformative action under section 86E or corrective action under section 86F, such commercial bank or Financial institution is unable to discharge its liabilities or there is no possibility to operate in healthy way, can apply to the Appellate Court for the dissolution of such commercial bank or financial institution. However, there is a provision. However, the commercial banks and financial institutions have a right to appeal against the order of NRB, under the given conditions.

2) Review of NRB Directives

Among NRB directives to bank and financial institutions major directives are as follows:

The new licensing policy in place requires having paid-up capital of Rs.2 billion to open new commercial banks (Class A finance institutions). The concept of regional banks has been eliminated. Paid-up capital base for development banks and finance companies has also been raised. Such capital requirement for micro-finance companies to open, however, has not been changed with a view to encourage micro finance companies to expand. Minimum paid up capital requirement for new bank and financial institutions has been shown below:

Table 2.1: Minimum paid up Capital requirement

NRs in Million				
Grade	National Level	Regional * Level	4-10* District	1-3* District
A	2000	-	-	-
B	640	-	300 ^{a/}	300 ^{a/}
		-	200	100
C	300 ^{a/}	-	-	300 ^{a/}
	200	-	-	100
D ^{b/}	100	60 [#]	20 ^{c/}	10

* *Except Kathmandu valley*

According to the new licensing policy, providing proof of mandatory paid-up capital base by June/July 2010 is a pre-condition for those that have submitted proposals to open new finance institutions. In case of operating financial institutions, they are required to comply with this provision by June/July 2013. Provisions such as, individual intending to invest in these institutions requires producing proof of tax clearance, and they are not blacklisted by the Credit Information Center have also been made effective. Accordingly, the banks and finance institutions are required to maintain capital adequacy at 11.0 percent starting from FY 2005/06.

The licensed banks and financial institutions deal with the financial statement. Starting from FY 2005/06, they are required to open capital adjustment fund to meet mandatory minimum paid-up capital by allocating a minimum of 10 percent of paid-up capital from their profit. For financial institutions not earning profit, they are required to comply with this provision by managing resources from whatsoever sources at their disposal.

To open a new branch in the Kathmandu Valley is required to add Rs.20 million/branch and Rs.5 million/branch to open a branch outside the Valley. Furthermore, the directive include the provision of amount so required to be added not to be counted towards capital adjustment fund, amount so added is to be counted for branch opening purpose only after the paid-up capital reaches the minimum of Rs50 million, and that the inactive loan ratio to be maintained at less than 5 percent level.

Based on the aging of overdue loan of commercial banks, loan has been classified into four groups and according to loan classification, necessary provisions is required to maintain annually as in the following percentage.

Table 2.2: Loan Classifications and Provision for Doubtful Loan

Loan Classification	Basis of Classification	Provision required Percentage of the loan
Pass	No overdue and overdue by 3 months	1
Sub-standard	Above 3 months to 1 year overdue	25
Doubtful	Above 6 months to 1 year overdue	50
Loss	Overdue by above 1 year	100

Source: NRB Directives

3) Review of Bank and Financial Institution Act 2063

Bank and Financial Institution act, 2063, which is popularly known as Umbrella Act, has recently been enacted. The act governs the functional aspect of banks and financial institutions. Some of the important provisions in the act regarding the banking sector have been analyzed in this chapter as follows.

Any person wishing to incorporate a bank or financial institution to carry on financial transactions should incorporate a bank or financial institution as a registered public limited company under the prevailing law of Nepal with prior approval of NRB by fulfilling the conditions prescribed in section 4 of the act. The individual desiring for the incorporation of such entity is required to submit an application to NRB for prior approval with the prescribed documents. The NRB is required to conduct necessary examination and grant permission to establish a bank or financial institution with or without terms or conditions if all the criteria are met and information of disapproval with reason is also to be given to the concerned person in case the application is denied. Similarly, any foreign bank or financial institution wishing to establish a bank or financial institution by making joint venture investment with a corporate body incorporated in Nepal or with a Nepali citizen or as a subsidiary company with

100% share is eligible to furnish the application to establish a bank or financial institution.

However, the act is silent about the percentage of equity investment in joint venture; such foreign corporate body can invest. It has been regulated by regulation till now as 75%. The prohibits anybody to conduct financial transaction except an established bank or financial institution and no bank or financial institution can use the proposed name for the purpose of carrying financial transaction without obtaining license from NRB. The bank or financial institution desiring to conduct financial transaction must submit an application for license to the NRB in the prescribed form including the prescribed fees, documents and description. NRB will grant license if it is satisfied with the basic physical infrastructure of the bank or financial institution; if the issuance of license for operating financial transaction will promote healthy and competitive financial intermediary and protect the interest of the depositors, the applicant is competent to operate financial transaction in accordance with the provision of this and its regulation, directives, order or provisions of Memorandum and Article of Association and there are sufficient grounds to believe that the entity is competent to operate financial transaction.

NRB will classify the institutions into "A" "B" "C" "D" groups on the basis of the minimum paid-up capital and provide the suitable license to the bank or financial institution. The authorized, issued and paid up capital of a license holder institution will be as prescribed by NRB from time to time. NRB can issue directives to the license holder entity to increase its authorized, issued and paid-up capital if it deems necessary. Similarly, the license holder entity must maintain a capital fund according to ratio prescribed by NRB based on the basis of its total asset or risk weighted Assets, and other transactions. At the same time, the license holder entity must maintain a risk fund according to ratio prescribed by NRB based on the basis of liability relating to its total

asset and the other risk to be borne from of balance sheet transaction. The license holder entity must maintain general reserve fund regularly every year till the amount becomes double of the paid up capital of such entity. The bank or financial institution can be upgraded if the authorized capital is enough for upper class, the institution has been able to make profit for last five years and the non-performing asset is within the prescribed limit. Similarly, the bank or financial institution can be degraded if it fails to meet prescribed capital within the time period, it has been making loss for last five years, it has violated the directives of Rastra Bank time and again and it fails to maintain Risk Management Fund as prescribed by it. NRB will make necessary investigation and avail opportunity to clarify before taking such decisions. NRB is in full power to deny license for financial transaction if the conditions stipulated in are not met and it is also authorized to impose necessary conditions taking into account the existing financial position of the bank or financial institution, the interest of depositors and healthy operation of financial transaction. Similarly, it may increase, decrease or modify the terms and conditions time to time. NRB can suspend the license of the license holder for a specific period of time issued for the purpose of carrying financial activities or it may order the bank or financial institution to close the operation of their office partially or fully if such a license holder acts against the provisions of the Nepal Rastra Bank Act, 2002, or the regulation made there under or fails to act in accordance with the order or directives issued by it or fails to act for the welfare and in the interest of the depositors. The NRB may cancel the license issued under this to carry on the financial transactions of the license holder under the certain circumstances as stipulated in the act.

A foreign bank or financial institution desiring to open its office within Nepal must submit an application to NRB in the form as prescribed along with the fees and particulars as prescribed. NRB may issue a license to foreign bank or financial institution to carry on financial transaction by allowing them to

open a office within m of Nepal taking into account the situation of competition existing in the banking sector, the contribution that could be rendered in the Nepalese banking sector and the reputation of such foreign bank or financial institution. NRB may specify necessary terms and conditions in the course of granting transaction license and it shall be the duty of the foreign bank or financial institution to comply with such terms and conditions. The section 34(4) of the reiterates that the provisions of to be complied by such foreign bank or financial institution. The foreign bank or financial institution, which has been issued license to operate financial transaction by opening its office within the Kingdom of Nepal, can not open another bank or financial institution in joint venture within the Kingdom of Nepal. However, the provision for the contact or representative office of any foreign bank or financial institution will be as prescribed by NRB. Some of the important issues such as relationship with parent bank in case of liquidation and supervisory role of the different institutions (parent bank and parent bank's supervisory authority) have not been adequately addressed in this. Provisions relating to capital requirement are also silent. As per Nepal's commitments foreign bank branches are only allowed for wholesale banking functions. So all of the provisions stipulated in subsection (1) will not be relevant to the foreign bank branches. According to the, NRB has authority to make necessary regulation in this aspect.

4) Review of Company Act 2063

Commercial banks including JVBs in Nepal can be established only as a company with limited liability under the company act 2063. The provisions existed in the act regulate the commercial banks in all aspects. The section 3 of the act explains about establishment of company as follows:

- (a) Any person who wants to undertake any enterprise with the motive of earning profits may establish a company with one or more objectives as

mentioned in the memorandum of association, personally or along with others.

(b) Any foreigner who has obtained permission according to current law to undertake any enterprise with the motive of earning profits by making investment within Nepal may also establish a company as mentioned in sub section (1).

(c) There must be at least seven promoters for the establishment of public company.

The commercial banks have to register in company's registrar office as per the section (4) of the act. If promoters are Nepali they have to submit citizenship, for company; certificate of registration and for foreigner; produce their proof of citizenship be acquainted with country from where they are. Application should submit to registrar's office enclosing proposed company's memorandum, by laws, and agreement of promoters if they have done for public company.

2.1.4 Concept of Financial Performance

Financial analysis is concerned with analyzing the financial statement of an organization in difference aspect. The term indicates the real picture of an organization by interpreting financial ratios and analysis, which enables to evaluate and disclose the conditions of an organization. Every stakeholder such as share holders, Trade creditors, long term investors or debtor, customers, employees, tax authorities, managements etc. wants to know about the position or condition of an organization before or after their involvement to the organization. By financial statement analysis they are able to take corrective actions to introduce new policies or to correct their old policies, to know about their strength weakness etc. By analyzing financial statements someone can predict or know the financial performance of that organization.

“Financial performance as a part of financial management is the main

indicator of the success or failure of the enterprises. Financial performance analysis can be considered as a heart of the financial decisions (Clark John, Chicago).”

“Financial analysis is the process of determining financial strength and weakness of a company by establishing strategic relationship between the components of a balance sheet and other operative data (Pandey I.M., 1993:94).” Therefore, the analysis of financial statement consists of a study of relationship and trends to determine whether or not the financial position and results operations and financial progress of the company are satisfactory.

“It is the process of determining the significant operating and financial statements. The goal of such analysis is to determine the efficiency and performance of the firm’s management reflected in the financial records and reports (Hampton, J.J. (1998:98).”

“Financial statement analysis involves a comparison of a firm’s performance with that of other firms in the same line of business which often is identified by the firm’s industry classification. Generally speaking the analysis is used to determine the firm’s financial position in order to identify its current strengths and weakness and to suggest actions that might enable the firm to take advantage of the strengths and correct its weakness (Weston J.F. Besley S. and Bringham, (1996:78).”

The main function of financial strength and weakness of a business undertaking by regrouping and analysis of figures contained in financial statements by making comparison of various components and by examining their content. This can be used to financial managers as basic to plan future financial requirements by means of forecasting and budgeting procedures.

2.1.4.1 Method of Financial Performance Analysis

An enterprise communicates financial information to users through financial statement and reports. Financial statements are summarized information of the firm's financial affairs, organized systematically. They are the means to present the firm's financial situation to owners, creditors and general public. The preparation of financial statement is the responsibility of top management. As investor and financial analysis to examine the firm's performance in use these statement under to make investment decisions. So concern authority should be prepared very carefully and contain as much as information as possible. The two basic financial statements are prepared for the purpose of external reporting to owner, investor and creditors are:

1. Balance Sheet (*or Statement of Financial Position*)
2. Profit and Loss Account (*or, Income Statement*)

For internal management purpose i.e. for the planning and controlling much information than contained in published financial statement is needed. The accountant or account officer prepares these financial statements at the end of firm's income year. Balance sheet and income statement undoubtedly provides useful financial data regarding the operation of an enterprise but they fail to present all the useful financial data required for major investing and financial decision by the management. Therefore, another financial statement fund flow statement is also in use. It summarized the source from which funds have been applied. It is prepared to show additional useful information not covered by the traditional statements.

2.1.4.2 Tools & Techniques of Financial Performance Analysis

To evaluate the financial condition & performance of a company, the financial analyst needs certain yardsticks. The yardstick frequently used is a ratio or index relating two pieces of financial data to each other. Analysis & interpretation of

various ratios should give experienced and skilled analyst a better understanding of the financial condition & performance of the firm, than they will obtain from analysis of the financial data alone (Vanhorn, J.C., 1999: 691-692). The techniques of analysis are employed to ascertain or measure the relationship among the financial statement items of a single set of statement and changes that have taken place in these items as reflected in successive financial statement. The fundament of the analytical technique is to simplify or reduce the data under review to the understandable terms. Out of the various techniques, selection of a technique or combination of the techniques depends on the purpose of analysis. Different techniques reveal different facts associated with the business, so some or all of the following major techniques can be used for the analysis depending on the purpose and availability of the materials demanded by the technique.

1) Funds Flow Analysis

The statements of the changes in financial position prepared to determine only the sources and uses of fund between two dates of balance sheets is known as funds flow statement. It is prepared to uncover the information that financial statement fail to describe clearly. It spells out the sources from which funds were derived and uses to which these funds were put. This statement is prepared to summarize the changes in assets & liabilities resulting from financial and investment transactions during the period as well as those changes occurred due to change in owner's equity. It is also aimed to depict the way in which the firm used its financial resources during the period. Method of preparing Funds flow statement depends essentially upon the sense in which the term 'fund' is used. There are concepts of fund: cash concept, total resources concept & working capital concept. According to cash concept, the word 'fund' is synonymous with cash. Total resources concept represents the total assets and resources as fund. The term 'fund' refers only to working capital on working capital concept. However, the concept of fund as working capital has gained wide acceptance as compared to

other concepts. Therefore, any transaction that increases the amount of working capital is taken as source of fund while conducting funds flow analysis.

Transaction that decreases working capital is treated as application. But any transaction that affects current liabilities or current assets without any change in working capital is not taken as source or use. The utility of this technique stems from the fact that it enables shareholders, creditors and other interested persons to evaluate the use of funds. It also enables them to determine how these uses were financed. In the light of information so supplied by statement, the outsider can decide whether or not to invest in the enterprise. It enables finance manager to detect the imbalances in the use of funds and undertaken remedial actions. It serves as control device to measure the deviation between actual use of fund and the estimated budget. An analyst can evaluate the financed pattern of concern (What portion of the growth was financed internally and what portion externally). In spite of the great significance of funds flow analysis to various parties associated with the business, it is not free from drawbacks. Its shortcomings can be listed as:

- This is not full proof as it depends on conventional financial statements.
- It cannot introduce any new items, which causes changes in financial status of the business.
- It is not much relevant technique as study of change in cash position is more useful rather than fund position.
- It is historical in nature, so, cannot estimate source and application of fund in near future.
- It does not reflect the structure and policy changes.

2) Cash Flow Analysis

This statement is prepared to know clearly the various items of inflow and outflow of cash. Cash flow analysis is different from funds flow analysis in the sense, the

analysis relates to the movement of cash rather than the inflow and outflow of working capital.

It summarizes the causes of change in cash position between dates of two balance sheets. While preparing cash flow statement, only cash receipts from debtor against credit sales are recognized as the source of cash. Similarly, cash purchases and cash payment to suppliers for credit purpose is regarded as the use of cash. The same holds true for expenses and incomes outstanding and prepaid expenses are not to be considered under this analysis.

This type of analysis is useful for short-run planning of firm. The firm needs sufficient cash to pay debt maturing in near future, to pay interest and other expenses and to pay dividend to shareholders. The projection of cash flow for near future can be made to determine the availability of cash. This cash balance can be matched with the firm's need for cash during the period and accordingly, arrangement can be made to meet the deficit or invest the surplus cash temporarily.

Though it is more confidential than funds flow analysis for the decisions related to the near future, it is also not free from drawbacks. Its drawbacks can be listed as:

- It is not perfect evident as it depends on conventional statements.
- It is historical in nature.
- It does not reflect structural and policy changes.

3) Trend Analysis

In finance analysis the direction of change over a period of years is crucial importance. Trend analysis of the ratio indicates the direction of change. The kind of analysis is particularly applicable to the items of profit and loss account. It is advisable that trend of sale and net income may be studied in the light of two factors. The rate of fixed companion secular trend in the growth of business and general price level; it might be found in practice that a number of firms would show a persistence growth over a period of years. But get a true trend of growth;

sales figure should be adjusted by suitable index of general prices. In other words, sales figures should be deflected for raising price level, which the resulting figures are, graphed us will get a trend of growth devoid a price change. Another method of securing trend of growth and one which can use instead of the adjusted sales figures or as check on them is to tabulated and plot the output or physical volume of sale expressed in suitable units of measure. If the general price level is not considered while analyzing trend of growth, it can mislead management. They may because unduly optimistic period of prosperity and pessimistic in dull period. This method is immensely helpful in making comparatively study of financial statements of several years. This method of analysis involves the computation of percentage relationship that each statement item bears to the same item in the base year. Base year for the purpose of comparison may be earliest year, the latest year or any intervening year under the study. This exhibits the direction to which the concern is proceeding.

Trend analysis facilities the horizontal study of the data. But trend ratios are generally not computed for all of items in the statement, as the fundamental objective is to make comparison between items having same logical relationship to one another. Trend analyst reveals whether the current financial position of the company has improved over the past years or not. It shows which of the items have moved in a favorable direction and which of them in unfavorable direction. Though it is the important tool of analysis, it is bound by certain limitation. They are:

- Trend for a single balance sheet or income statement is seldom very informative.
- It does not give accurate result if accounting principles followed by the accountants is not consistent over the period of study.
- Price level change adversely affects the comparison.

- Selected base year for some of the items in the statement may not be typical.

4) Ratio Analysis

An arithmetic relationship between two figures is known as ratio. Two number used in the ratio are called the term of ratio. The first term is the antecedent and is the divided; the second is the second is the consequent and is the divider. Ratio is computed by dividing one item of relationship with the other. Ratio simply means the relation of one quantity to another of the same kind is defined to be that pure (abstract) number, integral, or fractional, which express the number of times the later is contained in the former. Ratio analysis is a technique of analysis and interpretation of financial statement to evaluate the performance of an organization by creating ratios from the figure of different accounts consisting in balance sheet and income statement (P/L Account) is known as ratio analysis (Pandey, I.M, 1994:436-437). Financial ratios are the basic tools of financial analysis. The operational and financial problem of a corporation can be ascertained by examining the behavior of these ratios. In financial analysis a ratio is used as an index or yardstick for evaluating the financial position and performance of an enterprise. A financial ratio is a relationship between two financial variables and a process of identifying the financial strength and weakness of an enterprise. The liquidity ratio measures the corporations overall efficiency of operation. Similarly, leverage ratio measures the extent to which the corporation has been finance by debt, and turnover ratios measure the utilization of the corporation's resources. These financial ratios help us to find symptoms of problems. The cause of any problem may be determined only after locating the symptoms. Hence, the study of financial ratios behavior of the corporations assumes great significant. Ratio Analysis is carried out to develop meaning relationship between individual items or group of items usually shown in the periodical financial statements. An accounting ratio shows the relationship between the two inter-related accounting

figures. Ratios are guides or shortcuts that are useful in evaluating the financial position and operations of a company. When the relationship between two figures in the balance sheet is established, the ratio so calculated is called 'balance sheet ratio'. Ratio may be expressed in the form of quotient, percentage or proportion. Ratio analysis involves two types of comparison for the useful interpretation of the financial statement. A ratio itself does not indicate the favorable or unfavorable position. Most commonly used standards to evaluate the ratio are:

- Comparison of present ratio with past or expected future ratio.
- Comparison of the ratio of the firm with those of similar firms over the period of time or with industry average at the same point of time.

With the help of ratio, one can judge financial performance of a business concern over a period of time and against the industry average. The ratio helps the analyst to form the judgment whether the performance of firm is good, questionable or poor. Management of the firm can take strategic decisions on the basis of position revealed by ratio. Investors can decide about the future of their investment. Creditors judge whether the firm is able to meet its obligations and whether the more lending would be beneficial for them or not.

In view of the requirement of the various users of ratios, they can be classified into four major categories. They are: - liquidity ratio, leverage ratio, activity ratio and profitability ratio.

Liquidity ratio measures the ability of firm to meet its current obligations. Leverage ratio evaluates the long-term financial position of the firm. Activity ratios are employed to evaluate the efficiency with which the firm manages and utilizes its assets. Finally, profitability ratios are calculated to measure the operating efficiency of the company.

Through ratio analysis is powerful technique of financial analysis; it should be used with extreme care and considered judgment because it suffers from certain drawbacks. The drawbacks of the ratio analysis are listed below:

- It is difficult to decide the proper basis of comparison.
- It calls interpretation to certain aspects of the business, which needs detailed investigation before arriving at any final conclusion.
- Unless there is a consistency in adoption of accounting methods, ratios may not prove of greater use in case of inter-firm comparison.
- The price level changes make the interpretation of ratios invalid.
- The ratios are generally calculated from past financial statements and thus, are no indicators of future.

Ratio Analysis & Its Classification

In general ratio may be classified on the following base leading to somewhat overlapping categories (Pandey, I.M, 1994: 502-503).

A) Traditional Classification

It is classification according to the statement from which ratios are derived. By for the most convenient mode of classification, it has the sanctity of tradition in much as since the advent of ratio analysis. Ratio has grouped in this manner from this angle ratios are classified as:

- Balance sheet ratios or financial ratios: - These ratios deal with relationship between two items or groups of items, which are together to the balance sheet e.g. debt equity ratio.
- Revenue statement ratio: These ratio sometimes also referred as operating ratio establish the relationship between two items or group, which are in the revenue statement e.g. stock turnover ratios.
- Inter statement ratio or combine ratio: - These ratio portray the relationship between items of one of which part of balance sheet and profit & loss account (income statement).

B) Functional Classification

Ratios are grouped in accordance with certain test which they are intended to sub-serve from the point of view of varies parties having a financial interest in an enterprise test are:

- Test of liquidity
- Test of profitability
- Market test etc.

C) Classification According to Nature

These ratios are classified from the point of view of financial management. They are:

- Liquidity Ratio
- Activity Ratio
- Leverage Ratio
- Profitability Ratio

2.1.4.3 Limitations of Financial Performance Analysis

From the above discussion, it has been evident that financial performance analysis of great significance for investor, creditors, management, economist and other parties having interest in business. It helps management to evaluate its efficiency in past performance and take decisions relating to future. However, it is not free from drawbacks. Its limitations are listed below (Jain, S.P, and Narang K.L, 1989:B23-B25):

a) Historical Nature of Financial Statements: - The basic nature of statements is historical. Past can never be a precise and infallible index of the future and can never be perfectly helpful for the future forecast and planning.

b) No Substitute for Judgment:- Analysis of financial analysis is a tool to be used by expert analyst to evaluate the financial performance of a firm. That's why; it may lead to faulty conclusion if used by unskilled analyst.

c) Reliability of Figures:- Reliability of analysis depends on reliability of figures of the financial statements under scrutiny. The entire working of analysis will be vitiated by manipulation in the income statement, window dressing in the balance sheet, questionable procedures adopted by the accountant for the valuation of fixed assets and such other facts.

d) Single year Analysis is not much valuable: - The analysis of these statements relating to single year only will have limited use and value. From this, one cannot draw meaningful conclusion.

e) Result may have different Interpretation: - Different users may differently interpret the result derived from the analysis. For example, a high current ratio may suit the banker but it may be the index of sufficiency of the management due to under-utilization of fund.

f) Changes in Accounting Methods: - Analysis will be effective if the figures derived from the financial statements are comparable. Due to change in accounting methods, the figures of current period may have no comparable base, and then the whole exercise of analysis will become futile.

g) Pitfall in inter-firm Comparison: - When different firms are adopting different procedures, records, objectives, policies and different items under similar heading, comparison will be more difficult. If done, it will not provide reliable basis to assess the performance, efficiency, profitability and financial condition of firm as compared to whole industry.

h) Price level change reduces the validity of analysis: - The continuous and rapid changes in value of money, in the present day, economically also reduces the validity of the analysis. Acquisition of assets at different levels of prices makes comparison useless as no meaningful conclusion can be drawn from a comparative analysis of such items relating to several accounting period.

2.2 Review of Related Articles

Some of the journals and articles published by management experts in financial aspects have been reviewed in this section:

Mr. N.P. Poudel, in the journal entitled, "Financial statement Analysis: An Approach to Evaluate bank's Performance" which was published NRB Samachar (An annual publication-2053) is reviews as follows:

According to Mr. Poudel, Balance sheet, profit and loss a/c and the accompanying notes are the most useful aspects of the banks. It needs to understand the major characteristics of bank's balance sheet and profit and loss a/c. The bank's balance sheet is composed of financial claims as liabilities in the form of deposits and as assets in the form of loans. Fixed assets accounts form a small portion of the total assets. Financial innovations, which are generally contingent in nature, are considered as off-balance sheet item.

According to Mr. Poudel the principle objectives of analyzing financial statement are to identify: Liquidity, Profitability and solvency. Most of users of the financial statements are interest in assessing the bank's overall performance which is affected by the following factors:

- The structure of Balance sheet and profit and Loss account
- Operating efficiency and internal management system

- Managerial decision taken by top management regarding interest rate, exchange rate, lending policies etc.
- Environmental changes (Technology, Government, Competition and economy).

The other factors to be considered in analyzing the financial statement of bank are to assess the capital adequacy ratio and liquidity position. In the line of adequacy of bank is assessed on the basis of risk weighted assets. It indicates a bank's strength and solvency. Bank facing with capital adequacy problem may increase capital or reduce assets or reallocate the existing assets structure in order to maintain the desired level of capital base.

Govinda Bahadur Thapa in his articles "Nepal banking system: can on the mess be managed" stated that the joint venture banks have been earning a huge profit not from fund based lending but from investing outwards. That is why, these banks have been less interested to lending aggressively in the domestic market. Economic activities have slowed down in Nepal for several years; however commercial banks have not lowered their lending rate to revitalize the economy. On the contrary, the commercial banks have been discouraging the deposit to get rid of excess liquidity. And new avenue that is investing abroad has been opened for the commercial banks to earn profit rather than motivating them to invest locally.

The above journals & articles focus in the various aspects of the bank's economic environment. What ever aspects of the bank the above journals target, they all have to be combinable assessed and kept in strict consideration for effective & efficient financial performance of the banks in the Nepalese economy.

2.3 Review of Previous Thesis

Various studies have been conducted on the financial performance of

commercial banks of Nepal. Many of them are concentrated to Nepalese commercial banks and only few are focused on joint venture bank especially comparative studies. In this chapter, different previous studies have been reviewed so that the chances of duplication will be avoided from the present study and some newness can be created in this field of study.

Mr. Ishwori Prasad Panta (2005) had conducted a study on a topic "*A comparative study of Everest bank Ltd. and Nepal Industrial & Commercial Bank Ltd.*" He had mainly focused on his study in comparing and analyzing liquidity, profitability, solvency and activity ratio analysis as well as so other major ratio a\such as weighted avg. interest rate spread Fx-fluctuation gain to total income ratio etc.

The major objectives of his study are

- To find the bank deposits mobilization and investment
- To examine the liquidity, profitability, solvency and activity ratio analysis of EBL & NIC
- To examine the strength and weakness
- To evaluate performance of EBL & NIC.

Time period covered by it was six years data from FY 1998/99 to 2003/04. Necessary data and other information have been collected from the secondary sources of data. In this study, Mr. Panta had pointed out various remarkable findings were:

- CRR of the banks were maintained as per the directives of NRB.
- Both banks had maintained NRB balance to deposits ratio remarkable higher than the standard prescribed by the NRB.
- Both banks were maintaining lower capital adequacy ratio. The total assets, net worth to total deposit and not worth to total credit seemed less satisfactory.

- They should encourage to small, medium a large-scale organization to avail their services.
- Both banks were suggested to review their overall structure and investment portfolio to make better mix in capital structure as well as investment portfolio.

Mr. Manandhar (2005) conducted a dissertation on a topic “*Financial performance analysis of Nepal Bangladesh bank Ltd*”. In this study, various financial research and statistical tools have been used to achieve the objective of the study. The analysis of data will be done according to the pattern of data available. Likewise, some financial tools such as ratio analysis and trend analysis have been also been used for financial analysis.

The specific objectives of his research are:

- To analyze the functions, objectives procedure and activities of the NBBL.
- To analyze the lending practices and resources utilizations of NBBL.
- To determine the impact of growth in deposit on liquidity and lending practices.
- To examine the lending efficiency and its contribution to profit.
- To make suitable suggestions based on the findings of this study, The financial and statistical tools are used.

It found that NBBL has sufficient liquidity. It shows that bank has not got investment sectors to utilize their liquid money. So, the study has the following findings:

- NBBL has utilized most funds in the form of credit and advances. More than 75% of total deposits of the bank have been forwarded to customers as a credit and advances.
- The major part of utilizing deposits and income generating sectors. If the bank has high deposits, bank can provide money to its customers as credit

and advances. Therefore, there is highly positive correlation between total deposits and credit and advances of NBBL.

- Bank is providing different schemes to attract good customers. After attracting deposits from the customers, bank has issued the deposits to the needy area to make for the profit.

The recommendations of this study are:

- The bank has enough liquated but enables to invest the liquidity in proper sector so it is recommended that the bank should made proper investment to commercial sector.
- The bank providing different schemes to attract good customer and has issued the deposit to the needy area to make profit for the bank.

Mr. Gautam (2006) has conducted a study on “*Comparative study on financial performance of Standard Chartered Bank Limited and Nepal Bangladesh Bank Limited*”. The financial performance is analyzed with two important tools. The first most important tools are the financial tools, which includes ratio analysis and other is a statistical tools, which is bankruptcy score.

The objectives of his study are:

- To study the existing capital structure of financial position of selected joint venture commercial banks and to analyze its impact on the profitability.
- To access the debt serving of the joint venture commercial bank.
- To examine the correlation and the signification of their relationship between different ratios related to capital structure.
- To provide suggestions and the recommendations for the optimal capital structure of the joint venture commercial bank.
- To obtain the objectives, some financial, statistical and accounting tools.

He has found his study were the joint venture banks are operating in Nepal as commercial merchant banks. The growth is still going on as so many new banks

are coming into existence after this study. However, this study has been undertaking SCBNL and NBBL to examine and evaluation the financial data. In this study, the following are the findings of his study:

- The study sample JVB's have used high percentage of total debt in raising the assets. The higher ratio constitutes that the outsider's claims in total assets of the bank is owner's claim.
- On an average, NBBL bank constitutes 16.27 times of P/E ratio, which should be reduced as quickly as possible.
- The financial risk of the banks NBBL average degree of finance leverage constitute 3.73 times which indicates the higher degree of financial risks 3.73 times which indicates the higher degree of financial risks.
- The average ROE of JVB's i.e. SCBNL and NBBL area 37.63% & 21.75% respectively.

Now, in Nepal many banks and other financial institution are functioning to collect deposits and invest money somewhere in the investable sectors. So, the recommendations of his study are:

- The bank use high percentage of debt which indicates that it has highly financial risk. It is recommended that the bank immediately control the financial risk.
- P.E ratio of NBBL is 16.27 times. It is too high, so the bank reduces the position.
- Nepal is underdeveloped country; almost banks are established and operated in urban area. So, it is recommended that the bank should open its branch different parts of the country.

Mr. Bobby K.C (2007) has conducted a thesis on a topic "*Comparative Financial Performance Analysis of Everest Bank Limited and Bank of Kathmandu*". He has mainly focused his study on comparing & analyzing liquidity, profitability,

solvency and activity ratio analysis as well as reviewing the government policies related to banking industry of Nepal. The main objectives of his study are:

- To compare the financial ratios of sampled banks in terms of liquidity, capital adequacy, capital structure, activity and profitability.
- To evaluate the trends of growth of in total deposit, loan and advances & net profit.
- To examine the relationship between key financial variables such as total deposit and net profit, total deposit and total investment & net worth and net profit of the sampled banks.
- To review the government policies related to banking industry of Nepal.

Time period covered by it was five years data from 2001/02 to 2005/2006. Necessary data and other information have been collected from the secondary sources of data. In this study, Mr. Booby had pointed out various remarkable findings were:

- The cash reserve ratio of the banks was maintained as per the directives of NRB. So, BOK is utilizing its liquid assets better than EBL.
- EBL has maintained liquidity as per financial standard than BOK. So, BOK has poor in the liquidity.
- EBL & BOK appeared highly levered and capital structure of EBL is a little riskier than BOK.
- Earning generating capacity of EBL's assets is far better than BOK. Management of EBL is successful to utilize their resources efficiently and effectively.

The recommendations of this study are:

- EBL has maintained liquidity as per financial standard but BOK is not able to meet the standard. So EBL can be recommended to utilize the excess amount of current assets on secured and highly liquidity investment and BOK is to increase the liquidity capacity to meet immediate and short term

obligations.

- Capital structures of booth banks are highly levered so it is recommended to introduce new products with high quality services, adopt new technology, made adjustment interest rate as per situation.
- To meet their objectives and goals it is recommended to open new branches at new potential urban areas to collect more deposit and to increase investment as well as shareholder's wealth.

Mr. Madhav Prasad Kuikel (2008) conducted a thesis on a topic "*Financial Performance of Leading Commercial Banks in Nepal*". He attempt to analysis the financial performance with the help of financial analysis such as liquidity, leverage, activity, profitability & solvency ratio of SCBNL, Nabil, HBL and EBL.

The main objectives of his study are as follows:

- To measure liquidity, leverage, activity, profitability ratio and ownership/solvency ratios of SCBNL, NABIL, HBL and EBL.
- To analyze and compare the position of NPA.
- To analyze the comparative financial position of SCBNL, NABIL, HBL and EBL.
- To examine whether these commercial banks are following NRB directives or not.

Mr. Madhav comes out with some valuable findings which are as follows:

- Regarding the liquidity management, all the banks are in better position except EBL. EBL was unable to maintain the liquidity (CRR) as per the directives of central bank (NRB). It obviously strikes that EBL was failure to meet short-term obligations.
- SCBNL is successful on maintaining capital adequacy ratio as per the directives of central bank. However, Nabil, HBL and EBL had not

significant differences as per the directives should be maintained. HBL had least ratio.

- The analysis of P/E ratio indicates all banks SCBNL, Nabil, HBL and EBL had getting more competitive value. This shows they all had better P/E ratio. Among them, HBL is the highest.
- The analysis of NPA indicates that EBL, Nabil and SCBNL had comparatively lower average of such ratio. HBL had comparatively high average. EBL has lowest and is more consistent in NPA; which indicates its sound lending & recovery policy.

Mr. Madhav has recommended some measure on the basis of his studies. His major recommendations were:

- For strengthening the liquidity position; EBL is strongly recommended to maintain CRR as per the directives of central bank.
- He has suggested improving the credit collection performance and maintaining an adequate bad debt provision.
- Except SCBNL and Nabil; he recommended to HBL & EBL to maintain Capital Adequacy ratio as per the directives of central bank. EBL is strongly recommended to generate cheaper fund by bearing favorable lower interest rate on deposits. SCBNL is suggested to keep-it-up.
- NPA is the most sensitive part of banking performance. The effectiveness of loan & recovery is depicted from NPA position. It is key variable for measuring bank's performance. HBL is recommended to make conscious efforts for lowering NPA in recent years. EBL is highly appreciated for its substantially lowest NPA and suggested to keep-it-up.

Mr. Mohan Prasad Tiwari (2009) has conducted a dissertation on "*Financial Performance Analysis as Tools for Profit Planning*". He attempts to analysis the

financial performance with the help of financial analysis of EBL, Nabil and BOK.

The objectives of this study are:

- To find out the relationships between total investment, loan and advances, deposit, net profit and outside assets.
- To identify the investment priority sectors of Commercial banks.
- To assess the impact of investment on profitability.
- To analyze and forecast the trend and structure of deposit utilization and its projection for five years of Commercial banks.
- To provide suggestions and possible guidelines to improve investment policy and its problems.

In this study, the findings of his study are:

- Current assets of all three banks i.e. EBL, Nabil & BOK are not satisfactory.
- The ratio of cash & bank balance to total deposit and current assets of EBL is higher than that of Nabil & BOK.
- From the study, he found that Nabil has not invested funds in government securities than that of other banks which shows that Nabil has kept relatively funds as cash and bank balance which does not earn any return.
- Profitability ratios of banks are not satisfactory, if resources held idle bank have to bear more cost and result would be lower profit margin.
- The investment policy of EBL is good in every aspect as studied above but the consistency in the above investment sectors is in equilibrium states. He found that bank focuses much of its attention to one sectors leaving other sectors untouched.

Now, in Nepal many banks & other financial institutions are functioning to collect the deposits and invest money somewhere in the productive sectors. Therefore, efficiency has been increased since liberalization policy taken by the government. Heavy remittance has also helps to increase the amount of deposits in bank. On the

other hand, due to political crisis, economic sectors have been fully damaged. So, the recommendations of this study are as follows:

- In commercial banks the liquidity position affects external & internal factors such as saving for investment situations, central banks requirements, the leading policies management capacity etc. So, all the banks are recommended to improve current assets and mobilize cash and bank balance in profitable as loan and advances.
- Investment in government securities such as Treasury bills, development bonds, saving certificates etc are free of risk and highly in nature. So, Nabil is recommended to invest its fund in government securities instead of keeping them idle.
- In the light of growing competition in the banking sectors the business of the bank is customer oriented. It should strengthen and active its marketing function as it is an effective part 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.
- EBL's investment policy is satisfactory so EBL is recommended to touch all the sectors and balance it effectively as to have the optimal performance of the bank.

CHAPTER III

RESEARCH METHODOLOGY

Research methodology is a sequential procedure and collection of scientific methods to be adopted in a systematic study. In other words, research methodology describes the methods and process applied in the entire of the study. It is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by us in studying his/ her research problem along with the logic behind them. It consists of research design, population and sampled source of data, data processing procedure and tools & techniques of analysis of data.

3.1 Research Design

Research Design is a method of defining the research problem. According to C.R. Kothari, “Research design is a plan, structure and strategy of investing conceived so as obtain answer to research question and to control variances”. Research design refers to the framework of the study. It is the blue print for any kinds of studies. ”Research design is the arrangement of condition and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

Research design is plan for collection and analysis of data. The purpose of design is to provide answer to research questions and control variance. Some financial & stational tools will be used to examine the facts and descriptive techniques to evaluate the financial performance of three banks and comparing between themselves. This study aims to find out the relation of financial performance of three commercial banks fully managed and owned by Nepalese entrepreneurs. The research design used for is basically, a historical, empirical, descriptive-cum-

analytical research methodology.

3.2 Populations and Sample

Currently, there are 27 commercial banks in Nepal. So this study chooses the Nabil Bank Limited, Nepal Investment Bank Limited and Nepal Industrial and commercial Bank Limited as sample for study. The financial statements of latest five years (i.e. from 2004/2005 to 2008/2009) have been taken as sample data for analyzing the financial performance. These banks are chosen because as they account for the considerable market share of banking sectors.

3.3. Nature and Sources of Data

The study is mainly based on secondary data. Data relating to financial performance of these three banks are directly obtained from concerned banks. The supplementary data were obtained from unpublished official records of concern banks, bank's staff, booklets, journals and other sources viz. Security Exchange Center and Nepal Rastra Bank.

3.4 Data Processing Procedure

The data analysis tools are applied as simple as possible. Data obtained from the various sources cannot directly be used in their original form. They need to further verified and simplified for the purpose of analysis. Data, information, figures and facts so obtained need to be checked, rechecked, edited and tabulated for computation. According to the nature of data, they have been inserted in meaningful Tables, which have been shown in appendices. Homogeneous data have been sorted in one Table and similarly various Tables have been prepared in understandable manner, odd data are excluded from the Table. Data have been analyzed and interpreted using financial and statical tools. The detail calculations

that cannot be shown in the body part of the report are presented in appendices at the end of the report.

3.5 Tools and Techniques of Analysis

On the basis of historical data financial and statistical tools are used to analysis of different variables.

3.5.1. Financial Tools

Financial tools are those, which are used for the analysis and interpretation of financial data. These tools can be used to get the prescribe knowledge of business which in turn are fruitful in exploring the strength and weakness of the financial policies and strategies. In order to meet the purpose of study, following financial tools have been used.

3.5.1.1. Ratio Analysis

Ratio analysis is a technique of analysis and interpretation of financial statement evaluate the performance of an organization by creating the ratio from the figures if different accounts consisting in balance sheet and income statement is know as ratio analysis. It is a powerful tool of financial analysis. An explained in second Chapter, ratio analysis is most frequently used tool to evaluate the financial health, operating result and growth of the banks under scrutiny. It helps to summarize the large quantities of financial data and to make quantitative judgments about the firm's financial performance. The ratios calculated for the study is described separately under following headings.

3.5.1.1.1. Liquidity Ratios

The liquidity refers the liquid assets of a firm or those types of assets, which can convert into cash easily. And liquidity ratio measures the ability of a

firm to meet its short-term obligations. The ratio reflects its short-term solvency capacity. It shows the capacity of a firm to pay interest and principal to suppliers of short-term credit and trade creditors. It is extremely essential for a firm to be able to meet its current obligations as they become due.

Depending on the special nature of current assets and current liabilities of the banks the following ratios are calculated.

a) Current Ratio

Current ratio is also known as Working capital ratio. The ratio is to evaluate or indicates the current solvency position of the organization. The current ratio (CR) represents a margin of safety for creditors at bad situation. It is the ratio of total current assets to current liabilities. Financial norms say that 2:1 is the optimal position of liquidity and profitability point of view. If the current ratio of the firm is less than 2:1 the solvency position of the firm is not good. The cash may not be available to pay current liabilities. If the ratio of the firm is under financial standard, the firms' liquidity position measured as better. Higher ratio of the firm is measured higher liquidity, i.e. meant the firm has excessive investment in current assets that do not produce a return so more than financial standard is poor utilization of assets.. It is calculated by dividing current assets by current liabilities, which is expressed as follows:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

In which current assets represents those assets which can be converted into cash within an accounting period such as cash balance, bank balance, investment in treasurer bills, money at call, bills purchase, inter branch account, other short terms, receivable, prepaid expenses, etc. Current liabilities refers to short term maturing obligation such as deposits bills payable, tax provisions, dividend payable staff bonus, bank over drafts, accrued expanses and provisions etc.

b) Quick Ratio

Quick ratio established a relationship between quick asset and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonable soon without a loss of value cash is the most liquid asset. Other assets which are considered to be relatively liquid are included in quick assets are book debts and marketable securities. This quick ratio can be calculated by dividing the total of quick assets by total current liabilities.

$$\text{Quick Ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}}$$

c) Cash and Bank Balance to Current Assets Ratio

This ratio is found out the ability of banks to pay total call made on current deposit. Cash and Bank Balance is highly liquid assets than others in current assets proportions. Higher ratio indicates the banks ability to meet the daily cash requirement of their customer deposit and vice versa. But higher ratio is not preferred as the bank has to pay more interest in deposit and will increase the cost of fund. Lower ratio is also very risky as the bank may not be able to make the payment against the cheque presented by the clients. So, the bank has must be maintain such ratio in such way that it should have sufficient cash for the clients demand against deposits when required and less interest is required to pay against the cash deposit. These ratios not only analyzed the use of total resources of the firm but also the use of resources component of total assets. The formula to obtain this ratio is;

$$\text{Cash \& Bank Balance to Current Assets Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Current Assets Ratio}}$$

Cash and Bank balance includes cash in hand, foreign cash in hand, clearing cheque and other cash items, balance with NBR current account, other domestic bank current account and balance held in foreign banks.

d) Cash and Bank Balance to Current, Saving & Margin Deposit Ratio

The ratio measures the ability of bank to meet its immediate obligations. The bank should maintain adequate cash and bank balance to meet the unexpected as well as heavy withdrawal of deposits. High ratio indicates sound liquidity position of the bank. However, too high ratio is not good enough as it reveals the under utilization of fund. The ratio is computed by dividing the total amount of cash and bank balance held in the bank by total deposit (except fixed deposits) collected by the bank.

$$\text{Cash \& Bank Balance to Deposits (Except FD Ratio)} = \frac{\text{Cash \& Bank Balance}}{\text{Total deposit (Except FD)}}$$

Cash and Bank balance comprises cash on hand, foreign cash on hand, cheque and other cash items, balance with domestic bank and balance held in foreign banks. Current and saving deposits consist of all types of deposits excluding fixed deposits.

e) Cash and Bank Balance to Total Deposits Ratio

The ratio is employed to measure whether cash & bank balance is sufficient to cover its current call margin including deposits. It shows the proportion of total deposits held as most liquid assets. High ratio shows the strong liquidity position of the bank. But too high ratio is not favorable for the bank because it produces adverse effect n profitability due to idleness of high-interest bearing fund. The ratio is calculated using following formula;

$$\text{Cash and Bank Balance to Total Deposit Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Total deposits}}$$

Total deposit consists of both interest bearing deposits & non-interest bearing deposits i.e. current deposits, saving deposit, fixed deposit, money at call and short notice and other deposits.

f) NRB Balance to Current Saving Deposit Ratio

The ratio shows the percentage of amount deposited by the bank in Nepal Rastra bank (NRB) as compared to current & saving deposits. Commercial banks are required to hold certain portion of current and saving deposits in Nepal Rastra Bank's account. It is to ensure the smooth functioning and sound liquidity position of the bank. As per the directive of Nepal Rastra Bank, the required ratio is 8%. Therefore, the ratio measures whether the bank is following the direction of NRB or not. The ratio is computed by dividing the balance held with Nepal Rastra Bank by saving deposits. It express as;

$$\text{NRB Balance to Current and Saving Deposit Ratio} = \frac{\text{NRB Balance}}{\text{Current \& Saving deposits}}$$

g) NRB Balance to Fixed Deposit Ratio

The ratio shows the percentage of the amount deposited by the bank in Nepal Rastra Bank as compared to fixed deposits. According to the direction of NRB, this ratio should be maintained 6%. Hence the ratio so calculated finds whether the bank has obeyed the direction of central bank or not. The ratio is computed by dividing the balance held with Nepal Rastra Bank by fixed deposits accepted.

$$\text{NRB Balance to Fixed Deposit Ratio} = \frac{\text{NRB Balance}}{\text{Fixed Deposits}}$$

3.5.1.1.2 Efficiency /Activity / Turnover Ratios

The fund of creditors and owners are invested in various assets to generate income and profit. Better the management of assets, the larger the amount of income. Activity ratio measures the degree of effectiveness in use of resources of fund by an entrepreneur. This ratio is also called turnover ratio because they indicate the number of times the assets are being converted or turnover into income. In other words, turnover ratios, also known as utilization ratios or activity ratios are employed to evaluate the efficiency with which the firm manages and utilizes its

assets. They measure how effectively the firm uses investment and economic resources at its command. High ratio depicts the managerial efficiency in utilizing the resources. They show the sound profitability position of the bank. Low ratio is the result of insufficient utilization of resources. However, too high ratio is also not good enough as it may be due to the sufficient liquidity. Depending upon special nature of assets and sales of the banks, following ratios are tested.

a) Loans and Advances to Total Deposit Ratio

The ratio indicates the proportion of total deposits invested in loans and advances. It is calculated to find out how the banks are successfully utilizing their total deposits for profit generating purpose on loan and advances. High ratio means the greater use of deposit for investing in loans and advances. In other words, Greater the ratio implies the better utilization of outsiders fund (Total Deposits). But very high ratio shows poor liquidity position and risk in loans. On the contrary, too low ratio may be the cause of idle cash or use of fund in less productive sector. The ratio is computed by dividing total loans and advances by total deposit liabilities.

$$\text{Loans and Advances to Total Deposit Ratio} = \frac{\text{Loans \& Advances}}{\text{Total deposits}}$$

Loan and advanced consist of loans, advances, cash credit, overdrafts, and foreign bills purchased and discounted.

b) Loans and Advances to Fixed Deposit Ratio

The ratio indicates what proportion of fixed deposits has been used for loans and advances. Loans and advances are the major sources of investment to generate income by the commercial banks. Fixed deposits are long-term interest-bearing obligation. It carries high rate of interest. Funds collected are needed to invest in such sectors, which yield at least sufficient return to meet the obligations. The ratio measures the extent to which the fixed deposits are utilized for the income

generating purpose. High ratio means utilization of fixed deposit in form of loans. The ratio is calculated by dividing loans and advances by fixed deposits.

$$\text{Loans and Advances to Fixed Deposits Ratio} = \frac{\text{Loans \& Advances}}{\text{Fixed deposits}}$$

c) Loans and Advances to saving Deposit Ratio

The ratio indicates how many times the short-term interest bearing deposits are utilized for generating the income. Saving deposits are the short-term interest bearing liabilities. Loans and advances are the major sources of investment to generate income in commercial banks. Loans and advances to saving deposits ratio is measured to find out how many time of fund is used in loan and advances against saving deposit. High ratio indicates greater utilization of the saving deposits in advancing loans. The ratio is calculated dividing the amount of loan and advances by total deposit in saving account. The following formula is used to calculate this ratio as:

$$\text{Loans and Advances to Saving Deposit Ratio} = \frac{\text{Loans \& Advances}}{\text{Saving deposits}}$$

d) Investment to Total Deposit Ratio

The ratio shows how efficiency the major resources of the bank have been mobilized. High ratio indicates managerial efficiency regarding the utilization of deposits. Low ratio is the result of less efficiency in use of funds. The ratio is obtained by dividing investment by total deposits collected in the bank.

$$\text{Investment to Total deposit ratio} = \frac{\text{Total Investment}}{\text{Total deposits}}$$

Investment comprises investment its HMG treasury bills, development bonds, company shares and other type of investment.

e) Performing Assets to Total Assets Ratio

The ratio measures what percentage of assets has been funded for income generation. High ratio indicates greater utilization of assets and hence sound profitability position. It is calculated by dividing performing assets by total assets.

$$\text{Performing Assets to Total Assets Ratio} = \frac{\text{Performing Assets}}{\text{Total Assets}}$$

Performing assets include those assets, which are invested for income generating purpose. These consist of loans & Advances; bills purchased and discounted investment and money at call or short notice.

3.5.1.1.3 Profitability Ratios

A company should earn profits to survive & grow over a long period of time. It is a fact that sufficient profit must be earned to sustain the operations of the business; to be able to obtain funds from investors for expansion and growth; and to contribute towards the social overheads for the welfare of society. The profitability ratios are calculated to measure the operating efficiency of the company. Management of the company, creditors and owners are interested in the profitability of the firm. Creditors want to get interest and repayment of principal regularly. Owners want to get a reasonable return from their investment (Pandey, 1994:116) Profitability ratios are calculated to measure the operating efficiency of the company. Various profitability ratios are calculated to measure operating efficiency of business enterprises. Though profitability ratios the lender & investors want to decide whether to invest in particular business or not. To meet the objective of the study, following ratios are calculated in this group.

a) Return on Total Asset

The ratio is measuring the profitability of funds invested in the bank's assets. In other words, it measures the efficiency of bank in utilization of the overall assets. High ratio indicates the success of management in overall working fund i.e. total

assets. It is also called net profit or loss to working fund i.e. total assets ratio or simply called ROA. The firm has to earn satisfactory return on assets or working funds otherwise its survival is threatened. High ratio indicates the success of management in overall operation. Lower ratio means insufficient operation of the bank. It is calculated by dividing net profit after tax (NPAT) by total assets of the bank

$$\text{Return on Assets} = \frac{\text{Net Profit After tax (NPAT)}}{\text{Total Assets}}$$

Net profit refers to the profit after deduction of interest and tax. Total assets mean the assets that appear in asset side of balance sheet.

b) Return on Net Worth

The ratio is tested to see the profitability of the owner's investment. It reflects the extent to which the objective of business is accomplished. All commercial banks have its main objective to earn the maximum profit, so that they can run smoothly and get the fame. For that they must mobilize resources and its equity capital properly. Equity capital is owned capital of banks. The ratio is also called net profit (or loss) to net worth or net profit (or loss) to shareholder's equity or return on shareholders equity or simply called *ROSE*. The ratio is of great interest to present as well as prospective shareholders and also of great significance to management, which has the responsibility of maximizing the owner's welfare. So, higher ratio is desirable. It is computed by dividing net profit after tax by net worth.

$$\text{Return on Net Worth} = \frac{\text{Net Profit After tax (NPAT)}}{\text{Net Worth}}$$

Net worth refers the owner's claim on banks. It can be find out subtracting the total liabilities from total assets. It includes shareholder's reserve and share capital.

c) Return on Total Deposit

Major financial source of a bank is deposit collection. And deposits are mobilized for loan and advances, investment etc. to earn profit. The ratio shows the relation of net profit earned by the bank with the total deposit accumulated. Higher ratio is the index of strong profitability position. The ratio is computed by dividing net profit after tax by total deposit.

$$\text{Return on Total Deposit} = \frac{\text{Net Profit After tax (NPAT)}}{\text{Total Deposit}}$$

d) Total Interest Expenses to Total Interest Income Ratio

The ratio shows the percentage of interest expenses incurred in relation to the interest income realized. Lower ratio is favorable from profitability point of view. The ratio is obtained by dividing total interest expenses by total interest income.

$$\text{Total Interest Expenses to Total Interest Income Ratio} = \frac{\text{Total Interest Expenses}}{\text{Total Interest Income}}$$

Total interest expenses consist of interest expenses incurred for deposits, borrowing and loans taken by the bank. Total interest income includes interest income received from loans, advances, cash credit, overdrafts, and Government securities, inter bank and other investments.

e) Interest Earned to Total Assets Ratio

The ratio shows percentage of interest income as compared to the assets of the bank. High ratio indicates the proper utilization of the bank's assets for income generating purpose. Low ratio represents unsatisfactory performance. The ratio is calculated by dividing interest income by total assets of the bank.

$$\text{Interest Earned to Total Assets Ratio} = \frac{\text{Interest Earned}}{\text{Total Assets}}$$

3.5.1.1.4 Capital Structure/Leverage/Solvency Ratios

Short-term financial positions refer to the liquidity position of the firm. Long-term financial position refers to the capital structure or financial leverage. Long-term financial position of the firm is judged by the capital structure ratio or leverage ratio or structure ratio. The leverage ratio or structural ratio is calculated to measure the financial risk and the firm's ability of the using for debt the benefit for the shareholders. Leverage refers to the ratio of debt to equity in the equity in the capital structure of the firm. Debt & equity are long-term obligation and remaining parts in the ability side of the balance sheet are termed as short –term obligation. Both types of obligations are required in forming the capital structure of the firm. The long-term financial position of the firm is determined by leverage or capital structure. Debt is more risky from the form the firm's point of view. The firm has legal obligation to pay interest to debt holders irrespective of the profit made or losses incurred by the firm. But use of debt is advantageous to shareholders in two ways:

- They can retain control on the firm with a limited stake.
- Their earning is magnified when rate of return of the firm on total capital is higher than the cost of debt.

Following ratios are calculated to test the optimality of capital structure.

a) Debt-Equity Ratio

This ratio is calculated to find out the proportion of the outsider's fund to owner's fund to finance the total assets. It is also called the proportion of outsider's claim and insider's claim on total assets of the banks. It is also called debt to net worth ratio. The ratio shows the mix of debt and equity in capital. It measures creditors' claims against owners'. High ratio shows that the creditors' claims are greater than those of owners. Such a situation introduces inflexibility in the firm's operation due to the increasing interference and pressures from creditors. Low ratio implies a greater than claim of owners than creditors. In such a situation, shareholders are

less benefited if economic activities are good enough. Therefore, the ratio should neither be too high nor too low. The ratio is calculated by dividing total debt by shareholder's equity.

$$\text{Debt-Equity Ratio} = \frac{\text{Total Debt}}{\text{Shareholder's Equity}}$$

Total debt consists of all interest-bearing long-term debts. These include loans and short-term debts. These include loans advances taken from other financial institutions, deposits carrying interest etc. Shareholder's equity includes paid-up capital, reserves and surplus and undistributed profit.

b) Debt- Asset Ratio

This ratio shows the contribution of creditors in financing the assets of the bank. It is the proportion of debt on the total capital or proportion of outsider's claim on total assets. Greater proportion of the banks assets has been financing through outsider's funds. High ratio indicates that the greater portion of the bank's assets has been financed through outsider's fund. The ratio should neither be too high per too low. The ratio can be calculated by dividing total debt by total assets.

$$\text{Debt-Assets Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

c) Interest Coverage Ratio

This ratio is calculated to find out the banks ability to meet interest obligation. The ratio also known as times interest-earned ratio is used to test the debt servicing capacity of the bank. It shows the number of times the interest charges are covered by funds that are ordinarily available for their payment. It indicates the extent to which the earning may fail without causing any embarrassment to the firm regarding the payment of interest. Higher ratio is desirable, but too high a ratio indicates the firm is very conservative in using debt. A lower ratio indicates

excessive use of debt or insufficient operation. The ratio calculated by dividing net profit before deduction of interest and tax by interest charges.

$$\text{Interest Coverage Ratio} = \frac{\text{Earning Before Interest \& Tax (EBIT)}}{\text{Interest Charged}}$$

EBIT or Earning Before Interest and Tax Net Profit Before Interest and Tax (NPBIT) is amount of operating profit before deduction of the amount of interest and tax.

3.5.1.1.5 Capital Adequacy Ratio

Capital adequacy ratio measures whether the firm has maintained sufficient capital or not. In other words, it helps to decide whether the existing capital is adequacy or there is the not need of reforms. The ratio is tested to ensure the safety and stability of the firm in long run. Over capitalization and under capitalization both have adverse effect on profitability of the firm. If the capital is excess, it remains idle. If the capital is insufficient, the firm may not be able to grasp the opportunity from potential profitable sectors. Therefore, the commercial banks have been directed to retain sufficient ratio by the central bank. Here, capital fund refers to the core capital and supplementary capital. Commercial banks cannot declare and distribute dividend until they meet capital adequacy ratio. Under this group, following ratios are tested.

a) Net Worth to Total Deposit Ratio

This ratio measures the percentage of net worth in relation to the total deposits collected in the bank. The ratio is a yardstick to see whether the bank has maintained the capital fund according to the direction of Nepal Rastra Bank. The ratio is calculated by dividing net worth by total deposits.

$$\text{Net Worth to Total Deposit Ratio} = \frac{\text{Net Worth}}{\text{Total Deposits}}$$

b) Net Worth to Total Assets Ratio

The ratio measure what is the percentage of shareholders' fund in relation to the total assets owned by the bank. High ratio means greater contribution of investors' fund and strong capital adequacy position. The ratio is calculated by dividing the net worth by total assets of the bank.

$$\text{Net Worth to Total Assets Ratio} = \frac{\text{Net Worth}}{\text{Total Assets}}$$

c) Net Worth to Total Credit Ratio

It measures the relative proportion of the shareholders fund with respect to the credit. High ratio shows that the firm has adequacy capital, which is the index of safety. Moreover, a bank with higher ratio is less affected by the instability of the financial market. The ratio is obtained when net worth is divided by the total credit of the bank

$$\text{Net Worth to Total Credit Ratio} = \frac{\text{Net Worth}}{\text{Total Credit}}$$

Total credit refers to the total of loans and advances granted, cash credit, overdrafts, bill purchased and discounted.

3.5.1.1.6 Assets Quality Ratios

As explained earlier, turnover ratios measure the turnover of economic resource in terms of quality. Only the investment is not of great significance, but the return from them with minimum default in payment by debtors is significant. A firm may be in a state of enough profit and through unable to meet liabilities. Therefore, asset quality ratios are intended to measure the quality of assets contained by the bank. Following ratios are dealt in this group.

a) Loan Loss Coverage Ratio

Nepal Rastra Bank has directed commercial banks to maintain provision for loan loss on the basis of category of loans and risk grade. The ratio, therefore, measures whether the provision is sufficient to meet the possible loss created by defaulted in payment of loan or not. High ratio indicates that the major portion of loan is risky. The ratio is calculated by dividing provision for loan loss by total risk assets.

$$\text{Loan Loss Coverage Ratio} = \frac{\text{Loan Loss Provision}}{\text{Total Risk Assets}}$$

For the study purpose, risk assets constitute loans and advances, bill purchased and discounted.

b) Loan Loss Provision to Total Income Ratio

This ratio shows what portion of total income has been held as safety cushion against the possible bad loan. Higher ratio indicates that the greater portion of loan advanced by the bank is inferior in quality. Low ratio means that the bank has provided most of its loans and advances in secured sector. The ratio is obtained by dividing loan loss provision by total income.

$$\text{Loan Loss Provision to Total Income Ratio} = \frac{\text{Loan Loss Provision}}{\text{Total Income}}$$

c) Loan Loss Provision to Total Deposit Ratio

It shows the proportion of bank's income held as loan loss provision in relation to the total deposit collected. Higher ratio means quality of assets contained by the bank in form of loan is not much satisfactory. Low ratio is the index of utilization of resources in healthy sector. The ratio is obtained by dividing the provision for loan loss by total deposit in the bank.

$$\text{Loan Loss Provision to Total Deposit Ratio} = \frac{\text{Loan Loss Provision}}{\text{Total Deposits}}$$

d) Accrued Interest to Total Interest Income Ratio

This ratio shows the percentage of accrued interest with respect to total income in form of interest. High ratio indicates the large portion interest remained to be collected. Lower ratio reflects the better quality of assets in the bank. The ratio is obtained by dividing accrued interest by total interest income.

$$\text{Accrued Interest to Total Income Ratio} = \frac{\text{Accrued Interest}}{\text{Total Interest}}$$

Accrued interest refers to the interest that is accrued but not collected. Total interest income includes the interest received from the investment in various sectors.

3.5.1.1.7 Others Indicators

Above stated ratios throw light on various aspects of bank. Management, investors and creditors can get information regarding their interest. Some indicators are dealt here which provide more knowledge about the performance of bank. They are listed below.

a) Earning Per Share (EPS)

Earning Per Share refers to the income available to the common shareholders on per share basis. It enables us to compare whether the earning based on per share basis has changed over past period or not. The investors favor high EPS. It reflects the sound profitability position of the bank. It is obtained by dividing earning available to common shareholders by number of equity shares outstanding.

$$\text{Earning Per Share} = \frac{\text{Earning Available Common Shareholder(EAC)}}{\text{No of Equity Share Outstanding}}$$

Earning available to common shareholders is the amount of that profit which can be found after deducting the amount of interest to the outsiders' fund, dividend to

the preferred shareholders and income tax to the government. For this purpose, it is net profit after tax.

b) Price –Earning Ratio (P/E ratio)

P/E Ratio is widely used to evaluate the bank's performance as expected by investors. It represents the investors' judgment or expectation about the growth in the bank's earning. In other words, it measures how the market is responding towards the earning performance of the concerned institution. High ratio indicates greater expectation of the market towards the achievement of firm. It is obtained by dividing market value per share by earning per share.

$$\text{Price-Earning Ratio} = \frac{\text{Market Value Per Share(MVPS)}}{\text{Earning Per Share (EPS)}}$$

c) Market Value Per Share to Book Value Per Share (MVPS/BVPS)

The ratio measures the value that the financial market attaches to the management and organization of the bank as a growing concern. High ratio is the indication of strong management and organization. It is the ratio of market value per share to book value per share.

$$\text{Market Value Per Share to Book Value Per Share} = \frac{\text{Market Value Per Share(MVPS)}}{\text{Book Value Per Share (BVPS)}}$$

BVPS is net worth dividend by the number of shares outstanding.

3.5.1.1.8 Income & Expenditure Analysis

Except various analyses, income and expenditure analysis is one of the major tools financial performance analyses of banks. The profit & loss account of the bank is used to find out operating income, expenditure and profit and loss percentage. This is a tool with the help of which the components of income and expenditure can be compared between two competitive firms. By this analysis, one is able to conclude which sources of income & expenditure are dominant in the related concerns.

Under income analysis, overall operating income is split up into major headings- Interest income, commission & discount, foreign exchange income and other income. Under expenditure analysis, entire operating expenses are split up into four major headings- Interest expenses, staff expenses, office operating expenses and bonus facility. Operating profit (loss) is the difference between total operating income and total operating expenses. If total operating income is higher than total operating expenses, then it is operating profit, other wise operating loss.

3.5.2 Statistical Tools

Various statistical tools can be used to analyze it. These tools are used in order to draw the reliable conclusion through the analysis of financial data. Following tools are used for this purpose.

3.5.2.1 Arithmetic Mean

An average is a single value selected from a group of values to represent them in same way, which is supposed to stand for whole group of which it is a part, as typical of all the values in the group (Waugh A.E). Out of various measures of the central tendency, arithmetic mean is one of the useful tools applicable here. It is easy to calculate and understand and based on all observations.

Arithmetic mean of a given set of observations is their sum divided by the number of observation. In general, if $X_1, X_2, X_3, \dots, X_n$ are the given observations, then arithmetic mean usually denoted by \bar{X} is given by;

$$\bar{X} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{n} = \frac{\sum X}{n}$$

Where, n = number of observation.

3.5.2.2 Standard Deviation

Average like other mean, mode and medium gives us the idea of concentration of the items around the central part of distribution. But average do not gives clear

picture about the distribution because two distributions with same average may differ in the scatter ness of the items from the central value. To remove this drawback, dispersion is used. Dispersion is defined as the measure of variation I the item from the central value. Among various measure of dispersion, standard deviation is widely used. Standard deviation is absolute measure of dispersion, which defined as the positive square root of the mean of the square of deviation taken from the arithmetic means, if $X_1, X_2, X_3, \dots, X_n$ are the given observations, then standard deviation denoted by σ is given by;

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

Where, n = number of observation in series X

$\sum X$ = Sum of observation in series X

$\sum X^2$ = Sum of squared observations in series X

Standard deviation is the absolute measure of dispersion. The relative measure of dispersion based on the standard deviation is known as the Coefficient of Standard deviation.

$$\text{Coefficient of S.D.} = \frac{\text{Standard deviation}}{\text{Mean}} = \frac{\sigma}{\bar{X}}$$

The coefficient of dispersion based on standard deviation multiplied by 100 is known as

Coefficient of Variance and written, as C.V is given by;

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

It is independent unit. So two distributions can bitterly compared with the help of C.V. for their variability. Less the C.V more will be the uniformity consistency etc and more the C.V less will be the uniformity consistency etc.

According to Prof. Karl Pearson, coefficient of variation is the percentage variation in mean, standard deviation being considered as the total variation in the

mean. It is one of the relative measures of dispersion that is useful in comparing the amount of variation in data groups with different mean.

For comparing the variability of two distributions, we compute the coefficient of variation for each distribution. A distribution with smaller CV is said to be more homogeneous or uniform or less variable than other. Conversely, a series with greater CV is said to be more variable or heterogeneous than the other (Gupta, S.C. 2000:769).

3.5.2.3. Correlation Coefficient Analysis

If the distribution consists of two variables then correlation is used to find out the relation between them. Two variables are said to correlation when they are so related that the change in the value of one variable is accompanied by the change in the value of other. Correlation is the measure of relationship between two or more characteristics of population or sample. It is simply measure the chance between the phenomenons's (Joshi, R.P. 2001).

Correlation is a statistical tools with the help of which we can determine whether or not two or more variable are correlated & if they are correlated the degree (extent) and direction of correlation is determined (Shrestha S and Silwal D.P)

Correlation is the statistical tools that we can used to describe the degree of which one variable is linearly related to another. The coefficient of correlation measures the degree of relationship between two set of figure. Among the various method of finding out coefficient (i.e. Karl Pearson's Coefficient of Correlation, Spearman's Rank Correlation Coefficient, Kendall's Tau etc); **Karl Pearson's** method is applied in this study.

If two variables vary in the same direction i.e. if increase (or decrease) in the value of one variable result increase (or decrease) in the value of other variable, then two variables are said to have positive correlation. Similarly, the two variables are said have negative correlation if they vary in the opposite direction i.e. if increase (or

decrease) in the value of one variable result decrease (or increase) in the value of other variable.

One of the widely used mathematical methods of calculating the correlation coefficient between two variables is Karl Pearson's Correlation coefficient. It is also known as Pearson's correlation coefficient & denoted by r_{xy} or, simply r . if x be the one variable and y be the other variable with n number of observation then r is defined;

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

Where,

n = number of observation in series X and Y

$\sum X$ = Sum of observations in series X

$\sum Y$ = Sum of observation in series Y

$\sum X^2$ = Sum of squared observations in series X

$\sum Y^2$ = Sum of squared observations in series Y

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

The result of correlation coefficient is always lies between -1 & $+1$

When, $r = +1$, there is positively perfect correlation between two variables

When, $r = -1$, there is negatively perfect correlation between two variables

When, $r = 0$, there is no correlation between two variables or the variables are uncorrelated.

Neither the value of r to $+1$, closer will be relationship between two variables nor will the value of r to 0 lesser be the relationship between two variables.

Probable Error of Correlation Coefficient

Probable error of correlation coefficient is an old measure of testing the reliability of an observed value of correlation coefficient. It is calculated to find the extent to which correlation coefficient is dependable as it depends upon the condition of random sampling.

Probable error of correlation coefficient denoted by P.E(r) is obtained as;

$$P.E(r) = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

where,

$$\frac{1-r^2}{\sqrt{n}} = \text{Standard Error}$$

Reasons for taking 0.6745 is that in a normal distribution 50% of observation lie in the range $\mu \pm 0.6745 \sigma$ where, μ and σ denoted the populations mean and standard deviation.

P.E(r) is used to test if an observed value of sample correlation coefficient is significant of any correlation in the population. It is used to interpret whether the calculated value of r is significant or not.

If $r > P.E$; correlation is insignificant. So there is no evidence of correlation

If $r > 6P.E$. r is definitely significant.

In this study, following relationship is calculated;

- Total Deposits and Loan and Advances
- Total Deposits and Net Profit
- Loan and Advances and Net Profit
- Performing Assets and Net Profit
- Total Deposits and Performing Assets
- EPS and MVPS
- MVPS and NWPS

3.5.2.4 Trend Analysis

Trend analysis is a very useful and commonly applied tool to forecast the future event in quantitative term, on the basis of the tendencies in the dependent variable in the past period.

The straight-line trend implies that irrespective of increase or decrease by absolute amount per unit of time. The linear trend values form a series in arithmetic progression.

The tools that are used to show gradually increase or a decrease of variable over a period of time is known as trend analysis. With the help of trend analysis the tendency of variables over the period can be seen clearly.

Mathematically, $Y = a + bx$

Where,

Y = the value of dependent variable

a = Y-intercept, b = slope of the trend line

X = value of the independent variable i.e. time = Year-2006/07 (with regard to the data used in the study)

Normal equations fitting above equation are;

$$\Sigma Y = Na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2 \quad \text{Since } \Sigma X = 0 \quad a = \frac{\Sigma Y}{N}, b = \frac{\Sigma XY}{\Sigma X^2}$$

For this study, the following variables are used: Total Deposits, Loans and Advance, Performing Assets, Net Profit and Net worth etc.

3.5.2.5 Diagrammatic & Graphical Representation

Diagrams and graphs are visual aids that give a bird's eye view of a given set numerical data. They present the data in simple and readily comprehensive form. Diagrams are primarily used for comparative studies and can't be used to study the relationship between the variables under study. This is done through graphs.

3.6 Period Covered

This study covers a period of five years from FY 2004/05 to 2008/09 of the three commercial banks. Their analysis is done on the basis of data covering five years.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This Chapter deals with the analysis and interpretation of data following the research methodology dealt in the third chapter. In course of analysis, data gathered from the various sources have been inserted in the tabular form according to their homogeneous nature. The various tables prepared for the analysis purpose have been shown in annexes. Using financial and statistical tools, the data have been analyzed. The result of the analysis has been interpreted keeping in mind the conventional standard with respect to ratio analysis, directives of NRB and other factors while using other tools. Moreover, financial performance of the sampled banks has especially been analyzed in cross sectional manner. Specially, the chapter includes and interpretation of the ratio Analysis, Income and Expenditure Analysis, Correlation Analysis and Trend Analysis.

4.1 Ratio Analysis

Financial tools are an instrument that helps to analyze and interpret the financial performance of an organization. In other words, financial tools help to analyze the strength and weakness of a firm. Ratio analysis is a most important part of financial analysis, which is used in this study that gives us financial performance of three sampled banks. It helps to show the quantities relationship between two numbers. It may be expressed in terms of proportion, rates and times or in percentage. It is used to compare a firm's financial performance and status with other firms. Many writers like J.C Vanhorn, R.M Srivatav, I.M Pandey, etc. describe that the following ratios have been used according to data which helps to analyze, interpret and find out the actual financial performance of any organization.

- i) Liquidity Ratios

- ii) Efficiency/Activity/Turnover Ratios
- iii) Profitability Ratios
- iv) Capital Structure/ Leverage/ Solvency Ratios
- v) Capital Adequacy Ratios
- vi) Assets Quality Ratios
- vii) Other indicators

4.1.1 Liquidity Ratios

Liquidity ratios have been employed to test the ability of the banks to pay immediate liabilities (i.e. short term liabilities). These include current ratio, quick ratio, cash & bank balance to current assets ratio, cash & bank balance to deposit (except Fixed Deposits) ratio, cash & bank balance to total deposit ratio, NRB balance to current and saving deposit ratio and NRB balance to Fixed deposits ratio.

4.1.1.1 Current Ratio

Current ratio is also known as working capital ratio. It is computed by dividing the current assets liabilities.

$$\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current Liabilities}}$$

Table 4.1 clearly shows that current ratio of Nabil for the study period remained 1.17, 1.11, 1.24, 1.29 & 1.20 times respectively from the FY 2004/05 to FY 2008/09. Mean of the ratios appeared 1.20 times and CV appeared 5.09%. Similarly, the ratios of NIB for the corresponding period remained 1.21, 1.29, 1.35, 1.26 & 1.31 times. Mean of the ratios came 1.28 times whereas CV came 3.67%. Similarly, the ratios of NIC for the corresponding period remained 2.05, 1.97, 1.80, 1.90 & 2.05 times. Mean of the ratios appeared 1.95 times and CV appeared 4.87%.

Table 4.1
Current Ratio (Times)

Rs in million

Nabil Bank Ltd				NIBL			NIC		
FY	Current Asset	Current Liabilities	Ratio	Current Asset	Current Liabilities	Ratio	Current Asset	Current Liabilities	Ratio
2004/05	14,909	12,718	1.17	13,955	11,532	1.21	7,061	3,443	2.05
2005/06	18,122	16,363	1.11	17,786	13,821	1.29	9,618	4,879	1.97
2006/07	22,827	18,369	1.24	23,424	17,352	1.35	11,029	6,122	1.80
2007/08	31,169	24,155	1.29	34,022	27,075	1.26	14,275	7,498	1.90
2008/09	35,916	30,004	1.20	46,876	35,857	1.31	17,656	8,628	2.05
Mean			1.20			1.28			1.95
SD			0.06			0.05			0.10
CV			5.09%			3.67%			4.87%

Source: Appendix 1 & 2

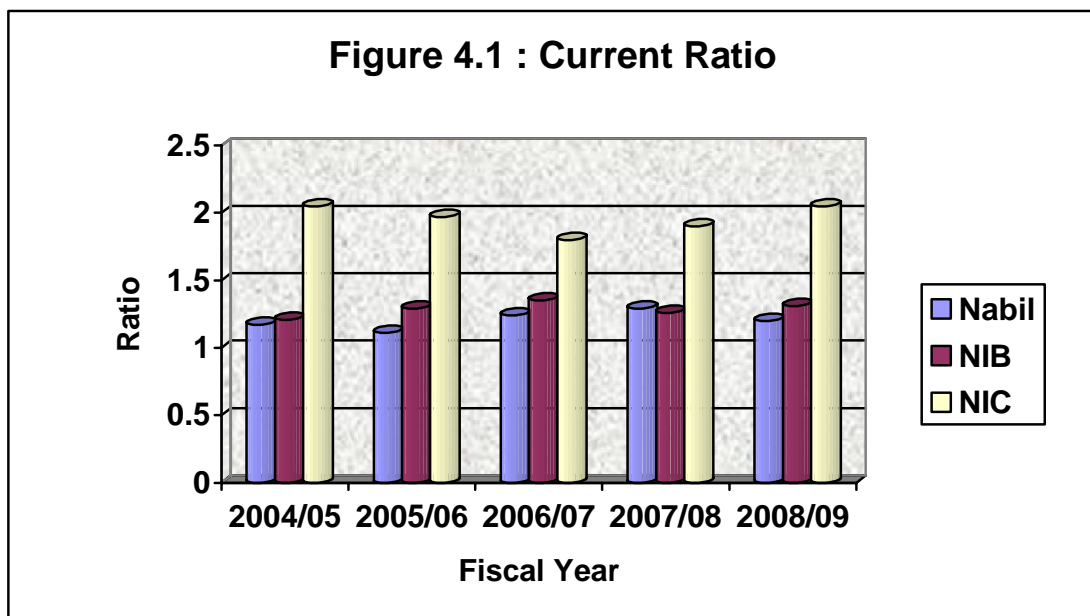


Figure 4.1 explore that the ratios of Nabil & NIBL were fluctuating trend. Nabil has highest in FY 2007/08 i.e. 1.29 times & lowest in FY 2005/06 i.e. 1.11 times.

NIB was highest in FY 2006/07 i.e. 1.35 times & lowest in FY 2003/04 i.e. 1.13 times. Similarly, the ratio of NIC was decreasing trend from FY 2004/05 to 2006/07 then it started to rise. It has highest in FY 2004/05 i.e. 2.05 times and lowest in FY 2003/04 i.e. 1.69 times. Mean of the ratios in NIC was slightly greater than those two banks, which depicts that the banks could not maintain the conventional standard of 2:1 except NIC in FY 2004/05 and 2008/09. The nature of assets and liabilities of commercial banks, the ratio below the stated standard may be accepted as satisfactory, but it signifies that the banks have the poor liquidity position. The banks may face the problem of working capital if they need to pay the current liabilities at demand. Delay in payment of liabilities may lead the banks to lose their goodwill. They will have the problem in winning the confidence of current depositors and short-term lenders. For commercial banks, it is very important to maintain a good balance between liquidity and profitability. If banks keep large portion of money under its control it affects in profit because idle money earn nothings but other hand the bank should have enough cash balance with it to fulfill the requirement of short-term liabilities.

4.1.1.2 Quick Ratio

Quick ratio establishes a relationship between quick or liquid assets & current liabilities. It is computed by dividing the quick assets by current liabilities.

$$\text{Quick Ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}}$$

Table 4.2 describes that quick ratio of Nabil for the study period-remained 0.30, 0.29, 0.37, 0.38 & 0.25 times respectively from the FY 2004/05 to FY 2008/09. Mean & CV were 0.32 times and 15.58% respectively. Similarly, the ratios of NIB were 0.30, 0.36, 0.35, 0.26 & 0.29 times respectively from FY 2004/05 to FY 2008/09 of corresponding years. Mean of the ratios appeared 0.31 times and whereas CV appeared 12.06%. Similarly, the ratios of NIC were 0.67, 0.59, 0.30,

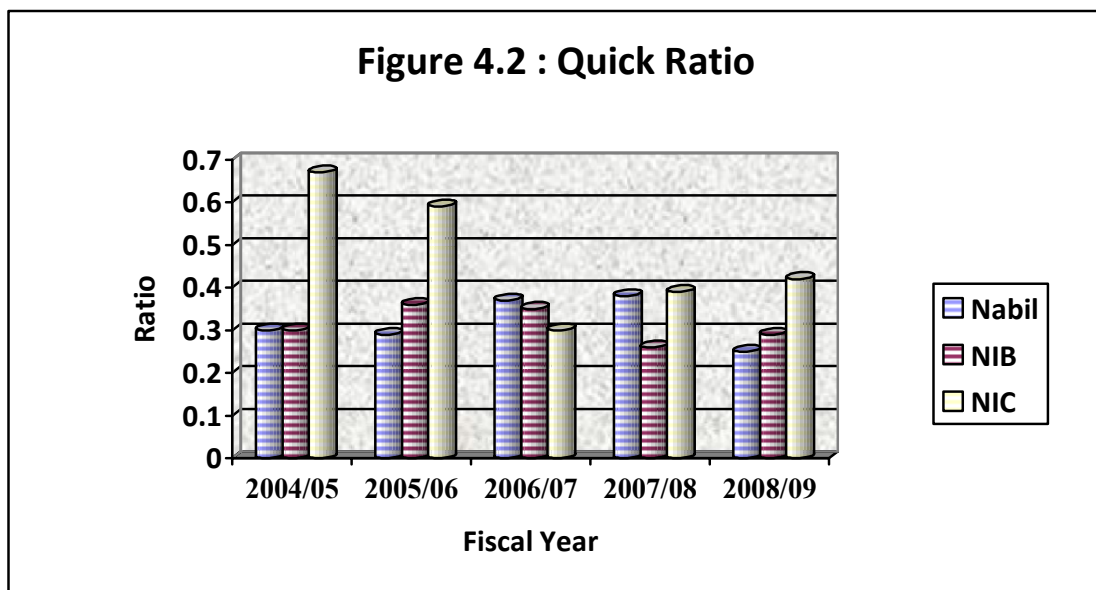
0.39 & 0.42 times respectively from FY 2004/05 to FY 2008/09 of corresponding years. Mean of the ratios appeared 0.47 times and whereas CV appeared 28.64%.

Table 4.2
Quick Ratio (Times)

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Quick Asset	Current Liabilities	Ratio	Quick Asset	Current Liabilities	Ratio	Quick Asset	Current Liabilities	Ratio
2004/05	3,842	12,718	0.30	3,429	11,532	0.30	2,290	3,443	0.67
2005/06	4,667	16,363	0.29	4,929	13,821	0.36	2,859	4,879	0.59
2006/07	6,772	18,369	0.37	6,061	17,352	0.35	1,867	6,122	0.30
2007/08	9,270	24,155	0.38	6,910	27,075	0.26	2,898	7,498	0.39
2008/09	7,632	30,004	0.25	10,449	35,857	0.29	3,656	8,628	0.42
Mean			0.32			0.31			0.47
SD			0.05			0.04			0.14
CV			15.58%			12.06%			28.64%

Source: Annual Reports (2004/05 - 2008/09) & Appendix 2



According to Figure 4.2, the ratios of Nabil and NIB were fluctuating trend. So, the highest ratio of Nabil was 0.38 times in FY 2007/08 and lowest ratio 0.25 times in FY 2008/09. Similarly, highest ratio of NIB was 0.36 times in 2005/06 and lowest is 0.26 times in FY 2007/08. Similarly, the ratio of NIC was decreasing trend. It has highest ratio of NIC was 0.67 times in 2004/05 and lowest is 0.30 times in FY 2006/07. In table 4.2 shows that the mean ratio of NIC is significantly higher than that of the two banks because of higher quick assets due to the amount of investment in government securities. The standard quick ratio is 1:1 i.e. quick assets must be equal to current liabilities. The three banks showed poor liquidity position because of quick ratios of every year were below than standard form. It indicates that they have very weak position of immediate payment of short-term obligation (i.e. current liabilities) because current liabilities were greater than that of quick assets. From the standard point of view we can here say that though the NIC ratio is higher than that of the two banks. Higher the CV of ratios in NIC as compared to two banks signifies greater variation in the ratios. So, NIC seems to be slightly in the better position than Nabil & NIB and then after Nabil seems to be better than NIB.

4.1.1.3 Cash and Bank Balance to Current Assets Ratio

The ratio shows the ability of banks to pay total call made on current deposits. Cash and bank balance are highly liquid assets in current assets proportion. So, the ratio utilizes higher liquidity position than current ratio. The ratio is calculated by dividing cash and bank balance by current assets and expressed as;

$$\text{Cash and Bank Balance to Current Assets Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Current Assets Ratio}}$$

Table 4.3

Cash & Bank Balance to Current Assets Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Cash & Bank Balance	Current Assets	Ratio %	Cash & Bank Balance	Current Assets	Ratio %	Cash & Bank Balance	Current Assets	Ratio %
2004/05	559	14,909	3.75	1,340	13,955	9.61	1,006	7,061	14.24
2005/06	630	18,122	3.48	2,337	17,786	13.14	749	9,618	7.79
2006/07	1,400	22,827	6.13	2,442	23,424	10.42	600	11,029	5.44
2007/08	2,671	31,169	8.57	3,755	34,022	11.04	1,192	14,275	8.35
2008/09	3,373	35,916	9.39	7,918	46,876	16.89	1,461	17,656	8.28
Mean			6.26			12.22			8.82
SD			2.42			2.61			2.91
CV			38.57			21.37			33.01

Source: Annual Reports (2004/05 - 2008/09) & Appendix 1

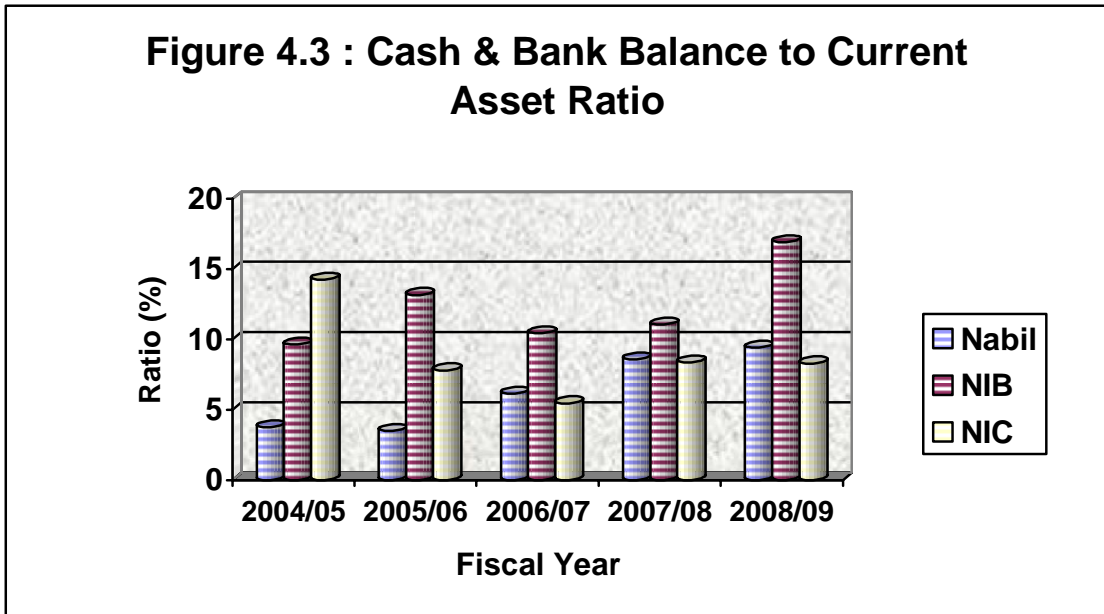


Figure 4.3 indicates that the ratios of Nabil show the increasing trend except decreased in FY2005/06 i.e.8.57%. It was highest in FY 2008/09 i.e.9.39% and lowest in FY 2005/06 i.e. 3.48%. The ratios of NIB & NIC were fluctuating trend. So, highest ratio of NIB was 16.89% appeared in FY 2008/09 and lowest was 9.61% in FY 2004/05. Similarly, the highest ratio of NIC was 14.24% in FY 2004/05 and lowest in FY 2006/07 i.e. 5.44%. The table 4.3 states that the mean ratio of NIB was higher than that of the two banks, which indicates NIB has higher ability to meet the daily cash requirement of their customer's deposits. NIB has more liquidity position & utilized its fund more effectively. Higher CV of ratios in Nabil as compared to NIC and NIB signifies greater variation in the ratios.

4.1.1.4 Cash and Bank Balance to Deposits (Except Fixed Deposits) Ratio

The ratio measures the ability of the banks to meet its immediate obligation. The bank should adequate cash and bank balance to meet the unexpected as well as the heavy withdrawal of deposits. The ratio is computed by dividing the cash and bank balance to total short-term deposits i.e. Saving Deposits, current Deposits, and Margin Deposits & Call deposits. It express as;

$$\text{Cash \& Bank Balance to Deposit (except FD) Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Total deposit (Except FD)}}$$

The Table 4.4 reveals that cash & bank balance to deposit ratio of Nabil for the study period-remained 4.47%, 3.96%, 7.82%, 11.39% & 11.69% respectively from the FY 2004/05 to FY 2008/09. Mean & CV were 7.85 and 41.56% respectively. Similarly, the ratios of NIB were 12.14%, 17.29%, 14.39%, 14.17% & 22.58% respectively from FY 2004/05 to FY 2008/09 of corresponding years. Mean of the ratios appeared 16.11% and whereas CV appeared 22.50%. Similarly, the ratios of NIC were 30.37%, 15.93%, 10.01%, 16.54% & 18.22% respectively from FY 2004/05 to FY 2008/09 of corresponding years. Mean of the ratios appeared 18.22% and whereas CV appeared 36.66%.

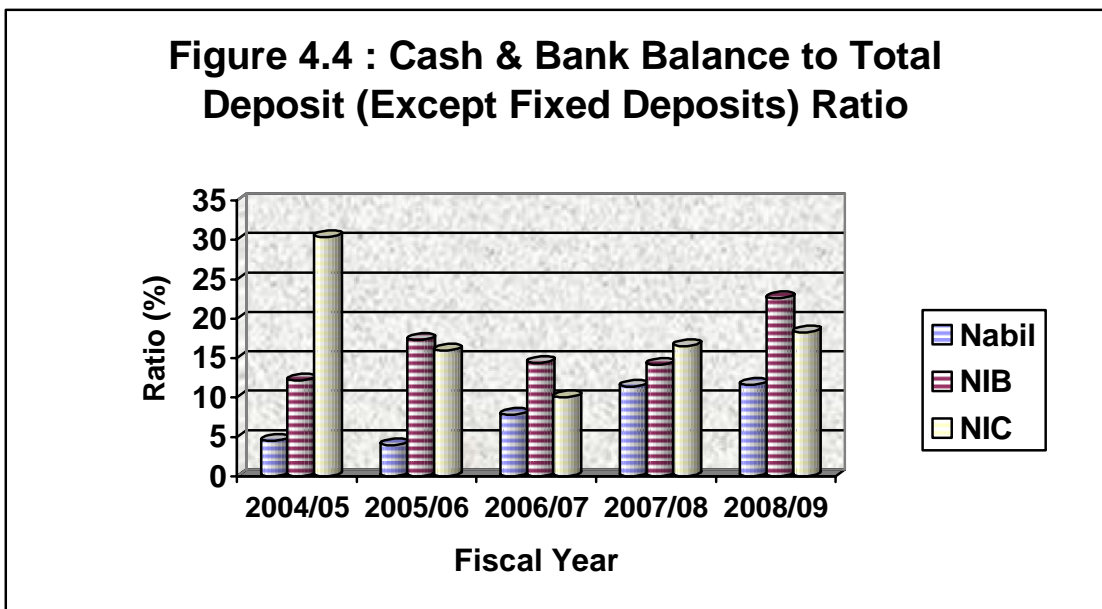
Table 4.4

Cash & Bank Balance to Total Deposit (Except Fixed Deposits) Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Cash & Bank Balance	Total Deposit (Except FD)	Ratio %	Cash & Bank Balance	Total Deposit (Except FD)	Ratio %	Cash & Bank Balance	Total Deposit (Except FD)	Ratio %
2004/05	559	12,508	4.47	1,340	11,042	12.14	1,006	3,311	30.37
2005/06	630	15,898	3.96	2,337	13,514	17.29	749	4,701	15.93
2006/07	1,400	17,907	7.82	2,442	16,972	14.39	600	5,994	10.01
2007/08	2,671	23,451	11.39	3,755	26,507	14.17	1,192	7,209	16.54
2008/09	3,373	29,038	11.61	7,918	35,065	22.58	1,461	8,000	18.26
Mean			7.85			16.11			18.22
SD			3.26			3.63			6.68
CV			41.56			22.50			36.66

Source: Annual Reports (2004/05 - 2008/09)



In figure 4.4, the ratios of Nabil show the decreasing trend up to 2nd year and increasing trend than after. It was highest in FY 2008/09 i.e. 11.61% and lowest in FY 2005/06 i.e.3.96%. Similarly, the ratio of NIB & NIC was fluctuating trend. NIB has the highest in FY 2008/09 i.e. 22.58% and lowest in FY 2004/05 i.e. 12.14%. Likewise, NIC has the highest in FY 2004/05 i.e. 30.37% and lowest in FY 2006/07 i.e. 10.01%. The mean ratio of NIC appeared greater than that of two banks, which indicates that NIC can maintain its immediate obligation & also should maintain its adequate cash and bank balance efficiently than Nabil & NIB. Higher ratio indicates sound liquidity position of bank. But higher ratio is not good enough to reveal under utilization of its fund. Higher CV of ratios in Nabil as compared to two banks signifies greater variation in the ratios.

4.1.1.5 Cash and Bank Balance to Total Deposit Ratio

The ratio shows the proportion of total deposits held at most liquid assets. The ratio computed by dividing the cash & bank balance by total Deposits.

$$\text{Cash and Bank Balance to Total Deposit Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Total deposits}}$$

Table 4.5 explains that the ratios were 3.83%, 3.26%, 6%, 8.37% and 9.03% in Nabil in the respectively years for the FY 2004/05 to FY 2008/09. Mean and CV of the ratios were 6.10% and 38.08% respectively. Similarly, the ratios remained 9.40%, 12.34%, 9.97%, 10.90% & 16.96% in NIB in the respectively years for the FY 2004/05 to FY 2008/09. Mean and CV of the ratios were 11.91% and 22.76% respectively. Similarly, the ratios remained 16.11%, 8.55%, 5.96%, 9.11% & 9.38 in NIC in the respectively years for the FY 2004/05 to FY 2008/09. Mean and CV of the ratios were 9.82% and 34.31% respectively.

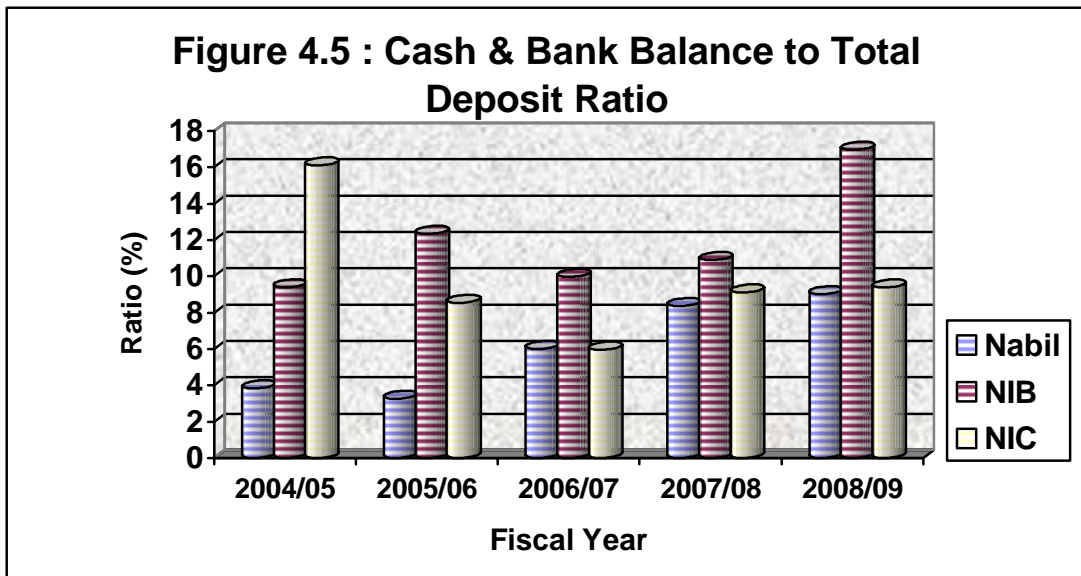
Table 4.5

Cash and Bank Balance to Total Deposit Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Cash & Bank Balance	Total Deposit	Ratio %	Cash & Bank Balance	Total Deposit	Ratio %	Cash & Bank Balance	Total Deposit	Ratio %
2004/05	559	14,587	3.83	1,340	14,255	9.40	1,006	6,241	16.11
2005/06	630	19,347	3.26	2,337	18,927	12.34	749	8,766	8.55
2006/07	1,400	23,342	6.00	2,442	24,489	9.97	600	10,068	5.96
2007/08	2,671	31,915	8.37	3,755	34,452	10.90	1,192	13,085	9.11
2008/09	3,373	37,348	9.03	7,918	46,698	16.96	1,461	15,580	9.38
Mean			6.10			11.91			9.82
SD			2.32			2.71			3.37
CV			38.08			22.76			34.31

Source: Annual Reports (2004/05 - 2008/09)



In figure 4.5, the ratios of Nabil bank appeared decreasing trend up to 2nd year and than after it started to rise. The ratio reached highest in FY 2008/09 i.e. 9.03% &

lowest in FY 2005/06 i.e. 3.26%. The ratio in NIB was fluctuating trend. So highest ratio was 16.96% in FY 2008/09 and lowest ratio was 9.40% in FY 2004/05. The ratio in NIC was fluctuating trend. So highest ratio was 16.11% in FY 2004/05 and lowest ratio was 5.96% in FY 2006/07. The mean ratio of NIB appeared greater than NIC & Nabil, which means that NIB has greater ability to repay the deposits i.e. NIB is more efficient to serve the customers from liquidity point of view. A high ratio represents the greater ability to meet their all types of deposits. But too high ratio of cash and bank balance to total deposits may be unsuitable and harmful because it affects their profitability position and also low ratio is unfavorable as capital will be tied up and opportunity cost will be higher. Higher CV of ratios in Nabil as compared NIC & NIB signifies greater variation in the ratios.

4.1.1.6 NRB Balance to Current and Saving Deposit Ratio

The ratio shows the percentage of amount deposits by the banks in Nepal Rastra Bank (NRB) as compare to the current and saving deposits. Commercial banks required holding certain position of current and saving deposits in NRB account. It is computed by dividing the NRB balance by current and saving deposits.

$$\text{NRB Balance to Current and Saving Deposit Ratio} = \frac{\text{NRB Balance}}{\text{Current \& Saving deposits}}$$

Table 4.6 denotes that the ratios were 3.97%, 2.73%, 8.20%, 10.49% and 13.18% in Nabil in the respectively years for the FY 2004/05 to FY 2008/09. Mean and CV of the ratios were 7.71% and 50.77% respectively. Similarly, the ratios remained 9.42%, 15.59%, 10.69%, 10.82% & 21.18% in NIB in the respectively years for the FY 2004/05 to FY 2008/09. Mean and CV of the ratios were 13.54% and 32.20% respectively. Similarly, the ratios remained 36.88%, 14.29%, 6.83%, 14.67% & 20.11% in NIC in the respectively years for the FY 2004/05 to FY 2008/09. Mean and CV of the ratios were 18.56% and 54.37% respectively.

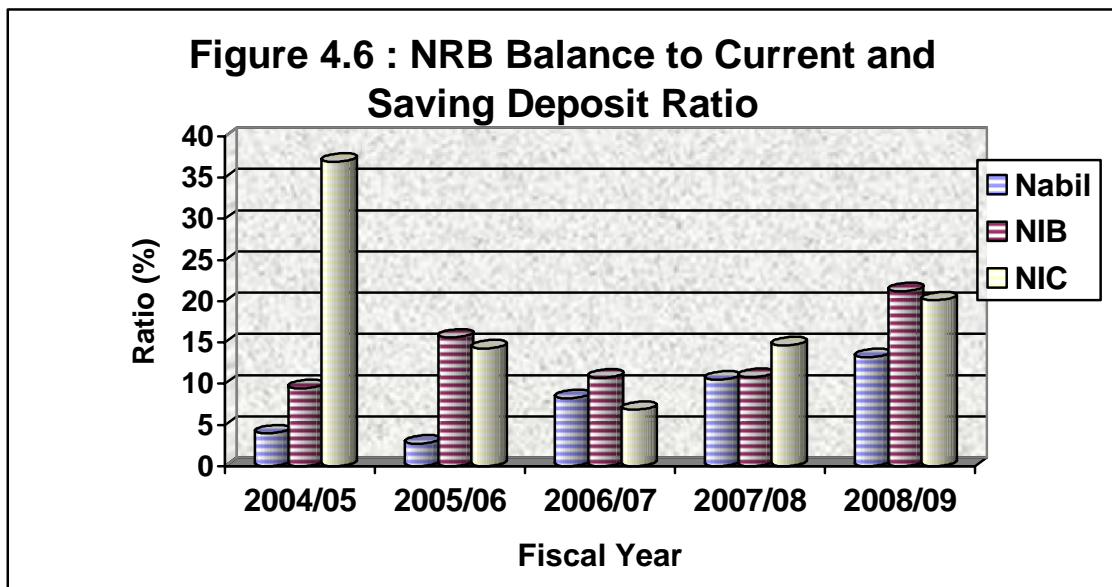
Table 4.6

NRB Balance to Current and Saving Deposit Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	NRB Balance	Current & Saving Deposit	Ratio %	NRB Balance	Current & Saving Deposit	Ratio %	NRB Balance	Current & Saving Deposit	Ratio %
2004/05	390	9,826	3.97	780	8,287	9.42	832	2,257	36.88
2005/06	318	11,681	2.73	1,526	9,788	15.59	456	3,189	14.29
2006/07	1,113	13,583	8.20	1,381	12,917	10.69	263	3,846	6.83
2007/08	1,829	17,444	10.49	1,820	16,827	10.82	634	4,322	14.67
2008/09	2,649	20,101	13.18	4,411	20,823	21.18	971	4,828	20.11
Mean			7.71			13.54			18.56
SD			3.92			4.36			10.09
CV			50.77			32.20			54.37

Source: Annual Reports (2004/05 - 2008/09)



In above figure 4.6, the ratio of Nabil & NIB remained highest in 5th year i.e.13.18% & 21.18% respectively whereas in NIC, it remained highest in the 1st year i.e. 36.88%. Similarly, the lowest ratios went in 3rd year i.e. 2.73% in Nabil,

in 1st year i.e.9.42% in NIB & in 4th year i.e.6.83% in NIC. As per directive of Nepal Rastra Bank, the required ratio is 8%. Therefore, Nabil bank shows below the standard in FY 2004/05 & 2005/06 and NIC shows below the standard in FY 2006/07. Mean ratio of NIC came higher than that of Nabil and NIB, which means that NIC has greater ability to repay the current & saving deposits i.e. NIC is more efficient to serve the customers from liquidity point of view. From the CV analysis, it can be concluded that the ratio of NIC varied to a greater than that of Nabil & NIC.

4.1.1.7 NRB Balance to Fixed Deposit Ratio

The ratio shows the proportion of cash balance at Nepal Rastra Bank's current account as compare to the commercial banks' fixed deposits amount. The ratio is calculated as using the following formula;

$$\text{NRB Balance to Fixed Deposit Ratio} = \frac{\text{NRB Balance}}{\text{Fixed Deposits}}$$

Table 4.7
NRB Balance to Fixed Deposit Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	NRB Balance	Fixed Deposit	Ratio %	NRB Balance	Fixed Deposit	Ratio %	NRB Balance	Fixed Deposit	Ratio %
2004/05	390	2,079	18.75	780	3,212	24.29	832	2,931	28.41
2005/06	318	3,449	9.23	1,526	5,413	28.19	456	4,064	11.21
2006/07	1,113	5,435	20.49	1,381	7,517	18.38	263	4,074	6.45
2007/08	1,829	8,464	21.61	1,820	7,944	22.91	634	5,876	10.79
2008/09	2,649	8,311	31.87	4,411	11,633	37.92	971	7,580	12.81
Mean			20.39			26.34			13.93
SD			7.22			6.59			7.54
CV			35.40			25			57.10

Source: Annual Reports (2004/05 - 2008/09)

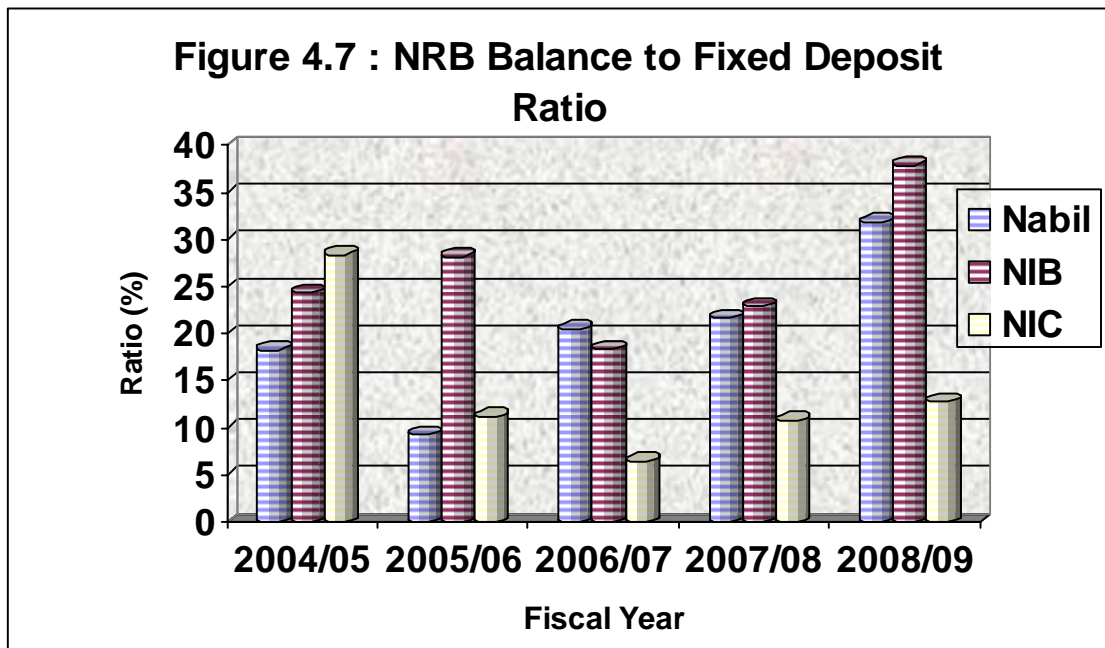


Figure 4.7 discuss that the ratios of Nabil indicate decreasing trend to 2nd year than after that it started to rise. So, it ranged from minimum of 9.23% in 3rd year and maximum of 31.87% in last year. In NIB, it has fluctuating trend in the period of review. So, it ranged from minimum of 18.38% in 4th year and maximum of 37.92% in last year. In NIC, it has decreasing trend in the period of review. So, it ranged from minimum of 6.45% in 4th year and maximum of 28.41% in 2nd year. In all of the years, the ratio remained higher than 6%, the minimum standard set by NRB. Mean ratio of NIB slightly greater than that of two banks. It reveals that NIB has slightly stronger the fixed deposits to be repaid than that of Nabil & NIC. Furthermore, CV of the ratios remained higher in NIC than Nabil & NIB, due to greater fluctuation in the ratios of NIC.

4.1.2 Efficiency /Activity/ Turnover Ratios

Turnover ratios have been used to evaluate the efficiency with which the banks have managed and utilized their assets. So, it is also called Efficiency ratio. These ratios are also employed to evaluate the speed with which assets are being

converted and turnover. These ratios moreover help in measuring the bank's ability to utilize their available resources. In this study these ratios include; loans and advances to total deposit ratio, loans and advances to saving deposit ratio, loans and advances to fixed deposit ratio, investment total deposit ratio and performing assets to total assets ratio.

4.1.2.1 Loans and Advances to Total Deposit Ratio

This ratio is calculated to find out how the banks are successful utilizing the outsiders' fund i.e. total deposits for profit generating purpose in the form of extending loan and advances. It is calculated as;

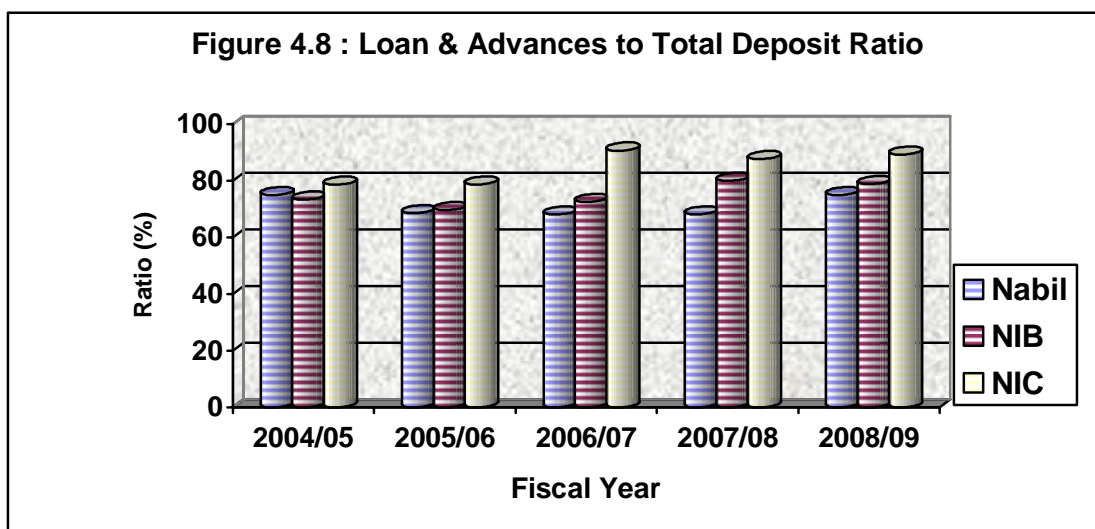
$$\text{Loans and Advances to Total Deposit Ratio} = \frac{\text{Loans \& Advances}}{\text{Total deposits}}$$

Table 4.8
Loans and Advances to Total Deposit Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Loans & Advances	Total Deposit	Ratio %	Loans & Advance	Total Deposit	Ratio %	Loans & Advance	Total Deposit	Ratio %
2004/05	10,947	14,587	75.05	10,453	14,255	73.33	4,909	6,241	78.66
2005/06	13,279	19,347	68.63	13,178	18,927	69.63	6,902	8,766	78.74
2006/07	15,903	23,342	68.13	17,769	24,489	72.56	9,129	10,068	90.67
2007/08	21,759	31,915	68.18	27,529	34,452	79.91	11,465	13,085	87.62
2008/09	27,999	37,348	74.97	36,827	46,698	78.86	13,916	15,580	89.32
Mean			70.99			74.86			85
SD			3.29			3.91			5.24
CV			4.63			5.22			6.16

Source: Annual Reports (2004/05 - 2008/09)



The Figure 4.8 depicts that the ratio in the three banks fluctuated throughout the study period. In Nabil bank, it ranged from minimum in 3rd year i.e.68.13% to maximum in second year i.e. 75.05%. In NIB, it is highest in FY 2007/08 i.e.79.91% and lowest in FY 2005/06 i.e. 69.63%. In NIC, it is highest in FY 2006/07 i.e.90.67% and lowest in FY 2007/05 i.e. 78.66%. Mean ratio of NIC appeared considerably higher than that of Nabil & NIB, which signifies that NIC is more successful in utilizing the resource in profitable sectors than two banks. From the CV analysis, it can be concluded that the ratio of NIC varied to a slightly greater than that of two banks. There is not standard turnover ratio for loan and advances to total deposits. Higher turnover ratio is considered significant as it is indicated that the bank is utilizing its assets in profitable field and vice versa. For this analysis we can say that from point of the view of both amount & ratio, the NIC is better than that of Nabil & NIB. Similarly, NIB is better than that of Nabil from above analysis.

4.1.2.2 Loans and Advances to Saving Deposit Ratio

Saving deposits are interest- bearing obligation for short- term purpose where as loan and advances are long-term investment for generating income. So the ratio indicates how money time's short –term interest-bearing deposits are utilized for income generating purpose. It is calculated as;

$$\text{Loan and Advances to Saving Deposit Ratio} = \frac{\text{Loans \& Advances}}{\text{Saving deposits}}$$

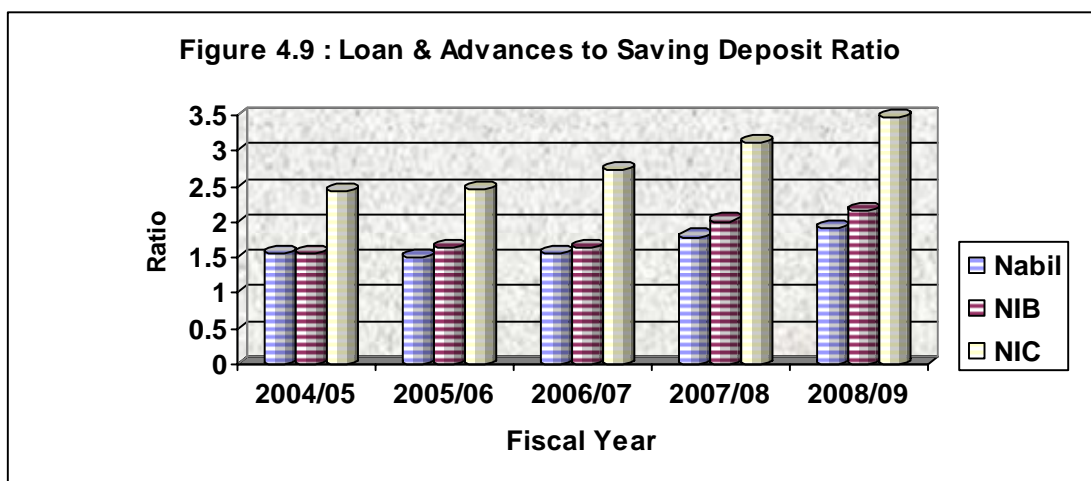
Table 4.9

Loans and Advances to Saving Deposit Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Loans & Advance	Saving Deposit	Ratio	Loans & Advance	Saving Deposit	Ratio	Loans & Advance	Saving Deposit	Ratio
2004/05	10,947	7,026	1.56	10,453	6,704	1.56	4,909	2,024	2.43
2005/06	13,279	8,771	1.51	13,178	8,082	1.63	6,902	2,797	2.47
2006/07	15,903	10,187	1.56	17,769	10,742	1.65	9,129	3,336	2.74
2007/08	21,759	12,160	1.79	27,529	13,689	2.01	11,465	3,668	3.13
2008/09	27,999	14,620	1.92	36,827	17,066	2.16	13,916	3,994	3.48
Mean			1.67			1.80			2.85
SD			0.16			0.24			0.40
CV			9.54%			13.19%			14.11%

Source: Annual Reports (2004/05 - 2008/09)



The ratios of all three banks show the increasing trend in FY 2004/05 to FY 2008/09 from above figure 4.9. In Nabil, the highest ratio is 1.92 times in FY 2008/09 and lowest ratio is 1.51 in FY 2005/06. In NIB, the highest ratio is 2.16 times in FY 2008/09 and lowest is 1.56 times in FY 2004/05. So, in NIB, the

highest ratio is 3.48 times in FY 2008/09 & lowest ratio is 2.43 times in FY 2004/05. With respect to these ratios, the three banks have not shown good performance. In other hand, these banks have not well utilized the interest bearing deposits in term of loan and advances. Since average of the ratios in NIC seemed greater than that of NIB & Nabil, the turnover position of NIC was greater than that of these two banks. But in comparing the each year ratio and CV analysis, NIC has also good performance than Nabil & NIB.

4.1.2.3 Loans and Advances to Fixed Deposits Ratio

The ratio examines that how many the fund is used in loans and advance against fixed deposits. They are interest bearing long-term obligation where as loans and advance are the major sources of investment in generating income for commercial banks. It is calculated as;

$$\text{Loans and Advances to Fixed Deposit Ratio} = \frac{\text{Loans \& Advances}}{\text{Fixed deposits}}$$

Table 4.10

Loans and Advances to Fixed Deposit Ratio (Times)

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Loans & Advance	Fixed Deposit	Ratio	Loans & Advance	Fixed Deposits	Ratio	Loans & Advance	Fixed Deposits	Ratio
2004/05	10,947	2,079	5.27	10,453	3,212	3.25	4,909	2,931	1.68
2005/06	13,279	3,449	3.85	13,178	5,413	2.43	6,902	4,065	1.70
2006/07	15,903	5,435	2.93	17,769	7,517	2.36	9,129	4,075	2.24
2007/08	21,759	8,464	2.57	27,529	7,944	3.47	11,465	5,876	1.95
2008/09	27,999	8,311	3.37	36,827	11,633	3.17	13,916	7,580	1.84
Mean			3.60			2.94			1.88
SD			0.94			0.45			0.20
CV			26.11%			15.43%			10.85%

Source: Annual Reports (2004/05 - 2008/09)

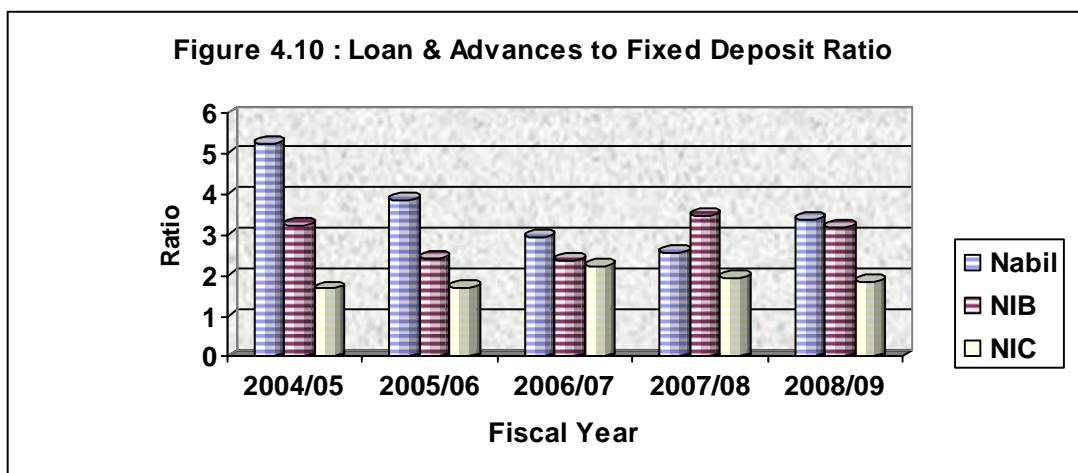


Figure 4.10 indicates that the ratio of Nabil revealed decreasing trend to 4th year and than after it start to rise slightly. It is highest in FY 2004/05 i.e. 5.27 times and lowest in FY 2007/08 i.e. 2.57 times. It showed fluctuating trend in NIB & NIC for the period. In NIB, the highest was in FY 2007/08 i.e. 3.47 times and lowest in FY 2006/07 i.e. 2.36 times. In NIB, the highest was in FY 2006/07 i.e. 2.24 times and lowest in FY 2004/05 i.e. 1.68 times. Mean turnover ratio of Nabil is greater than that of NIB & NIC, which means it utilized the high interest bearing fixed deposits in yielding sector satisfactory return or utilizes its fixed deposits more efficiently. As compared to Nabil, mean ratio is slightly lower in NIB than NIC; it also utilized the high interest bearing fixed deposits in yielding sectors satisfactory return in comparing the saving turnover ratio. CV analysis of Nabil is greater than NIB & NIC. In comparing the saving deposits turnover ratio, the fixed deposits turnover gives good performance in three banks.

4.1.2.4 Investment to Total Deposit Ratio

Total investment includes its HMG treasury bills, development bonds, other company's share and other types of investment. The ratio shows how efficiently the major sources of bank have been mobilized. It is calculated as;

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

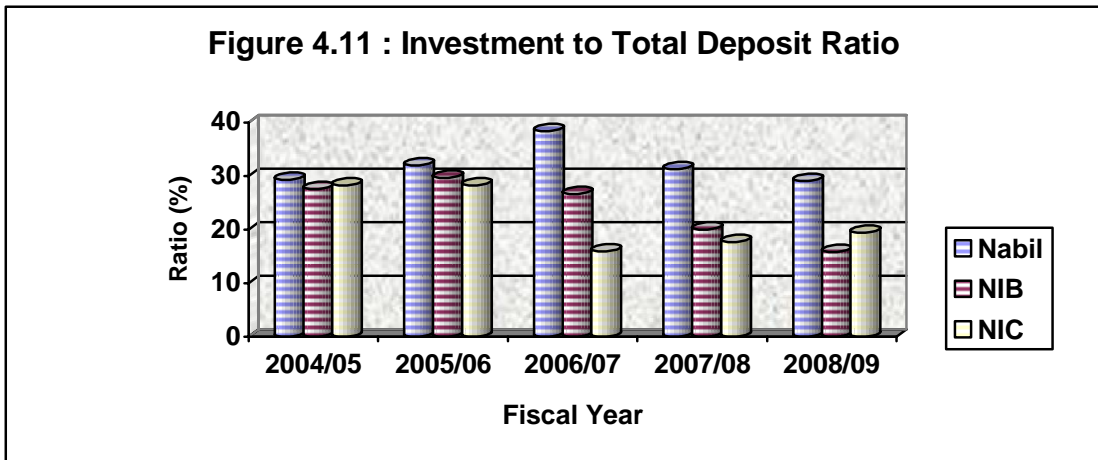
Table 4.11

Investment to Deposit Ratio

Rs in ‘million’

Nabil Bank Ltd				NIB			NIC		
FY	Total Investment	Total Deposits	Ratio %	Total Investment	Total Deposits	Ratio %	Total Investment	Total Deposits	Ratio %
2004/05	4,270	14,587	29.27	3,934	14,255	27.60	1,761	6,241	28.21
2005/06	6,181	19,347	31.95	5,603	18,927	29.60	2,480	8,766	28.29
2006/07	8,956	23,342	38.37	6,506	24,489	26.57	1,599	10,068	15.89
2007/08	9,966	31,915	31.23	6,879	34,452	19.97	2,311	13,085	17.67
2008/09	10,875	37,348	29.12	7,403	46,698	15.85	3,026	15,580	19.42
Mean			31.99			23.92			21.90
SD			3.37			5.17			5.31
CV			10.55			21.61			24.24

Source: Annual Reports (2004/05 - 2008/09)



The ratios of Nabil explores increasing trend to 3rd year then after it started to fall. It has the highest appeared in FY 2006/07 i.e. 38.37% and the lowest appeared in FY 2008/09 i.e. 29.12%. Similarly, the ratio of NIB & NIC were decreasing trend. In NIB, the highest was in FY 2005/06 i.e. 29.60% and the lowest in NIB appeared in FY 2008/9 i.e.15.85% and in NIC, the highest was in FY 2005/06 i.e. 28.29% & lowest appeared in FY 2006/07 i.e.15.89%. Mean ratio in Nabil bank was greater than NIB & NIC, which signifies that Nabil bank has more

successfully allocated its deposits in investment portfolio. High ratio indicates management efficiency regarding the utilization of deposits and low ratio is result of less efficiency in use of fund. Because of high investment and low deposits amount in Nabil, its ratios were high which mean it utilized its fund efficiently and that of NIB & NIC were reserved. CV analysis of NIC i.e. 25.21% is greater than Nabil & NIB, which indicates lesser consistency in its ratios.

4.1.2.5 Performing Assets to Total Assets Ratio

Performing assets include those assets that are invested for income generating purpose. It consists loan and advances; bill purchased and discounted investment and money at call and short notice. This ratio measures what percentage of assets has been funded for income generation or it measures how efficiently the bank uses investment and economic resources at its demand. It is calculated as;

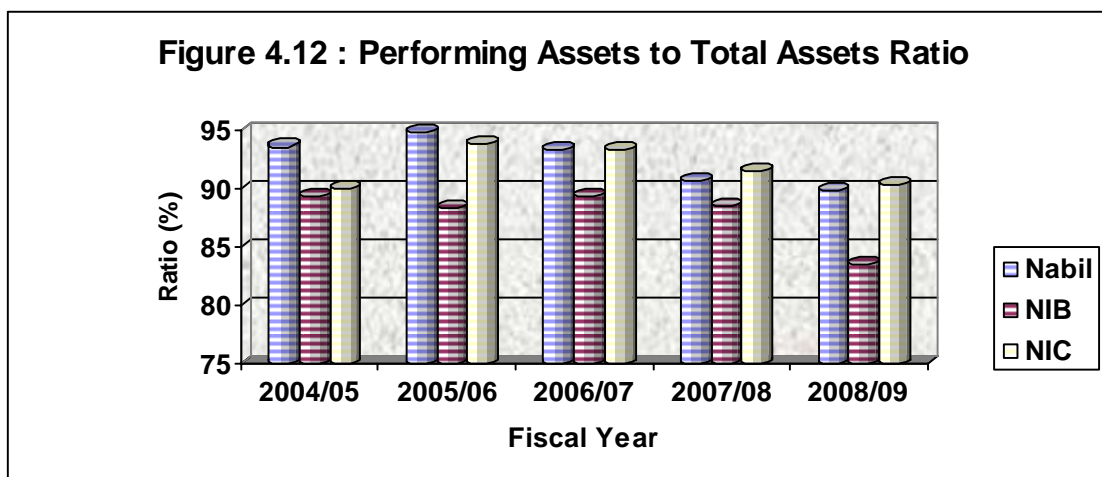
$$\text{Performing Assets to Total Assets Ratio} = \frac{\text{Performing Assets}}{\text{Total Assets}}$$

Table 4.12
Performing Assets to Total Assets Ratio

Rs in 'million'

FY	Nabil Bank Ltd			NIB			NIC		
	Performing Assets	Total Assets	Ratio %	Performing Assets	Total Assets	Ratio %	Performing Assets	Total Assets	Ratio %
2004/05	16,085	17,186	93.59	14,527	16,274	89.27	6,760	7,508	90.04
2005/06	21,194	22,330	94.91	18,851	21,330	88.38	9,736	10,384	93.76
2006/07	25,423	27,253	93.28	24,638	27,591	89.30	10,891	11,679	93.26
2007/08	33,678	37,133	90.70	34,409	38,873	88.52	13,937	15,239	91.46
2008/09	39,427	43,867	89.88	44,230	53,011	83.44	16,942	18,751	90.35
Mean			92.47			87.78			91.77
SD			1.88			2.20			1.50
CV			2.03			2.51			1.64

Source: Annual Reports (2004/05 - 2008/09) & Appendix 4



In Nabil bank, the ratio depicts increasing trend up to 2nd year and then after it start to fall. It is highest in FY 2005/06 i.e. 94.91% & lowest in FY 2008/09 i.e. 89.88%. In NIB, it also shows fluctuating trend. It was highest ratio in FY 2006/07 i.e.89.30% & lowest in FY 2008/09 i.e. 83.44%. In NIC, it shows increasing trend to 2nd year and then it started to fall. It was highest ratio in FY 2005/06 i.e.93.76% & lowest in FY 2004/05 i.e. 90.04%. Mean of ratios appeared slightly greater in Nabil bank, which means it has used more proportion of assets for income generating purpose. Throughout the study period, Nabil bank utilized its assets in terms of loan and advances, investment and bill discounting and purchasing more effectively than NIB & NIC. NIC also utilized its assets in term of loan and advances and other performing assets more effectively but slightly less than Nabil. In other words, NIB utilized its assets in term of loan and advances and other performing assets more effectively but less than Nabil & NIC. CV of the ratios in NIB is higher than Nabil & NIC, which clarifies that the ratios remained less consistent.

4.1.3 Profitability Ratios

Profit is an important factor that determines the firm's expansion & diversification. A required level of profit is necessary for the firm's growth and survives in the

competitive environment. Profitability ratios have been employed to measure the operating efficiency of the sampled banks. For the purpose, return on assets, return on net worth, return on total deposit, total interest expenses to total interest income ratio and interest earned to total asset ratio have been analyzed and interpreted.

4.1.3.1 Return on Assets (ROA)

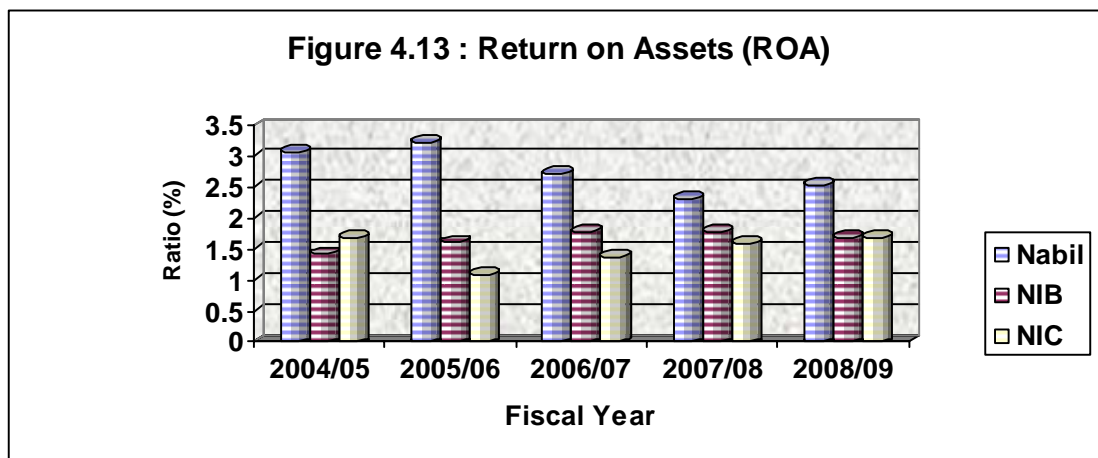
The ratio is useful in measuring the profitability of all financial resources invested in the firm's assets. It is also called net profit or loss to total assets or working fund ratio and denoted by ROA. It is calculated as;

$$\text{Return on Assets} = \frac{\text{Net Profit After tax (NPAT)}}{\text{Total Assets}}$$

Table 4.13
Return on Assets (ROA)

FY	2004/05	2005/06	2006/07	2007/08	2008/09	Mean	S.D	C.V
Nabil	3.06%	3.23%	2.72%	2.32%	2.55%	2.78%	0.33%	11.94%
NIB	1.42%	1.61%	1.79%	1.77%	1.68%	1.65%	0.13%	8.08%
NIC	1.69%	1.08%	1.36%	1.60%	1.69%	1.48%	0.24%	15.86%

Source: Annual Reports (2004/05 - 2008/09)



Above figure 4.13 states that the ratios of Nabil shows the increasing trend to FY 2005/06 and then after it starts to fall and in last year slightly rise. It reached 3.23% in FY 2005/06 at highest point & 2.32% in FY 2007/08 at lowest. The ratios of NIB are increasing trend. It was highest in FY 2006/07 i.e. 1.79% and lowest in FY 2004/05 i.e. 1.42%. Similarly, the ratios of NIC are decreasing trend to 2nd year and then it started to rise. It was highest in FY 2008/09 i.e. 1.69% and lowest in FY 2005/06 i.e. 1.08%. The mean ratio was considerably higher in Nabil bank than that of NIB & NIC, which signifies that the profitability position of Nabil in the relation to this ratio is better than that of NIB & NIC. If bank earns high profit, it will increase its goodwill in competitive market as it can give attractive bonus and dividend to staffs and shareholders respectively. From the above analysis overall profitability of Nabil is better than NIB & NIC and whole credit goes to good management of banking sectors. CV of the ratios was higher in NIC than that of Nabil & NIB. In total, the three banks profitability position was satisfactory.

4.1.3.2 Return on Net Worth / Shareholders' Equity (ROE)

The ratio is tested to see the profitability of owners' investment. It reflects the extent to which the objective of business is accomplished. So, all commercial banks have its main objectives to earn the maximum profit, so that they can run smoothly and get the name and fame. The ratio is of great interest to present as prospective shareholders' and also of great significance to management, which has the responsibility maximizing the owners' welfare. So, higher is desirable. Net worth refers the owner's claim on banks. It is also called net profit to shareholders equity ratio on shareholder equity simply denoted by ROE. It is calculated as;

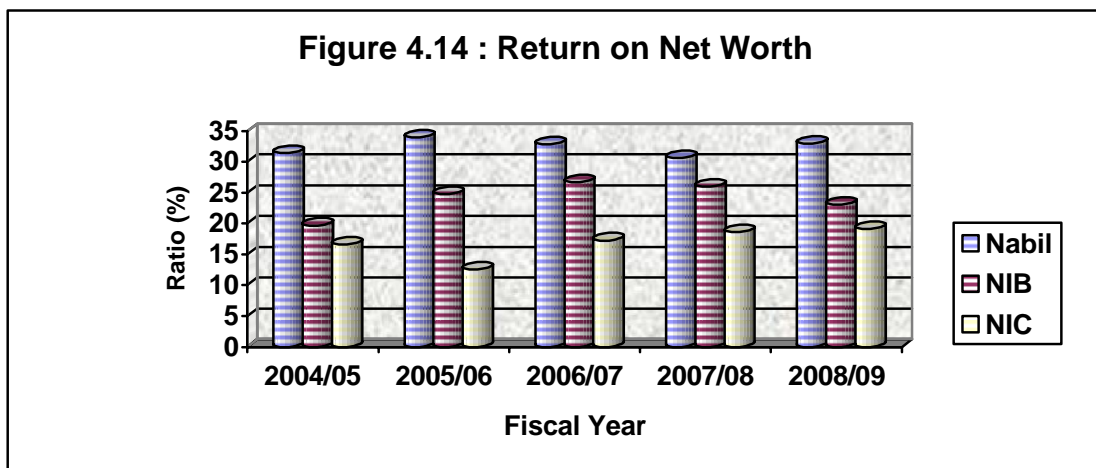
$$\text{Return on Net Worth} = \frac{\text{Net Profit After tax (NPAT)}}{\text{Net Worth}}$$

Table 4.14
Return on Net Worth

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	NPAT	Net Worth	Ratio %	NPAT	Net Worth	Ratio %	NPAT	Net Worth	Ratio %
2004/05	520	1,657	31.39	232	1,180	19.67	114	684	16.63
2005/06	635	1,873	33.91	350	1,415	24.77	97	766	12.60
2006/07	674	2,055	32.79	501	1,878	26.70	158	918	17.25
2007/08	746	2,440	30.60	697	2,687	25.93	243	1,303	18.65
2008/09	1,031	3,129	32.95	901	3,908	23.05	317	1,660	19.12
Mean			32.33			24.02			16.85
SD			1.18			2.50			2.31
CV			3.65			10.41			13.70

Source: Annual Reports (2004/05 - 2008/09) & Appendix 6



The figure 4.14 denotes that the ratio in Nabil showed fluctuating trend. It was highest in FY 2005/06 i.e. 33.91% and lowest in FY 2007/08 i.e. 30.60%. In NIB, the ratio was increasing trend to 3rd year and then it started to fall. It ranged from minimum in FY 2004/05 i.e. 19.67% to maximum in FY 2006/07 i.e. 26.70%. In NIC, the ratios was also decreasing trend to 2nd year and then it started to rise. It

ranged from minimum in FY 2005/06 i.e. 12.60% to maximum in FY 2008/09 i.e. 19.12%. Mean ratio of Nabil appeared more than that of NIB and almost two times of NIC, which indicates that Nabil has effectively utilized the owners' capital and able to give regular & significant return to them. Higher CV of the ratios in NIC signifies that the lesser uniformity in the ratio or the ratios were far from the mean ratios.

4.1.3.3 Return on Total Deposits

The ratio is shows the relation of net profit earned by bank with the total deposits accomplished. It is calculated as;

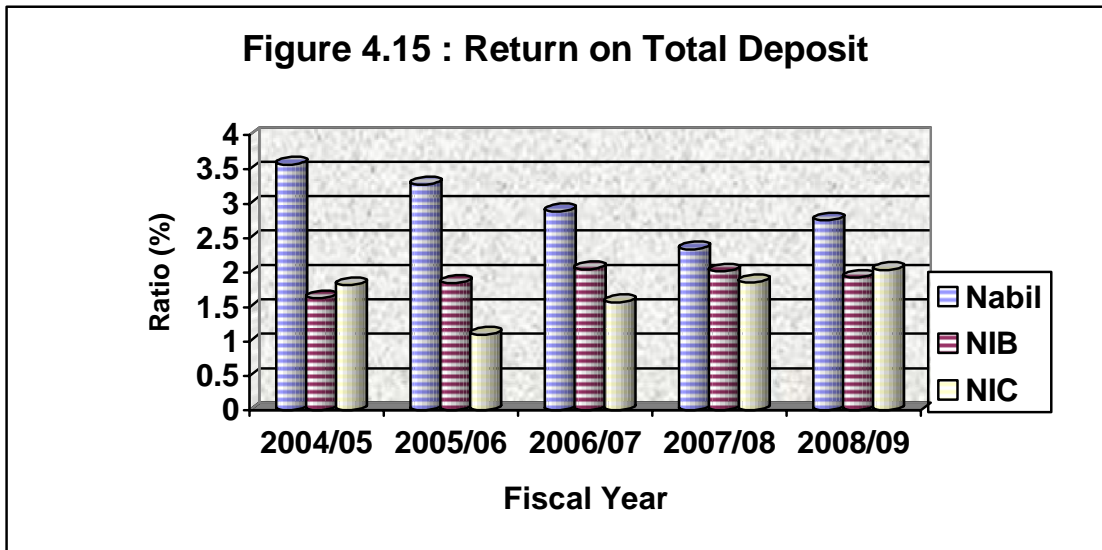
$$\text{Return on Total Deposit} = \frac{\text{Net Profit After tax (NPAT)}}{\text{Total Deposit}}$$

Table 4.15
Return on Total Deposit

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	NPAT	Total Deposit	Ratio %	NPAT	Total Deposit	Ratio %	NPAT	Total Deposit	Ratio %
2004/05	520	14,587	3.57	232	14,255	1.63	114	6,241	1.82
2005/06	635	19,347	3.28	350	18,927	1.85	97	8,766	1.10
2006/07	674	23,342	2.89	501	24,489	2.05	158	10,068	1.57
2007/08	746	31,915	2.34	697	34,452	2.02	243	13,085	1.86
2008/09	1,031	37,348	2.76	901	46,698	1.93	317	15,580	2.04
Mean			2.97			1.90			1.68
SD			0.43			0.15			0.33
CV			14.32			7.93			19.40

Source: Annual Reports (2004/05 - 2008/09) & Appendix 6



The figure 4.15 exhibits that the ratios in Nabil followed decreasing trend except in FY 2008/09. It was ranged from minimum in FY 2007/08 i.e. 2.34% to maximum in FY 2004/05 i.e. 3.57%. In NIB, the ratios showed increasing trend except in FY 2007/08 and 2008/09. It ranged 1.63% minimum in FY 2004/05 to 2.05% FY 2006/07 the maximum. In NIC, the ratios showed decreasing trend to 2nd year and then it started to rise. It ranged 1.10% minimum in FY 2005/06 to 2.04% FY 2008/09 the maximum. Mean of the ratio was higher in Nabil than that of NIB & NIC. It signifies that the profitability of Nabil is stronger than that of NIB & NIC. CV of the ratios appeared greater in NIC, which indicates that its ratios were respectively less uniform through out the review period.

4.1.3.4 Total Interest Expenses to Total Interest Income Ratio

The ratio shows the percentage of interest expenses incurred in relation to the interest income incurred. In other words, it indicates the how much percent of interest income is used as interest paid. Low ratio is favorable from profitability point of view and expressed as;

$$\text{Total Interest Expenses to Total Interest Income Ratio} = \frac{\text{Total Interest Expenses}}{\text{Total Interest Income}}$$

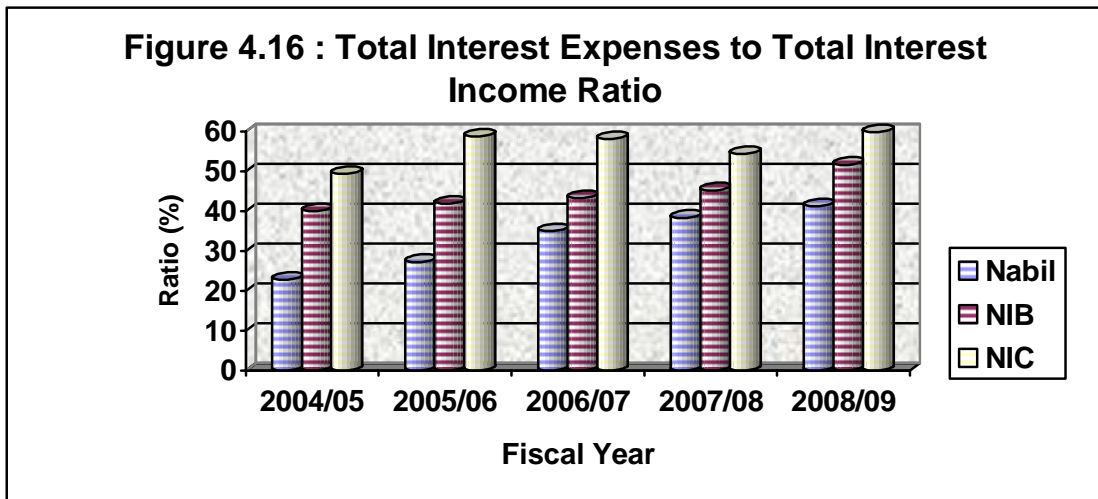
Table 4.16

Total Interest Expenses to Total Interest Income Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Total Int. Exp.	Total Int. Income	Ratio %	Total Int. Exp.	Total Int. Income	Ratio %	Total Int. Exp.	Total Int. Income	Ratio %
2004/05	244	1,069	22.79	355	887	39.98	226	458	49.39
2005/06	357	1,310	27.26	491	1,173	41.86	340	580	58.66
2006/07	556	1,588	35.00	685	1,585	43.25	421	726	58.06
2007/08	758	1,979	38.33	992	2,194	45.22	506	931	54.33
2008/09	1,153	2,798	41.21	1,687	3,268	51.62	767	1,284	59.77
Mean			32.92			44.39			56.04
SD			6.88			4			3.79
CV			20.91			9.02			6.77

Source: Annual Reports (2004/05 - 2008/09) & Appendix 6



The figure 4.16 implies that the ratios in Nabil and NIB showed increasing trend. IN Nabil, it was highest in FY 2008/09 i.e. 41.21% and lowest in FY 2004/05 i.e. 22.79%. In NIB, the highest ratio appeared FY 2008/09 i.e.51.62% and lower in

FY 2004/05 i.e. 39.98%. In NIC, the ratios shows fluctuating trend. The highest ratio appeared FY 2008/09 i.e.59.77% and lower in FY 2004/05 i.e. 49.39%. Lower mean ratio in Nabil indicates better profitability position as compared to NIB & NIC. Overall picture shows that Nabil is more successful in allocating the interest bearing debt in profitable sectors. CV of the ratios appeared greater in Nabil, which means that its ratios were less uniform throughout the review period. In totality the three banks' profitability position was in satisfactory.

4.1.3.5 Interest Earned to Total Assets Ratio

The ratio shows percentage of interest income as compared to the asset of the banks. It indicates how properly utilize the bank's assets for income generating purpose. It is computed as;

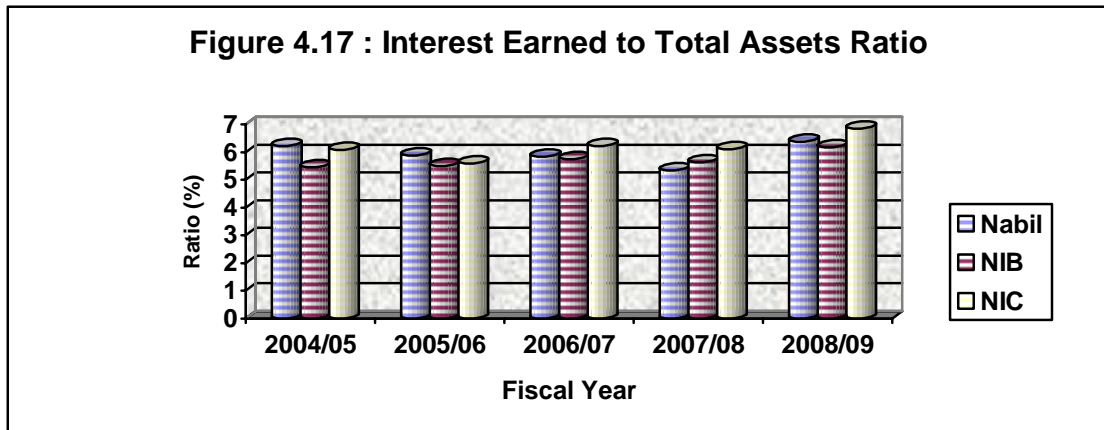
$$\text{Interest Earned to Total Assets Ratio} = \frac{\text{Interest Earned}}{\text{Total Assets}}$$

Table 4.17
Interest Earned to Total Assets Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Int. Earned	Total Assets	Ratio %	Int. Earned	Total Assets	Ratio %	Int. Earned	Total Assets	Ratio %
2004/05	1,069	17,186	6.22	887	16,274	5.45	458	7,508	6.09
2005/06	1,310	22,330	5.87	1,173	21,330	5.50	580	10,384	5.59
2006/07	1,588	27,253	5.83	1,585	27,591	5.74	726	11,679	6.21
2007/08	1,979	37,133	5.33	2,194	38,873	5.64	931	15,239	6.11
2008/09	2,798	43,867	6.38	3,268	53,011	6.17	1,284	18,751	6.85
Mean			5.93			5.70			6.17
SD			0.36			0.26			0.40
CV			6.13			4.50			6.52

Source: Annual Reports (2004/05 - 2008/09)



The figure 4.17 explores that the ratios of all three banks showed fluctuating trend. In Nabil, the ratio ranged from 5.33% in FY 2007/08 to 6.38% in FY 2008/09. In NIB, it ranged from minimum in FY 2004/05 i.e. 5.45% to maximum in FY 2008/09 i.e. 6.17%. In NIC, it ranged from minimum in FY 2005/06 i.e. 5.59% to maximum in FY 2008/09 i.e.6.85%. Mean ratio as higher in NIC, which leads us to conclusion that NIC managed the assets more effectively to earn the interest. Furthermore, interest earned to the total assets in different years of the study period remained more varied in NIC as revealed by higher CV.

4.1.4 Capital Structure/ Leverage/ Solvency Ratios

Leverage refers to the ratio of debt to total equity in the capital structure of the firm. Debt and equity are long- term obligation and remaining part of the liabilities side of Balance Sheet are term as short-term obligation. Both types of obligations are required in forming capital structure of firm. The appropriate mixed of all types of structure in capital structure result sound position of firm. Therefore a firm has strong short-term liabilities as well as long-term financial position. Long-term financial position of the firm is determined by leverage or capital structure. So, leverage ratios have been analyzed and interpreted to judge the long-term financial health of the sampled banks. These include debt-equity ratio, debt-assets ratio, debt to total capital ratio and interest coverage ratio.

4.1.4.1 Debt-Equity Ratio

The ratio shows the mixed of debt & equity in capital. It measures creditors' claim against owners'. It is computed as;

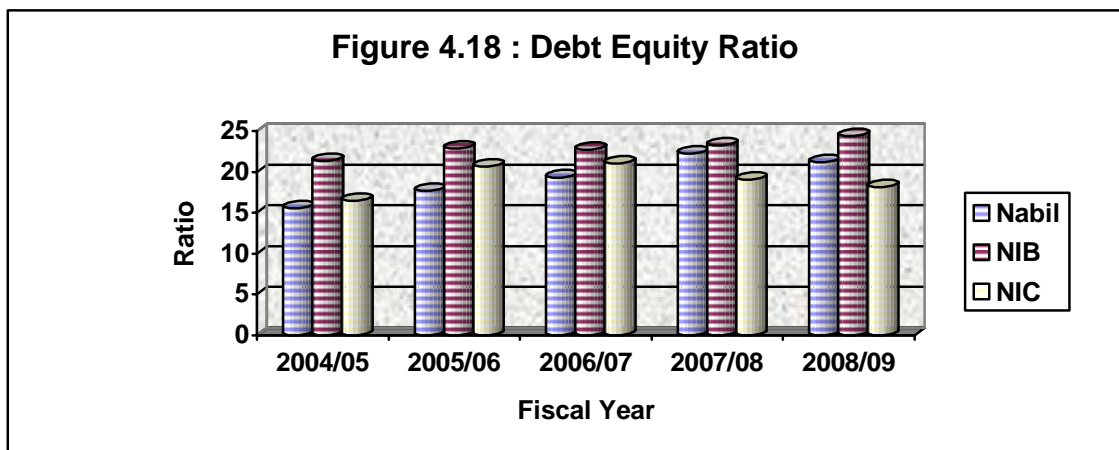
$$\text{Debt-Equity Ratio} = \frac{\text{Total Debt}}{\text{Shareholder's Equity}}$$

Table 4.18
Debt- Equity Ratio (Times)

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Total Debt	Net worth	Ratio	Total Debt	Net worth	Ratio	Total Debt	Net worth	Ratio
2004/05	25,743	1,657	15.54	25,197	1,180	21.35	11,283	684	16.49
2005/06	33,091	1,873	17.67	32,412	1,415	22.90	15,846	766	20.67
2006/07	39,707	2,055	19.32	42,638	1,878	22.70	19,326	918	21.04
2007/08	54,379	2,440	22.29	62,548	2,687	23.28	24,839	1,303	19.06
2008/09	66,313	3,129	21.19	95,336	3,908	24.40	30,124	1,660	18.14
Mean			19.20			22.93			19.08
SD			2.42			0.98			1.67
CV			12.60%			4.29%			8.76%

Source: Annual Reports (2004/05 - 2008/09) & Appendix 5



In above figure, the ratios in Nabil Bank showed increasing trend to 4th year. It was ranged from minimum FY 2004/05 i.e. 15.54 times to maximum in FY

2007/08 i.e. 22.29 times. The ratio of NIB revealed increasing trend. It ranged from minimum FY 2004/05 i.e. 21.35 times to maximum in FY 2008/09 i.e.24.40 times. The ratio of NIC followed rising trend up to 3rd year and then it started to decrease. It ranged from minimum FY 2004/05 i.e. 16.49 times to maximum in FY 2006/07 i.e.21.04 times. Average of the ratios appeared significantly greater in NIB as compared to that of two banks. Such situation introduces in flexibility in the bank's operation due to the increasing interference and pressure from creditors. From the above analysis we can say that the three banks seemed levered. In other words, capital structure of NIB is riskier than that of Nabil & NIC bank. CV of NIB is lower, which clarifies that the ratios of Nabil & NIC were less consistent.

4.1.4.2 Debt Assets Ratio

The ratio shows the contribution of creditors in financing the assets of the bank. It is calculated as;

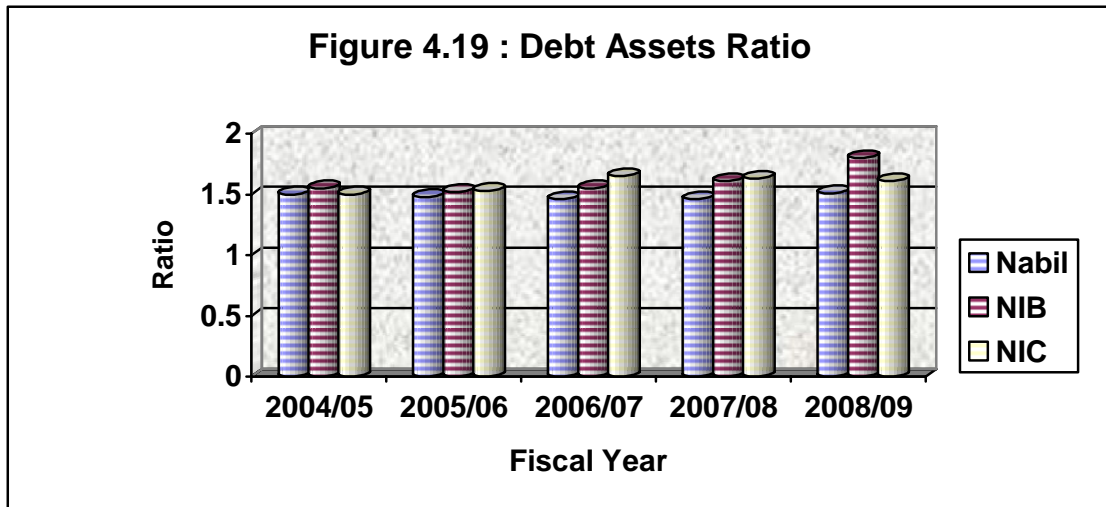
$$\text{Debt-Asset Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

Table 4.19
Debt –Assets Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Total Debt	Total Assets	Ratio	Total Debt	Total Assets	Ratio	Total Debt	Total Assets	Ratio
2004/05	25,743	17,186	1.50	25,197	16,274	1.55	11,283	7,508	1.50
2005/06	33,091	22,330	1.48	32,412	21,330	1.52	15,846	10,384	1.53
2006/07	39,707	27,253	1.46	42,638	27,591	1.55	19,326	11,679	1.65
2007/08	54,379	37,133	1.46	62,548	38,873	1.61	24,839	15,239	1.63
2008/09	66,313	43,867	1.51	95,336	53,011	1.80	30,124	18,751	1.61
Mean			1.48			1.61			1.58
SD			0.02			0.10			0.06
CV			1.38%			6.31%			3.69%

Source: Annual Reports (2004/05 - 2008/09) & Appendix 5



According to the above figure, the ratios in Nabil bank showed decreasing trend to 4th year and slightly increased in 5th year. It was higher in FY 2008/09 i.e. 1.51 times and lowest in FY 2006/07 i.e. 1.46 times. They were increasing trend in NIB. The ratios appeared highest in FY 2008/09 i.e. 1.80 times and lowest in FY 2005/06 i.e. 1.52 times. They were increasing tend in NIC to 3rd year and then started to fall. It was higher in FY 2006/07 i.e. 1.65 times and lowest in FY 2004/05 i.e. 1.50 times. Mean of the ratios came slightly greater in NIB as compared to that in NIC & Nabil, which signifies that the former followed more aggressive policy in raising the capital. On the other hand, capital structure of Nabil seems less risky. Higher ratio in NIB indicates that the greater portion of the banks assets has been financed through outsider's fund. From the CV analysis, it can be noticed that the ratios of NIB varied considerably throughout the review period.

4.1.4.3 Interest Coverage Ratio

The ratio is known as time interest earned ratio is used to test the debt servicing capacity of bank. It shows the number of times the interest charged are covered by fund that ordinary available for their payment. It is calculated by dividing the EBIT by interest charged.

$$\text{Interest Coverage Ratio} = \frac{\text{Earning Before Interest \& Tax(EBIT)}}{\text{Interest Charged}}$$

Table 4.20
Interest Coverage Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	EBIT	Int. Charged	Ratio	EBIT	Int. Charged	Ratio	EBIT	Int. Charged	Ratio
2004/05	1,001	244	4.11	688	355	1.94	391	226	1.73
2005/06	1,255	357	3.51	996	491	2.03	478	340	1.40
2006/07	1,551	556	2.79	1,409	686	2.06	652	421	1.55
2007/08	1,847	758	2.44	2,012	992	2.03	861	506	1.70
2008/09	2,632	1,153	2.28	2,986	1,687	1.77	1,222	767	1.59
Mean			3.03			1.97			1.59
SD			0.69			0.11			0.12
CV			22.73%			5.39%			7.39%

Source: Annual Reports (2004/05 - 2008/09) & Appendix 6

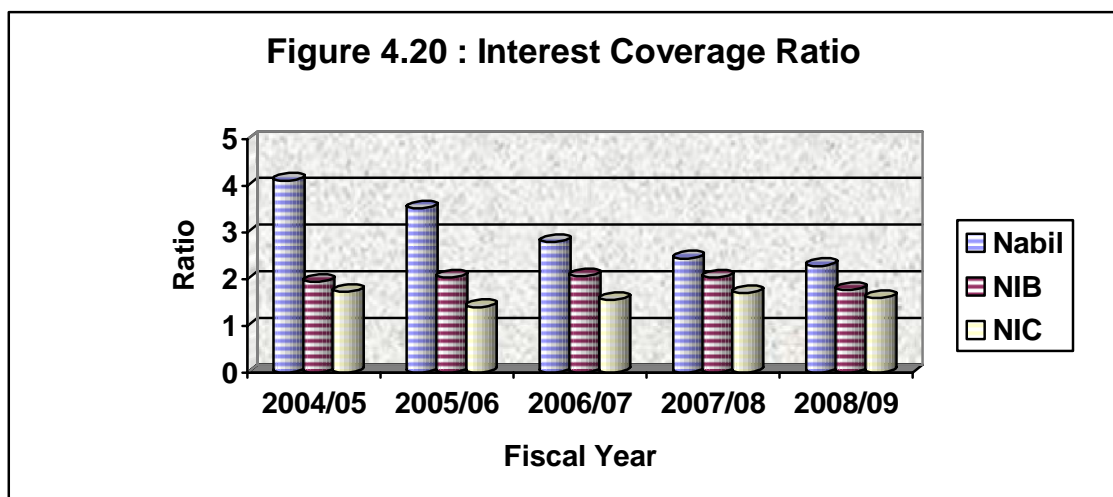


Table 4.20 reveals that the ratios of Nabil were remained 4.11, 3.51, 2.79, 2.44 & 2.28 times in the review period. Mean and CV of the ratios seemed 3.03 times and 22.73% respectively. Accordingly, the ratios in NIB were maintained 1.94, 2.03, 2.06, 2.03 & 1.77 times in the corresponding years. Mean of the ratios in the bank was 1.97 times whereas CV was 5.39%. The ratios of NIC were remained 1.73, 1.40, 1.55, 1.70 & 1.59 times in the review period. Mean and CV of the ratios seemed 1.59 times and 7.39% respectively. The ratio in Nabil bank depicted decreasing trend. It was highest in FY 2004/05 i.e.4.11 times and lowest in FY 2008/09 i.e. 2.28 times. In NIB the ratios showed the increasing trend to 3rd year and then started to fall. The highest ratio appeared in FY 2006/07 i.e.2.06 times and lowest ratio in FY 2008/09 i.e.1.77 times. The ratio in NIC bank depicted fluctuating trend. It was highest in FY 2004/05 i.e.1.73 times and lowest in FY 2005/06 i.e. 1.40 times. Mean ratio of Nabil bank higher than that of NIB & NIC, which reveals the better debt servicing capacity of Nabil bank. By comparing the CV of the ratios, Nabil has more varied than two banks. In total analysis of leverage ratios, the three banks seemed levered and debt-serving capacity also seemed satisfactory.

4.1.5 Capital Adequacy Ratios

Capital adequacy ratios of the banks have been tested to find whether they are successful to Measures the depositors and creditors about their soundness; and also to maintain general confidence in banking system. These include net worth to total deposit ratio, net worth to total assets and net worth to total credit ratio.

4.1.5.1 Net Worth to Total Deposits Ratio

The ratio measures the percentage of shareholders' fund in relation to the total deposits collected in the bank. It is the yardstick to see whether the bank has maintained the capital fund according to the direction of Nepal Rastra Bank. It is calculated as;

$$\text{Net worth to Total Deposit} = \frac{\text{Net Worth}}{\text{Total Deposits}}$$

Table 4.21
Net Worth to Total Deposit Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Net Worth	Total Deposits	Ratio %	Net Worth	Total Deposit	Ratio %	Net Worth	Total Deposit	Ratio %
2004/05	1,657	14,587	11.36	1,180	14,255	8.28	684	6,241	10.96
2005/06	1,873	19,347	9.68	1,415	18,927	7.48	766	8,766	8.74
2006/07	2,055	23,342	8.80	1,878	24,489	7.67	918	10,068	9.12
2007/08	2,440	31,915	7.64	2,687	34,452	7.80	1,303	13,085	9.96
2008/09	3,129	37,348	8.38	3,908	46,698	8.37	1,660	15,580	10.66
Mean			9.17			7.92			9.89
SD			1.28			0.35			0.86
CV			13.93			4.38			8.65

Source: Annual Reports (2004/05 - 2008/09)

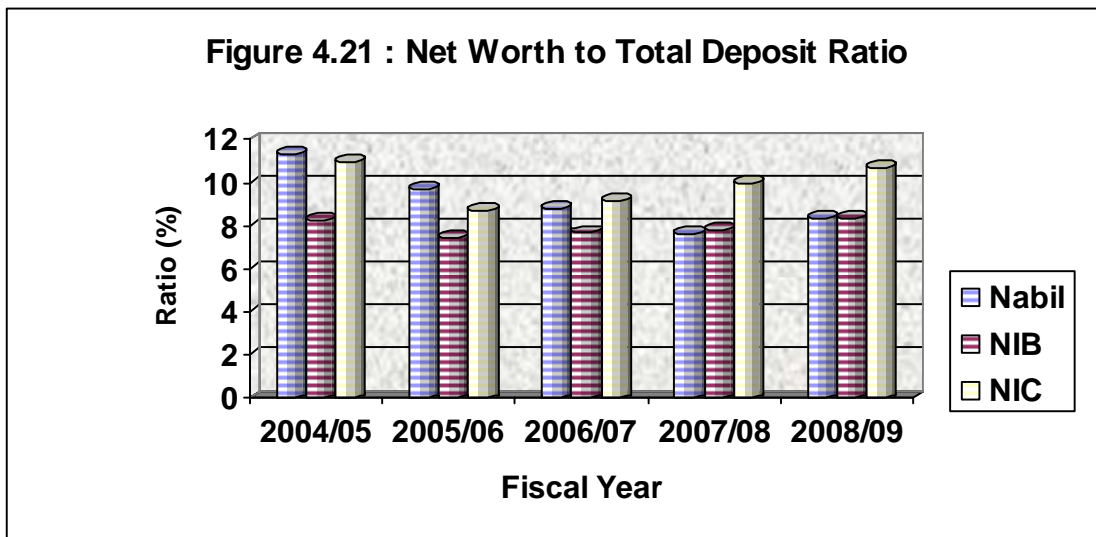


Figure 4.21 denotes that the ratios of Nabil bank showed decreasing trend up to 4th year. In Nabil bank, it was highest in FY 2004/05 i.e.11.36% & lowest in FY 2007/08 i.e.7.64%. Similarly, the ratio of NIB showed fluctuating trend in the

period of review. It was highest in FY 2008/09 i.e.8.37% & lowest in FY 2005/06 i.e.7.48%. Lastly, the ratio of NIC explained the decreasing trend to 2nd year and then after it goes to rise. So, it ranged from 10.96% in FY 2004/05 to 8.74% in FY 2005/06. Average ratio of NIC appeared higher than Nabil & NIC and average ratio of Nabil appeared higher than NIB which means the former is better with respect to the capacity adequacy position. Higher CV of the ratios of Nabil shows less consistency in the maintaining net worth with respect to deposits.

4.1.5.2 Net Worth to Total Assets Ratio

The ratio measures the percentage of net worth in relation to the total assets owned by the banks. It is calculated as;

$$\text{Net Worth to Total Assets Ratio} = \frac{\text{Net Worth}}{\text{Total Assets}}$$

Table 4.22

Net Worth to Total Assets Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Net Worth	Total Assets	Ratio %	Net Worth	Total Assets	Ratio %	Net Worth	Total Assets	Ratio %
2004/05	1,657	17,186	9.64	1,180	16,274	7.25	684	7,508	9.11
2005/06	1,873	22,330	8.39	1,415	21,330	6.64	766	10,384	7.38
2006/07	2,055	27,253	7.54	1,878	27,591	6.81	918	11,679	7.86
2007/08	2,440	37,133	6.57	2,687	38,873	6.91	1,303	15,239	8.55
2008/09	3,129	43,867	7.13	3,908	53,011	7.37	1,660	18,751	8.85
Mean			7.85			7			8.35
SD			1.07			0.27			0.64
CV			13.65			3.90			7.67

Source: Annual Reports (2004/05 - 2008/09)

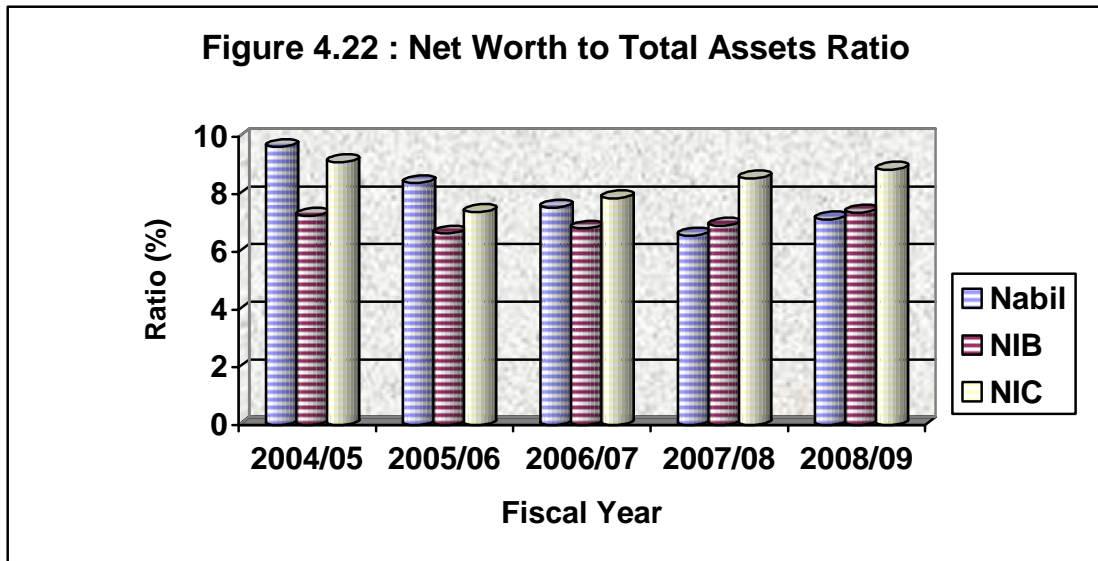


Figure 4.22 explores that the ratios of Nabil bank seemed decreasing trend to 4th year and then after it will start to rise slightly. It remained at maximum in FY 2004/05 i.e.9.64% and minimum in FY 2007/08 i.e.6.57%. Similarly, the ratio of NIB shows increasing trend from 2nd year and it ranged from 7.37% in FY 2008/09 to 6.64% in FY 2005/06. Again the ratio of NIC shows decreasing trend to 2nd year and then after it starts to rise. It was highest in FY 2004/05 i.e. 9.11% & lowest in FY 2005/06 i.e. 7.38%. Mean ratio of NIC seemed higher than that of Nabil & NIB, which indicates that net worth in it has covered comparatively greater portion of total assets. In other words, NIC is superior to Nabil & NIB and Nabil is superior to NIB which refers to check the possible risk that might arise due to high leverage. CV of the ratio remained greater in Nabil, which means that the ratios in Nabil highly as against NIC & NIB.

4.1.5.3 Net Worth to Total Credit Ratio

The ratio measures the relative portion of the shareholders fund with respect to the total credit. It is calculated as;

$$\text{Net Worth to Total Credit Ratio} = \frac{\text{Net Worth}}{\text{Total Credit}}$$

Table 4.23

Net Worth to Total Credit Ratio

Rs in 'million'

Nabil Bank Ltd			NIB			NIC			
FY	Net Worth	Total Credit	Ratio %	Net Worth	Total Credit	Ratio %	Net Worth	Total Credit	Ratio %
2004/05	1,657	10,947	15.14	1,180	10,453	11.29	684	4,909	13.94
2005/06	1,873	13,279	14.11	1,415	13,178	10.74	766	6,902	11.10
2006/07	2,055	15,903	12.92	1,878	17,769	10.57	918	9,129	10.06
2007/08	2,440	21,759	11.21	2,687	27,529	9.76	1,303	11,465	11.37
2008/09	3,129	27,999	11.18	3,908	36,827	10.61	1,660	13,916	11.93
Mean			12.91			10.59			11.68
SD			1.57			0.49			1.28
CV			12.15			4.63			10.98

Source: Annual Reports (2004/05 - 2008/09)

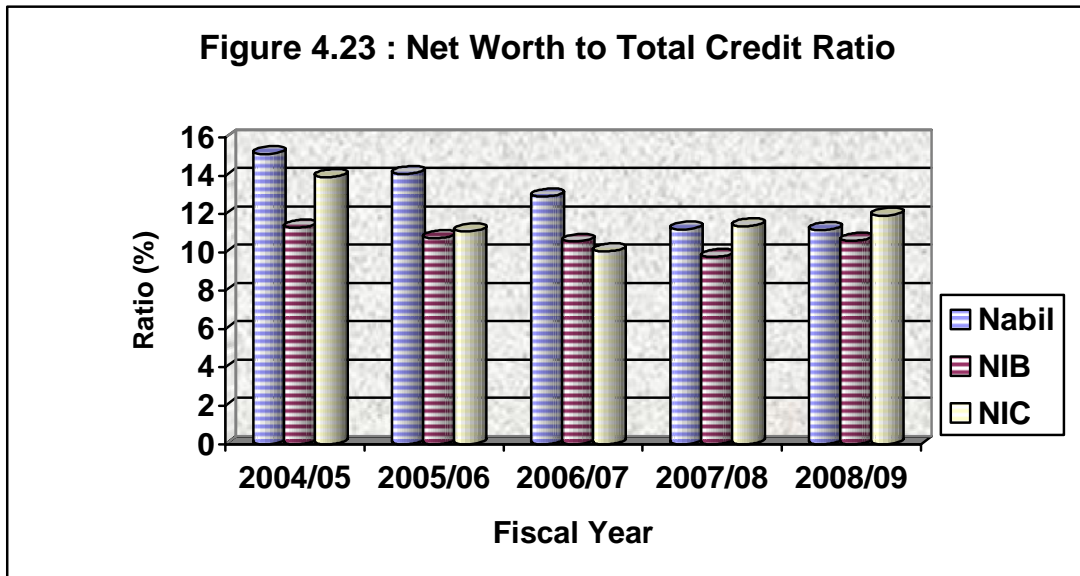


Figure 4.23 demonstrates that the ratio of Nabil Bank shows the decreasing trend. It was at maximum in FY 2004/05 i.e. 15.14% and minimum in FY 2007/08 i.e.11.21%. The ratio of NIB shows fluctuating trend. It ranged from 11.29% in 2nd

year and 9.76% to 4th year. The ratio of NIC decreased in trend to 3rd year and after that it will start to rise. It was highest in FY 2004/05 i.e. 13.94% and lowest in FY 2006/07 i.e.10.06%. Mean ratios of Nabil bank appeared greater than that of NIC & NIB, which indicates that the capacity adequacy position of Nabil is better than that. In totality, capital adequacy position of Nabil appeared stronger than that of NIB & NIC. In this sense, Nabil is successful to reassure creditors and depositors about its soundness. Similarly, the banks differ significantly with respect to capital adequacy position.

4.1.6 Assets Quality Ratios

Assets quality ratios intend to measure the quality of assets owned by the banks. These include loan loss coverage ratio, loan loss provision to total income ratio, loan loss provision to total deposit ratio and accrued interest to total interest income ratio.

4.1.6.1 Loan Loss Coverage Ratio

Nepal Rastra Bank has directed Commercial banks to maintain provision for loan loss on the basis of category of loan & risk grade. The ratio therefore measures whether the provision is sufficient to meet the possible loss created by defaulted in payment of loan or not. High ratio indicates that the major portion of loan is risky. Therefore, for the study purpose, risky assets constitute loans and advances, bill purchased and discounted. It is computed by dividing loan loss provision by total risk assets.

$$\text{Loan Loss Coverage Ratio} = \frac{\text{Loan Loss Provision}}{\text{Total Risk Assets}}$$

Table 4.24
Loan Loss Coverage Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Loan Loss Provision	Total Risk Assets	Ratio %	Loan Loss Provision	Total Risk Assets	Ratio %	Loan Loss Provision	Total Risk Assets	Ratio %
2004/05	361	10,947	3.29	325	10,453	3.11	198	4,909	4.03
2005/06	356	13,279	2.68	402	13,178	3.05	246	6,902	3.57
2006/07	357	15,903	2.25	484	17,769	2.72	187	9,129	2.05
2007/08	394	21,759	1.81	533	27,529	1.93	201	11,465	1.75
2008/09	409	27,999	1.46	586	36,827	1.59	236	13,916	1.70
Mean			2.30			2.48			2.62
SD			0.64			0.61			0.98
CV			28.02			24.69			37.47

Source: Annual Reports (2004/05 - 2008/09) & Appendix 3

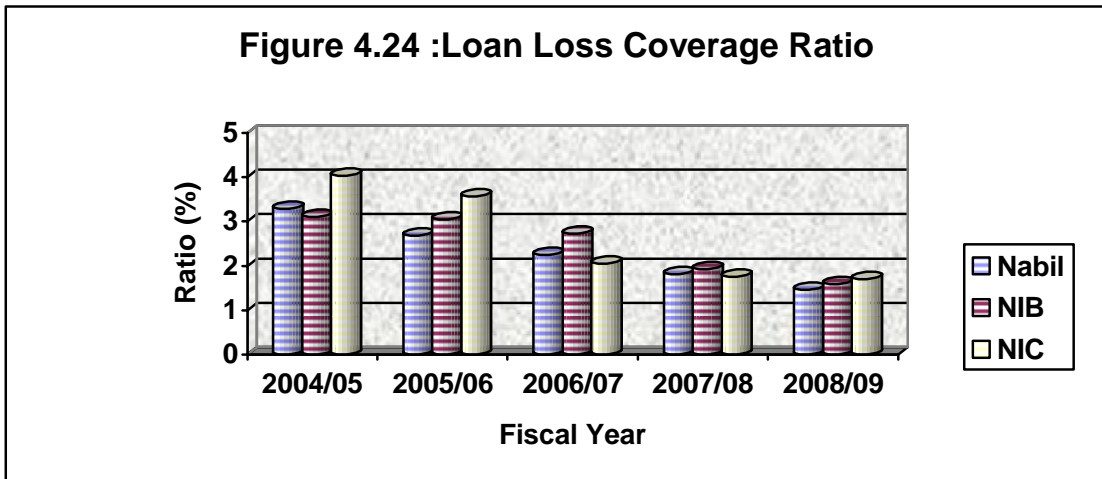


Figure 4.24 exhibits that the ratios of all Banks were in decreasing trend. They all have at maximum in FY 2004/05 i.e. 3.29% in Nabil; 3.11% in NIB & 4.03% in NIC and minimum in FY 2008/09 i.e. 1.46% in Nabil; 1.59% in NIB & 1.70% in NIC. Mean ratio of NIC was slightly greater than NIB & Nabil. It indicates that Nabil & NIB has been more successful to foresee the quality of loans lent.

Conversely, the assets possessed by NIC have higher degree of risk as compared to that of Nabil & NIB. That's why, the former bank has maintained comparatively higher ratio to prevent itself from possible default in payment by borrowers. CV of the ratios seemed less in NIB, which reveals that consistency in the ratios greater in NIC & Nabil bank.

4.1.6.2 Loan Loss Provision to Total Income Ratio

The ratio shows that portion of total income has been held as safety cushion against the possible bad loan. Higher ratio indicates that the greater portion of loan advanced by the bank is inferior in quality. Low ratio means that the bank has provided most of its loans & advances in secured sector. The ratio is obtained by dividing loan loss provision by total income. It is calculated as;

$$\text{Loan Loss Provision to Total Income Ratio} = \frac{\text{Loan Loss Provision}}{\text{Total Income}}$$

Table 4.25

Loan Loss Provision to Total Income Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Loan Loss Provision	Total Income	Ratio %	Loan Loss Provision	Total Income	Ratio %	Loan Loss Provision	Total Income	Ratio %
2004/05	361	1,069	33.74	325	887	36.67	198	458	43.19
2005/06	356	1,310	27.19	402	1,173	34.27	246	580	42.44
2006/07	357	1,588	22.50	484	1,585	30.52	187	726	25.80
2007/08	394	1,979	19.93	533	2,194	24.27	201	931	21.54
2008/09	409	2,798	14.62	586	3,268	17.93	236	1,284	18.42
Mean			23.60			28.73			30.28
SD			6.50			6.83			10.50
CV			27.53			23.78			34.69

Source: Annual Reports (2004/05 - 2008/09)

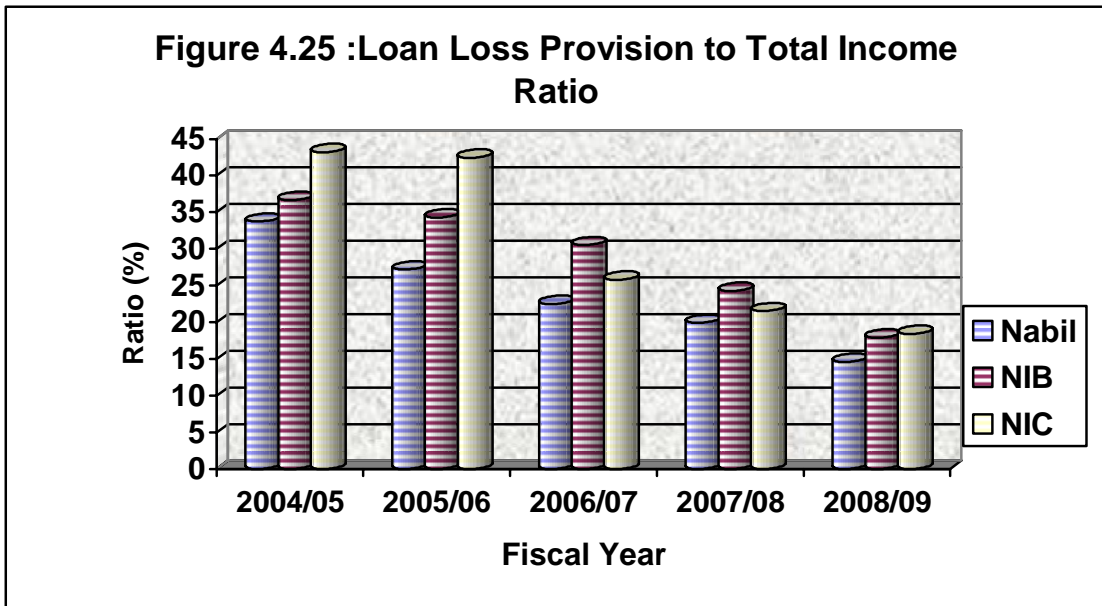


Figure 4.25 explains that the ratios of all three Banks were in decreasing trend. The three banks have at maximum in FY 2004/05 i.e. 33.74%, 36.67% & 43.19% and minimum in FY 2008/09 i.e.14.62%, 17.93% & 18.42% in Nabil, NIB & NIC respectively. Mean ratio remained higher in NIC than in NIB & Nabil, which signifies that NIC held comparatively greater portion of risky assets. Moreover, NIC has been forced to retain greater portion of its income idle as the cushion against loans of inferior quality. CV analysis signifies that the ratios of NIB remained less uniformity as compared with Nabil & NIC.

4.1.6.3 Loan Loss Provision to Total Deposit Ratio

The ratio shows the proportion of banks income held as loan loss provision in relation to total deposits collected. It is calculated as;

$$\text{Loan Loss Provision to Total Deposits Ratio} = \frac{\text{Loan Loss Pr ovision}}{\text{Total Deposits}}$$

Table 4.26

Loan Loss Provision to Total Deposits Ratio

Rs in 'million'

Nabil Bank Ltd				NIB			NIC		
FY	Loan Loss Provision	Total Deposit	Ratio %	Loan Loss Provision	Total Deposit	Ratio %	Loan Loss Provision	Total Deposit	Ratio %
2004/05	361	14,587	2.47	325	14,255	2.28	198	6,241	3.17
2005/06	356	19,347	1.84	402	18,927	2.12	246	8,766	2.81
2006/07	357	23,342	1.53	484	24,489	1.98	187	10,068	1.86
2007/08	394	31,915	1.24	533	34,452	1.55	201	13,085	1.53
2007/08	409	37,348	1.06	586	46,698	1.14	236	15,580	1.29
Mean			1.63			1.81			2.13
SD			0.50			0.42			0.73
CV			30.55			22.89			34.36

Source: Annual Reports (2004/05 - 2008/09)

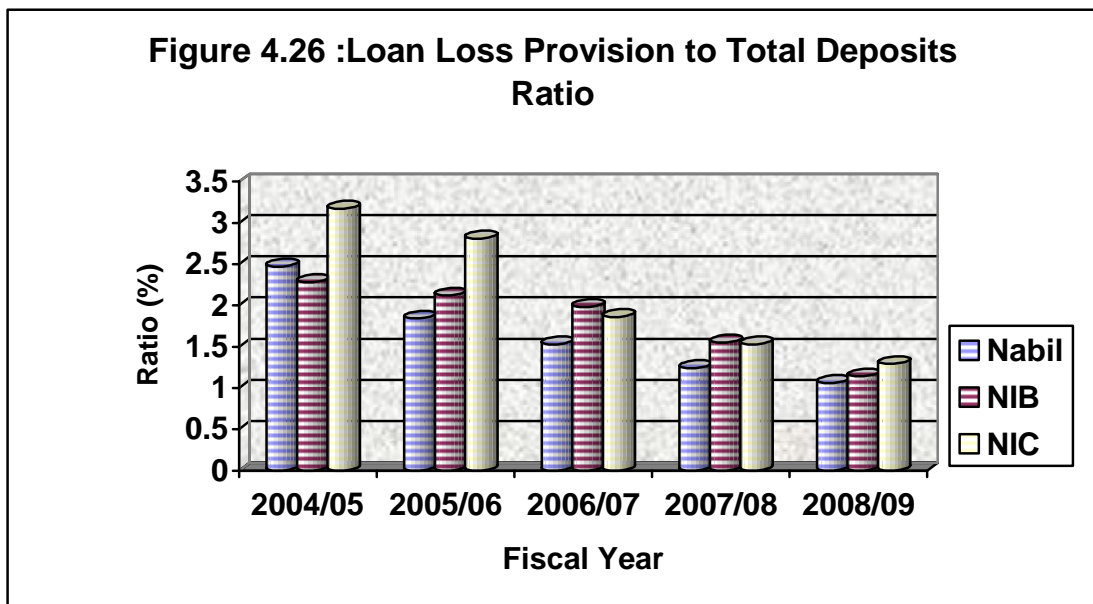


Figure 4.26 highlights that the ratios of all three Banks were in decreasing trend. The three banks have at maximum in FY 2004/05 i.e. 2.47%, 2.28% & 3.17% and

minimum in FY 2008/09 i.e.1.06%, 1.14% & 1.29% in Nabil, NIB & NIC respectively. Average ratio in NIC exceeded that in Nabil & NIB, which means assets owned by Nabil, are superior to that of NIC & Nabil and assets owned by NIB are superior to that of NIC. In other words, NIC has lent greater portion of its loans in riskier sectors. Lower CV of the ratios in NIB means that the consistency in the loan loss provision with respect to the deposits was higher in NIC & Nabil.

4.1.6.4 Accrued Interest to Total Interest Income Ratio

The ratio shows the percentage of accrued interest with respect to total income in form of interest. It is calculated as;

$$\text{Accrued Interest to Total Interest Income Ratio} = \frac{\text{Accrued Interest}}{\text{Total Interest}}$$

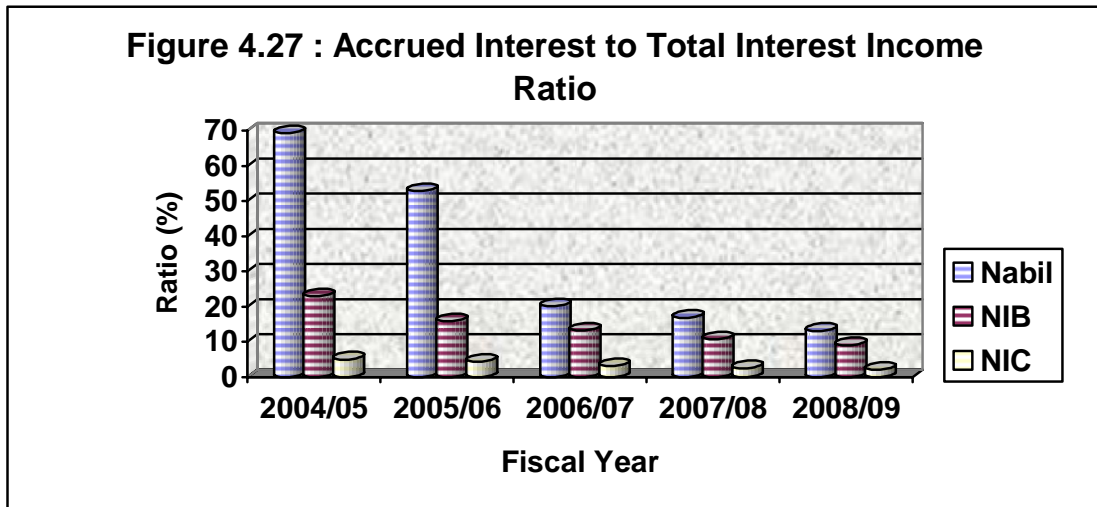
Table 4.27

Accrued Interest to Total Interest Income Ratio

Rs in '000'

Nabil Bank Ltd				NIB			NIC		
FY	Accrued Interest	Total Interest	Ratio %	Accrued Interest	Total Interest	Ratio %	Accrued Interest	Total Interest	Ratio %
2004/05	168,863	243,545	69.34	81,581	354,549	23.01	11,375	225,992	5.03
2005/06	188,634	357,161	52.81	77,941	490,947	15.88	15,134	340,222	4.45
2006/07	112,187	555,710	20.19	90,440	685,530	13.19	13,465	421,375	3.20
2007/08	128,043	758,436	16.88	106,677	992,158	10.75	12,914	505,996	2.55
2008/09	151,568	1,153,280	13.14	153,600	1,686,973	9.11	16,381	767,197	2.14
Mean			34.47			14.39			3.47
SD			22.45			4.88			1.10
CV			65.13			33.92			31.75

Source: Annual Reports (2004/05 - 2008/09)



In above figure 4.27, the ratios of all three Banks were in decreasing trend. The three banks have at maximum in FY 2004/05 i.e. 69.34%, 23.01% & 5.03% and minimum in FY 2008/09 i.e.13.14%, 9.11% & 2.14% in Nabil, NIB & NIC respectively. Mean of the ratios appeared greater in Nabil bank, which signifies that comparatively more portion of total interest income in the bank remained accrued. Moreover, the loans advanced by Nabil bank seemed less effective. Lower ratio in NIC indicates better quality of assets. Higher CV of the ratios in Nabil indicates greater variability of the ratios in it.

4.1.7 Other Indicators

Above stated ratio shows light on various aspect of the banks management, investment & creditors can get information regarding their investment. Besides the above-analyzed ratios, some indicators have been tested to have the boarder knowledge of financial performance of the banks. For this, EPS, P/E ratio and MVPS to BVPS have been analyzed.

4.1.7.1 Earning Per Share (EPS)

EPS refers to the income available to the common shareholder on per share basis. It is computed as;

$$\text{Earning Per Share} = \frac{\text{Earning Available Common Shareholder(EAC)}}{\text{No of Equity Share Outstanding}}$$

Table 4.28

Earning Per Share (EPS)

FY	2004/05	2005/06	2006/07	2007/08	2008/09	Mean	S.D	C.V
Nabil	105.49	129.21	137.08	108.31	106.76	117.37	13.15	11.20%
NIB	39.50	59.35	62.57	57.87	37.42	51.34	10.65	20.74%
NIC	22.75	16.10	24.01	25.75	27.83	23.29	3.98	17.09%

Source: Annual Reports (2004/05 - 2008/09)

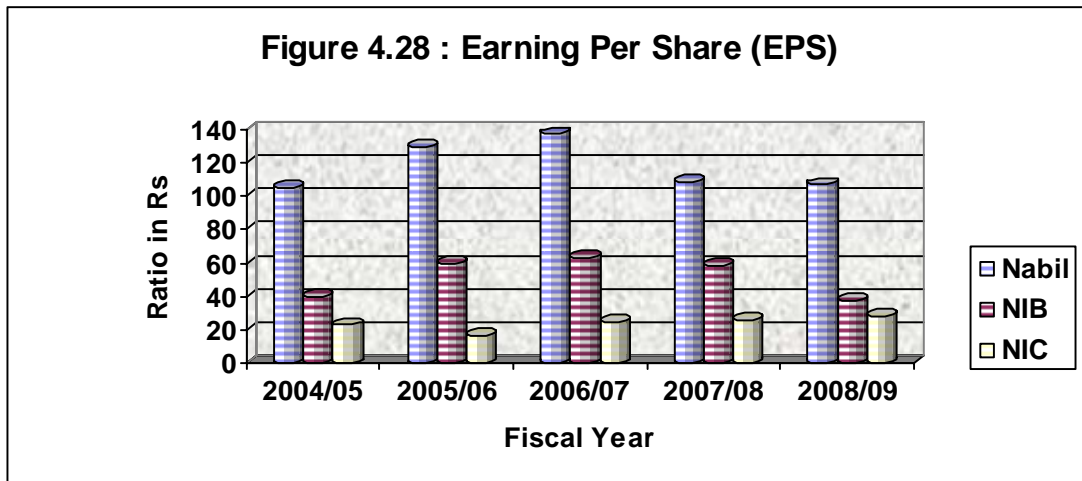


Figure 4.28 indicates that EPS of Nabil Bank and NIB showed increasing trend up to 3rd year and it starts to decline in 4th & 5th year. They have highest in FY 2006/07 i.e. Rs 137.08 & Rs 62.57 respectively and lowest in FY 2004/05 i.e. Rs 105.49 in Nabil & lowest in FY 2008/09 i.e. Rs 37.42 in NIB. Again the EPS of NIC showed decreasing trend to 2nd year and after that it starts to rise. It was highest in FY 2008/09 i.e. Rs 27.83 and lowest in FY 2005/06 i.e. Rs 16.10. Mean of the EPS was much higher in Nabil Bank in contrast to NIB & NIC; which indicates that the profitability position of the former is far better than that of the latter. In this sense, Nabil bank seems more successful to attract the investors. Net profit earned by Nabil is greater than that of NIB & NIC but number of equity

share outstanding in NIB is greater than NIC & Nabil and NIC is greater than Nabil, so EPS of Nabil was seemed well than NIB and NIC.

4.1.7.2 Price-Earning Ratio (P/E ratio)

P/E ratios widely used to evaluate the banks performance as expected by investors. It represents the investor's judgment or expectation about the growth in banks earning. In other words, it measures how the market is responding toward the earning performance of the concerned banks. It is obtained as;

$$\text{Price -Earning Ratio} = \frac{\text{Market Value Per Share(MVPS)}}{\text{Earning Per Share (EPS)}}$$

Table 4.29

Price- Earning Ratio (P/E ratio)

FY	2004/05	2005/06	2006/07	2007/08	2008/09	Mean	S.D	C.V
Nabil	14.27	17.34	36.84	48.70	45.89	32.61	14.30	43.86%
NIB	20.25	21.23	27.63	42.33	37.09	29.71	8.71	29.33%
NIC	16.09	30.81	39.56	49.86	40.46	35.30	11.29	31.99%

Source: Annual Reports (2004/05 - 2008/09)

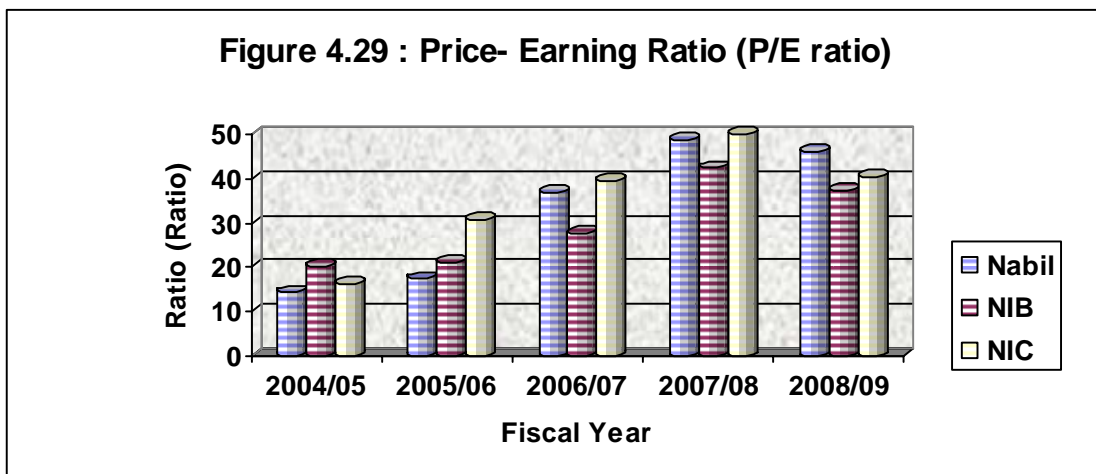


Figure 4.29 displays that the P/E ratios in Nabil bank, NIB & NIC showed increasing trend to 4th year and after that slightly decline. It ranged from 14.27

times in Nabil, 20.25 times in NIB & 16.09 times in NIC in FY 2004/05 to 48.70 times in Nabil, 42.33 times in NIB & 49.86 times in NIC in FY 2007/08. Mean ratios of NIC appeared higher than Nabil & NIB. It indicates that the investors are well satisfied with the performance of the bank or market has positively judged the performance of NIC and Nabil. At CV analysis, Nabil has higher CV than NIB & NIC, which indicates that the ratios varied in the bank.

4.1.7.3 Market Value Per Share to Book Value Per Share (MVPS/BVPS)

The ratio measures the value that the financial market attaches to the management and organization of the banks as a growing concern. It is calculated as;

$$\text{Market Value Per Share to Book Value Per Share} = \frac{\text{Market Value Per Share (MVPS)}}{\text{Book Value Per Share (BVPS)}}$$

Table 4.30

Market Value Per Share to Book Value Per Share

FY	2004/05	2005/06	2006/07	2007/08	2008/09	Mean	S.D	C.V
Nabil	4.47	5.88	12.08	14.90	15.12	10.49	4.49	42.82%
NIB	3.98	5.25	7.39	10.98	8.57	7.23	2.46	34.07%
NIC	2.67	4.28	6.83	9.30	7.71	6.16	2.38	38.72%

Source: Annual Reports (2004/05 - 2008/09)

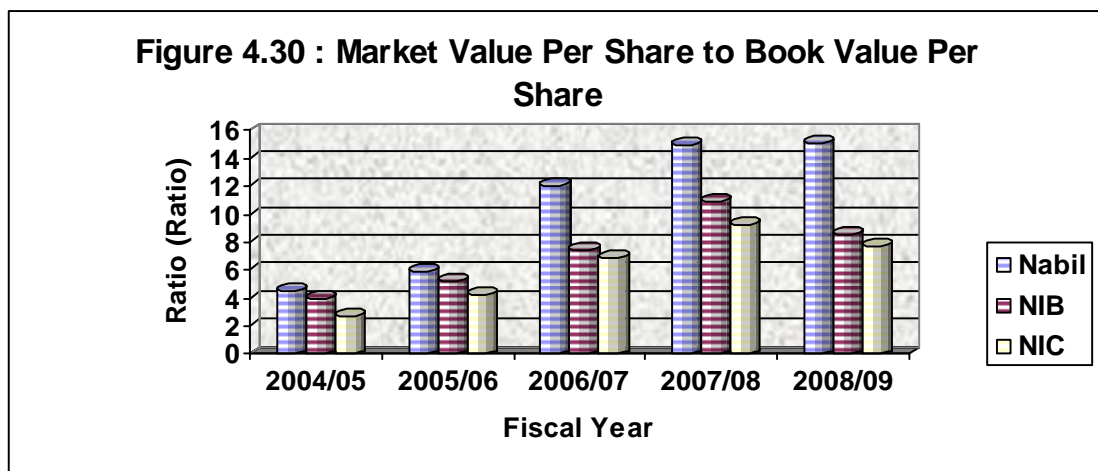


Figure 4.30 exhibit that the indicators showed Nabil banks in increasing trend. And other two banks i.e. NIB & NIC were in increasing trends to 4th year and after that it slightly declines. It ranged from 4.47 times in Nabil, 3.98 times in NIB & 2.67 times in NIC in FY 2004/05 to 15.12 times in Nabil in FY 2008/09, 10.98 times in NIB & 9.30 times in NIC in FY 2007/08. Mean value of the indicators appeared greater in Nabil, which indicates comparatively stronger management and organization in Nabil than NIC & NIB. CV of the indicators came less in NIB, which means the indicators, varied less over the period of study.

4.2 Incomes and Expenditure Analysis

Income and expenditure analysis is one of the very important tools to measure the financial performance of the banks. In competitive environment for the survival of banks should earn profit. If banks should earn profit, its market value of share will increased; banks will be able to give regular dividend to shareholder and interest to debenture holders; staffs can enjoy better salary and bonus and enhanced facilities which will increase the productivity of banks. So, the income & expenditure analysis is important not only in banks but also in other field. If banks are able to decrease unnecessary expenditure it will directly affect in the profit. The analysis covers the following heading in income and expenditure analysis;

- Operating Income Analysis
- Operating Expenditure Analysis
- Operating Profit (Loss) Analysis

4.2.1 Operating Income Analysis

Commercial Banks generate income from the investment made in various sectors. The banks, being services- oriented organization, do not produce physical goods. They produce loans and advances and innovations and sell the same. In the

courses of carrying out their functions, they receive income from various sources, which have been spilt up into the following major headings:

- Interest Income
- Commission and Discount
- Foreign Exchange Fluctuation Income
- Other Operating Income

The following table shows the various sources of operating income and its proportion in total operation income in percentage.

Table 4.31
Operating Income Analysis of Nabil Bank Limited

Rs in 'million'

FY	2004/05	2005/06	2006/07	2007/08	2008/09	Mean	SD	CV
Interest	1,069	1,310	1,588	1,979	2,498	1,689	506	29.94%
Income	74.30%	76.31%	77.99%	81.47%	81.27%	78.27%	2.79%	3.56%
Commission	129	138	151	156	180	151	17	11.49%
& Discount	8.96%	8.06%	7.40%	6.43%	5.85%	7.34%	1.11%	15.16%
Foreign	185	185	210	196	252	206	25	12.07%
Exchange								
Fluctuation	12.85%	10.80%	10.31%	8.09%	8.19%	10.05%	1.78%	17.68%
Income								
Other	56	83	88	97	144	94	29	30.75%
Operating								
Income	3.89%	4.83%	4.30%	4.01%	4.69%	4.34%	0.37%	8.46%
Total	1,438	1,717	2,036	2,429	3,074	2,139	572	26.76%
operating								
Income	100%	100%	100%	100%	100%	100%	-	-

Table 4.32
Operating Income Analysis of Nepal Investment Bank Limited

Rs in 'million'

FY	2004/05	2005/06	2006/07	2007/08	2008/09	Mean	SD	CV
Interest	887	1,176	1,585	2,194	3,268	1,822	846	46.43%
Income	77.83%	80.90%	82.06%	83.06%	85.92%	81.95%	2.65%	3.23%
Commission & Discount	94	116	164	215	263	170	62	36.64%
	8.21%	7.98%	8.49%	8.15%	6.91%	7.95%	0.54%	6.85%
Foreign Exchange Fluctuation Income	103	126	135	166	185	143	29	20.53%
	9.00%	8.65%	7.01%	6.28%	4.87%	7.16%	1.53%	21.31%
Other Operating Income	57	36	47	66	88	59	18	29.94%
	4.96%	2.47%	2.45%	2.51%	2.30%	2.94%	1.01%	34.50%
Total operating Income	1,139	1,453	1,932	2,642	3,804	2,194	951	43.34%
	100%	100%	100%	100%	100%	100%	-	-

Table 4.33
Operating Income Analysis of Nepal Industrial and Commercial Bank Limited

Rs in 'million'

FY	2004/05	2005/06	2006/07	2007/08	2008/09	Mean	SD	CV
Interest	458	580	726	931	1,284	796	291	36.52%
Income	88.26%	88.54%	87.21%	88.51%	86.31%	87.77%	0.87%	1%
Commission & Discount	27	29	36	43	62	40	13	31.64%
	5.23%	4.50%	4.33%	4.12%	4.16%	4.47%	0.40%	9.05%
Foreign Exchange Fluctuation Income	25	25	44	40	98	46	27	57.89%
	4.75%	3.88%	5.32%	3.77%	6.57%	4.86%	1.03%	21.19%
Other Operating Income	9	20	26	38	44	28	12	45.16%
	1.77%	3.09%	3.14%	3.60%	2.96%	2.91%	0.61%	20.96%
Total operating Income	518	655	832	1,052	1,487	909	340	37.39%
	100%	100%	100%	100%	100%	100%	-	-

(See Appendix 6)

a) Interest Income

Interest is the main and major source of the income in the commercial banks. These banks charged interest on loans and advances provide by them. They also received interest from investment made in government securities, debentures and inter-bank lending.

The above table 4.31 highlights that interest income in Nabil Bank Limited was slightly increasing trend except in last year. Interest income ranged from 74.30% in 2nd year to 81.47% in last year. So, the proportion of interest income with compared to total operating income shows slightly increasing trend. Mean of the interest income proportion was 78.27%, which shows that interest income was covered almost seven-tenth to total operating income in Nabil Bank Limited. Similarly, Table 4.32 shows that the interest income in NIB was shows increasing trend. Interest income of NIB ranged from the 77.83% in 1st year to 85.92% in last year. Mean of the proportion was 81.95%, which indicates that the interest income was covered almost forth-fifth of total income in NIB. Similarly, Table 4.33 shows that the interest income in NIC was fluctuating trend. It was highest in FY 2005/06 i.e.88.54% and lowest in FY 2008/09 i.e.86.31%. Mean of the proportion was 87.77%, which indicates that the interest income was covered almost nine-tenth of total income in NIC.

Average of the income in NIC was greater than in NIB and NIB was greater than in Nabil Bank, which indicates that average interest earning greater proportion in NIC. In other words, NIC might have focused more of its activities the lending and investment on Govt. securities. CV of the interest income came 3.56% in Nabil, 3.23% in NIB & 1% in NIC. It signifies that interest income remained more uniform in NIC. From the above table we can conclude that three banks' main sources of operating income were interest income, through greater promotion incurred in Nabil than NIB & NIC.

b) Commission and Discount

Commercial banks render various types of services to their customers. They provide remittance facility, guarantees, standing instructions, open letter of credit, and purchase and discount bill of exchange along with other agency functions. For making such facilities available, they receive certain charges in form of commission and discount. It also covers significant portion of total operating income.

Table 4.31 depicts that the commission and discount earned by Nabil in the respective years of the study period shows the decreasing trend. It ranged from 5.85% to 8.96% in FY 2008/09 to 2004/05 respectively. Mean and CV of the proportion appeared 7.34% and 15.16% respectively. Similarly, table 4.32 shows that the commission and discount earned by NIB was fluctuating trend. It ranged from 6.91% in last year to 8.49% in 4th year. Mean and CV of the proportion were 7.95% and 6.85% respectively. Similarly, table 4.33 shows that the commission and discount earned by NIC was decreasing trend. It ranged from 4.11% in 4th year to 5.23% in 1st year. Mean and CV of the proportion were 4.47% and 9.05% respectively.

Mean of the proportion of commission and discount with compared to total operating income seemed greater in NIB than in Nabil & NIC, which signifies that commission & discount covered higher proportion in total operating income in Nabil Bank. CV of the incomes in Nabil came higher than in NIC & NIB. This shows that the proportion of commission and discount in total income remained more varied in Nabil.

c) Foreign Exchange Fluctuation Income

One of the major functions of the commercial bank is transaction of foreign currency. Joint venture banks are allowed to purchase and sell foreign currencies under the directives of NRB and rules, regulations and laws in effect. Income

under this heading encompasses the trading gain derived from the exchange of foreign currencies due to the fluctuation in the exchange rate.

Table 4.31 explores that foreign exchange fluctuating income of Nabil was decreasing trend. It remained lowest in FY 2007/08 i.e. 8.09% and highest in FY 2004/05 i.e. 12.85%. Mean and CV of the proportions were came 10.05% and 17.68% respectively. Accordingly to table 4.32, the income of NIB shows decreasing trend. It can be ranged 4.87% to 9% in 5th and 1st year respectively. Mean and CV of the proportion came 7.16% and 21.31% respectively. Similarly, table 4.33 shows that foreign exchange fluctuating income of NIC was fluctuating trend. It remained lowest in FY 2007/08 i.e. 3.77% and highest in FY 2008/09 i.e. 6.57%. Mean and CV of the proportions were came 4.86% and 21.19% respectively.

Mean of the foreign exchange fluctuating income was higher in Nabil Bank. It indicates that foreign exchange fluctuating income occupied comparatively higher proportion in Nabil than NIB & NIC and NIB than NIC. At CV analysis it seemed lower in Nabil than NIC & NIB and NIC than NIB. It indicates income analysis in various years remained more uniform in Nabil as compared to NIC & NIB.

d) Other Operating Income

The fourth source of operating income is other income. Income not included in any of the above headings comes under this heading. It includes only operating and non-operating income was not included for the study purpose.

Table 4.31 highlights that other operating income in Nabil revealed fluctuating trend. It was seemed least in 1st year i.e. 3.89% and most in 2nd year i.e. 4.83% of total operating income. The mean and CV of the proportion were came 4.34% and 8.46% respectively. In similar way, table 4.32 indicates that the other income in NIB showed decreasing trend. It ranged from 2.30% in last year to 4.96% in first year. Mean and CV of the proportion appeared 2.94% & 34.50% respectively.

Similarly, table 4.33 shows that other income in NIC revealed fluctuating trend. It was seemed least in 1st year i.e. 1.77% and most in 4th year i.e. 3.60% of total operating income. The mean and CV of the proportion were came 2.91% and 20.96% respectively.

Mean of the income was slightly higher in Nabil bank than in NIB & NIC, which shows more portions of other incomes were held in Nabil.CV of incomes remained higher in NIB. It means the income received from this source appeared less consistent in NIB.

4.2.2. Operating Expenses Analysis

Expenses are the cost incurred in course of operating various activities. The banks need to pay interest for the deposits and borrowings. To handle all other resources, there is a team of personnel whom the bank pays salaries and provides other facilities. Besides, a significant portion of income is spent for day-to-day operation. For the study purpose, evaluation of the following form of expenses has been made:

- Interest Expenses
- Staff Expenses
- Office Operation Expenses
- Provision for Staff Bonus

The following Table shows the various sources of operating expenses of Nabil, NIB & NIC and its percentage in total operating expenses.

Table 4.34**Operating Expenses Analysis of Nabil Bank Limited**

Rs in 'million'

FY	2004/05	2005/06	2006/07	2007/08	2008/09	Mean	SD	CV
Interest	244	357	556	758	1,153	614	322	52.47%
Expenses	33.94%	42.05%	51.29%	56.14%	60.50%	48.78%	9.63%	19.73%
Staff	200	220	240	263	340	252	49	19.22%
Expenses	27.80%	25.87%	22.16%	19.46%	17.83%	22.62%	3.76%	16.60%
Other	190	183	188	221	265	209	31	14.74%
Operating								
Expenses	26.52%	21.51%	17.37%	16.34%	13.91%	19.13%	4.44%	23.19%
Staff	84	90	100	109	148	106	23	21.26%
Bonus								
Provision	11.73%	10.57%	9.18%	8.06%	7.76%	9.46%	1.50%	15.90%
Total	718	849	1,084	1,351	1,906	1,182	422	35.69%
Operating								
Expenses	100%	100%	100%	100%	100%	100%	-	-

Table 4.35**Operating Expenses Analysis of Nepal Investment Bank Limited**

Rs in 'million'

FY	2004/05	2005/06	2006/07	2007/08	2008/09	Mean	SD	CV
Interest	355	491	686	992	1,687	842	474	56.25%
Expenses	52.80%	57.58%	59.78%	62.23%	68.68%	60.21%	5.25%	8.72%
Staff	97	121	145	187	226	155	46	29.77%
Expenses	14.44%	14.15%	12.68%	11.74%	9.19%	12.44%	1.90%	15.27%
Other	183	191	243	313	414	269	86	32.07%
Operating								
Expenses	27.24%	22.35%	21.23%	19.64%	16.85%	21.46%	3.43%	15.98%
Staff Bonus	37	50	72	102	130	78	34	43.20%
Provision	5.52%	5.92%	6.31%	6.40%	5.29%	5.89%	0.43%	7.34%
Total	672	853	1,147	1,594	2,456	1,344	638	47.43%
Operating								
Expenses	100%	100%	100%	100%	100%	100%	-	-

Table 4.36
Operating Expenses Analysis of Nepal Industrial and Commercial Bank
Limited

Rs in 'million'

FY	2004/05	2005/06	2006/07	2007/08	2008/09	Mean	SD	CV
Interest	226	340	421	506	767	452	183	40.39%
Expenses	67.47%	74.48%	74.71%	72.83%	76.19%	73.14%	3.03%	4.14%
Staff	39	45	55	72	85	59	17	28.48%
Expenses	11.65%	9.96%	9.74%	10.37%	8.40%	10.02%	1.05%	10.45%
Other	52	57	65	81	110	73	21	28.71%
Operating								
Expenses	15.41%	12.56%	11.46%	11.69%	10.90%	12.40%	1.60%	12.86%
Staff	18	14	23	36	45	27	12	42.84%
Bonus								
Provision	5.46%	3.01%	4.09%	5.11%	4.51%	4.44%	0.86%	19.29%
Total	335	457	564	695	1,007	612	231	37.72%
Operating								
Expenses	100%	100%	100%	100%	100%	100%	-	-

(See Appendix 6)

a) Interest Expenses

It is one of the major parts of operating expenses. Commercial banks pay interest on various types of deposits, loans and advances taken from other banking and financial institutions, government etc. Since transfer of money from the excess units to the deficits units is the significant function of the commercial banks, interest occupies more than three-fourth of operating expenses.

Table 4.34 depicts that interest expenses of Nabil Bank showed increased trend. It ranged from 33.94% in 1st year to 60.50% in last year. Mean and CV of the interest expenses appeared 48.78% and 19.73% respectively. Likewise, Table 4.35

depicts the interest expense out of the total expenses in NIB showed increasing trend. Mean and CV of the proportion came 60.21% and 8.72% respectively. Similarly, Table 4.36 exhibits the interest expenses of NIC showed fluctuating trend. It has highest in FY 2008/09 i.e. 76.19% and lowest in FY 2004/05 i.e. 67.47%. Mean and CV of the proportion came 73.14% and 4.14% respectively.

Mean of the interest expenses in NIC more than that of two banks indicates that the interest expenses covered more portions in NIC as compared with two banks. CV of the expenses came less in NIC than in Nabil & NIB. It signifies that interest expenses in the total mix of the operating expenses remained more consistent in NIC.

b) Staff Expenses

In any organization, manpower plays vital role in the success or failure of that organization. Well-motivated staffs are the ornaments of the organization. In return of the services provided by them, they need to be paid remuneration, which are includes under this headings. Staff expenses include salary, different forms of allowances, incentives, fringe benefits etc.

Table 4.34 reveals that the staff expenses in Nabil decreasing trend. It ranged from 17.83% in 5th year to 27.80% in 1st year of the study period. Mean and CV of the staff expenses appeared 22.62% and 16.60% respectively. Similarly, table 4.35 depicts that the staff expenses in NIB shows decreasing trend. It ranged from 9.19% in last year to 14.44% in 1st year. Mean & CV of the proportion came 12.44% and 15.27% respectively. Likewise, table 4.36 reveals that the staff expenses in NIC showed fluctuating trend over the study period. It ranged from 8.40% in last year to 11.65% in 1st year. Mean & CV of staff expenses of NIC came 10.02% & 10.45% respectively.

Average of the staff expenses to total operating seemed greater in Nabil than two banks, it indicates greater portion of staff expenses paid by Nabil than that of these

two banks. By the CV analysis, the proportions were more varied on Nabil because of higher CV in Nabil than in NIB & NIC.

c) Office Operation Expenses

For the routine work of the commercial banks, considerable amount of the expenses is incurred. All the expenses made for the operation of the bank such as rent, hire, telephone charges, electricity charge, administrative expenses etc come under this heading. Generally, these expenses occupy second major portion in the composition of total expenses.

Table 4.34 indicates that the office operating expenses in Nabil showed decreasing trend. It was highest in 1st year i.e. 26.52% and lowest in last year i.e. 13.91%. Mean and CV of the proportion came 19.13% and 23.19% respectively. Similarly, table 4.35 appears that the office operating expenses in NIB showed in decreasing trend. The proportion of these expenses ranged from 27.24% to 16.85% in first to last year respectively. Mean and CV of the office operation expenses came 21.46% & 15.98% respectively. Like wise, table 4.36 depicts that the office operating expenses in NIC showed decreasing trend over the study period. It ranged from 10.90% in last year to 15.41% in 1st year. Mean & CV of office operating expenses came 12.40% & 12.86%.

Lower mean expenses in NIC signify that it is more successful to perform its operation efficiently. CV of the expenses appeared higher in Nabil, which means it maintained less consistency in making office operation expenses over the study period.

d) Staff Bonus Facility (Provision)

When the bank earns profit, dividend is paid to the owners. Similarly, a part of profit is paid to the staff as bonus, which is as the reward for their services. In other words, bonus refers to the extra incentive provided to employees for their

efficient services to the banks. It is distributed from the profit earned by the banks. Generally, staffs prefer that bank pays greater percentage of bonus. It acts as the motivator for them but it increases the volume of operating expenses.

Table 4.34 shows that bonus or provision of Nabil showed decreasing trend. It ranged from 7.76% in last year to 11.73% in 1st year. Mean and CV of staff bonus provision came 9.46% & 15.90% respectively. Similarly, table 4.35 reveals that staff bonus provision in NIB showed increasing trend to 4th year and after that it started to decline. It ranged from 5.29% to 6.40% last to forth year respectively. Mean & CV of bonus expenses came 5.89% and 7.34% respectively. Likewise, table 4.36 depicts that the staff bonus provision in NIC showed fluctuating trend in the study period. It ranged from 3.01% in 2nd year to 5.46% in 1st year. Mean & CV of bonus expenses came 4.44% & 19.29%.

Mean of the expenses higher in Nabil than NIB & NIC. It reveals that Nabil bank is more efficient in updating and motivating its staff. CV of the expenses appeared less in NIB than in Nabil & NIC. It signifies that NIB paid bonus to its staff more consistently as compared to these two banks.

4.2.3 Operating Profit/Loss Analysis

Operating profit (Loss) is the difference between total operating income and total operating expenses. If total operating income is higher than that of total operating expenses than its operating profit otherwise operating loss. If firm's profit has to examine from the point of view of all investors (both lenders' and owners'), the appropriate measure of profit is operating profit. It shows the earning gained from commercial operation of business without effect of financing. The following Tables show the operating income, operating expenses and operating profit of Nabil, NIB & NIC for the five years study period.

Table 4.37
Operating Profit Analysis of Nabil, NIB & NIC

Rs in 'million'

Nabil			NIB			NIC			
FY	Op. Income	Op. Expenses	Op. Profits	Op. Income	Op. Expenses	Op. Profit	Op. Income	Op. Expense	Op. Profits
2004/05	1,438	718	720	1,139	672	467	518	335	183
2005/06	1,717	849	868	1,453	853	600	655	457	198
2006/07	2,036	1,084	952	1,932	1,147	785	832	564	268
2007/08	2,429	1,351	1,078	2,642	1,594	1,048	1,052	695	357
2008/09	3,074	1,906	1,168	3,804	2,456	1,348	1,487	1,007	480
Mean	2,139	1,182	957	2,194	1,344	850	909	612	297
SD	572	422	150	951	638	313	340	231	109
CV	26.76%	35.69%	16.38%	43.34%	47.43%	37.17%	37.39%	37.72%	37.01%

From the above Table, we can see that the operating income, operating expenses and operating profit of Nabil was greater than NIB & NIC and greater in NIB than NIC. Similarly, the amount of incomes was greater than that of total expenses for the three banks. Therefore, the three banks can earn operating profit it can be shown in above table 4.37.

In Nabil, the operating profits remain Rs 720,000,000; 867,000,000; 952,000,000; 1,078,000,000 & 1,168,000,000 from FY 2004/05 to FY 2008/09 respectively. Similarly, it remained Rs 467,000,000; 600,000,000; 785,000,000; 1,048,000,000 & 1,348,000,000 in corresponding year of review period in NIB. In the similar way, the operating profits remain Rs 183,000,000; 198,000,000; 268,000,000; 357,000,000 and 480,000,000 from FY 2004/05 to FY 2008/09 respectively in NIC. The Operating profit of the three banks was also in increasing trend over the period. Average operating profit of Nabil was greater than that of NIB & NIC and NIB than that of NIC i.e. Rs. 957,000,000>850,000,000>297,000,000. It indicates

Nabil bank has better financial performance than NIB & NIC or better profitability position. If we compare the operating profit of Nabil, NIB & NIC each year separately, the operating profits were higher in Nabil bank.

At CV analysis, NIB has higher CV than NIC & Nabil and NIC than Nabil with respect to operating income, operating expenses and profit i.e. 43.34%>37.39%>26.76%, 47.43%>37.72%>35.69% and 37.17%>37.01%>16.38% respectively.

4.3. Correlation Analysis

Correlation coefficient is the statistical tools that can be describe to which one variable is linearly related to another the coefficient of correlation measures the degree of relationship between two sets of figures. Among the various methods of finding out coefficient of correlation, Karl Pearson's Method is applied in the study. It is the most common and useful tool to measure the relationship between two variables in the bank. The correlation coefficient(r) between two variables X and Y can be obtained by using following formula:

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

Where,

n = number of observation in series X and Y

$\sum X$ = Sum of observations in series X

$\sum Y$ = Sum of observation in series Y

$\sum X^2$ = Sum of squared observations in series X

$\sum Y^2$ = Sum of squared observations in series Y

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

Here,

r = +1 implies that two variables are positively and perfectly correlated.

$r = -1$ implies that two variables are negatively perfectly correlated.

$r = 0$, does not necessarily mean that the variables are independent. They may, however be related in some other form such as quadratic, logarithm or exponential.

Under the correlation analysis, the intensity of linear relation between the following variables has been measured:

- Total Deposit and Loans and Advances
- Total Deposit and Net Profit
- Loans and Advances and Net Profit
- Performing Assets and Net Profit
- Total Deposits and Performing Assets
- EPS and MPS
- MPS and NWPS

4.3.1 Correlation Analysis between Total Deposit and Loans and Advances

The correlation coefficient between total deposits and loan and advances to measure the relationship between major financial sources i.e. total deposits and major component of income generating assets i.e. loans and advances. In Correlation Analysis, deposit is the independent variable (Y) and loan and advances is dependent variable (X). The purpose of computing the coefficient of correlation is to justify whether the deposits are significant used in loan and advances or not and whether there is any relationship between these two variables.

Table 4.38

Correlation Coefficient and Probable Error between Total Deposits and Loans and Advances of Nabil, NIB and NIC

Banks	r_{xy}	PE(r)	6PE(r)	Condition
Nabil	0.9901	0.0059	0.0355	$r_{xy} > 6PE(r)$
NIB	0.9982	0.0011	0.0067	$r_{xy} > 6PE(r)$
NIC	0.9954	0.0028	0.0167	$r_{xy} > 6PE(r)$

(See Appendix 7.1)

Table 4.38 denotes that the correlation coefficient of Nabil, NIC & NIB is highly strong. Also they have significant relationship between total deposit & loan and advances because of correlation coefficient came greater than six times the probable error i.e. $r_{xy} > 6PE(r)$. This indicates that the three sampled banks seems to increase or decrease the investment in loans and advances portfolio with the increase or decrease in the deposit. But between three banks, NIB shows better relationship as well as utilization of deposits on loans and advances than NIC & Nabil due to higher value of r .

4.3.2 Correlation Analysis between Total Deposit and Net Profit

Coefficient of correlation between total deposits and net profit measures the degree of relationship between total deposits and net profit. In Correlation Analysis deposit is the independent variable (Y) and net profit is dependent variable (X). The purpose of computing the coefficient of correlation is to justify whether the banks significantly utilization of deposits for income generating purpose or not and whether there is any relation ship between these two variables. To find out the correlation (r) various calculations are done.

Table 4.39

Correlation Coefficient and Probable Error between Total Deposits and Net Profit of Nabil, NIB and NIC

Banks	r_{xy}	PE(r)	6PE(r)	Condition
Nabil	0.9388	0.0358	0.2145	$r_{xy} > 6PE(r)$
NIB	0.9949	0.0031	0.0184	$r_{xy} > 6PE(r)$
NIC	0.9494	0.0297	0.1783	$r_{xy} > 6PE(r)$

(See Appendix 7.2)

As shown in table 4.39, the coefficient of correlation strongly or near to perfect (i.e.1) for all banks. This indicates positive relation between deposit and net profit. The empirical test of significance of correlation with the help of probable error

shows that the relation is significant for Nabil, NIC & NIB. In other words, in all three banks the net profit depends upon deposit. But between three banks, NIB seems more efficient regarding the utilization of the deposit for income generating purpose as reveals by greater coefficient of correlation in NIB.

4.3.3 Correlation Analysis between Loans and Advances and Net Profit

The basis function of commercial banks to collect deposits and used these funds on loan and advances to generate higher profit. Large amount of Loan and advances generate higher profit. Correlation coefficient between loans and net profit measures the degree of relationship between loan and advances and net profit. In Correlation Analysis, loans and advances is the independent variable (Y) and net profit is dependent variable (X). The purpose of computing the coefficient of correlation is to justify whether the banks loans and advances are significantly generate profit or not and whether there is any relationship between two variables. To find out the correlation (r) various calculations are done.

Table 4.40

Correlation Coefficient and Probable Error between Net Profit and Loans & advance of Nabil, NIB and NIC

Banks	r_{xy}	PE(r)	6PE(r)	Condition
Nabil	0.9677	0.0191	0.1148	$r_{xy} > 6PE(r)$
NIB	0.9920	0.0048	0.0287	$r_{xy} > 6PE(r)$
NIC	0.9544	0.0269	0.1611	$r_{xy} > 6PE(r)$

(See Appendix 7.3)

Table 4.40 highlights that the coefficient of correlation for all the sampled banks found to be almost '1' which indicates there is proportional relationship between the net profit and loan & advances for all the banks. While testing of 6 PE (r) for all sample banks found to be 'significant' as the r_{xy} value for all the banks are greater than 6PE (r) value. This implies there found to be perfect correlation. It

shows that the loan & Advance depends upon net profit and net profit depends upon loan & advances.

4.3.4 Correlation Analysis between Performing Assets and Net Profit

Commercial banks being service-oriented organization do not produce physical goods. They produce loan and advance and innovation and sell same to generate profit. Correlation coefficient between performing assets and net profit measures the degree of relationship between performing assets and net profit. In Correlation Analysis, performing assets is the independent variable (Y) and net profit is dependent variable (X). The purpose of computing the coefficient of correlation is justify whether the banks performing assets are significantly generate profit or not and whether there is any relationship between these two variables. To find out the correlation (r) various calculations are done.

Table 4.41

Correlation Coefficient and Probable Error between Performing Assets and Net Profit of Nabil, NIB and NIC

Banks	r_{xy}	PE(r)	6PE(r)	Condition
Nabil	0.9416	0.0342	0.2050	$r_{xy} > 6PE(r)$
NIB	0.9980	0.0012	0.0073	$r_{xy} > 6PE(r)$
NIC	0.9423	0.0337	0.2025	$r_{xy} > 6PE(r)$

(See Appendix 7.4)

Table 4.41 explains that the coefficient of correlation of all banks are highly strong i.e. nearly '1'. This indicates proportional relationship between Performing Assets and Net Profit. The testing of significance empirically proves this significant relationship for all the banks since $r_{xy} > 6P.E(r)$ for all of them. It signifies that the net profit and performing assets of the bank are highly and positively related. Furthermore, all the banks can raise its net profit by increasing the performing assets.

4.3.5 Correlation Analysis between Total Deposit and Performing Assets

The correlation coefficient between total deposits and performing assets to measures the relationship between major financial sources i.e. total deposits and major component of total assets i.e. loans and advances. In Correlation Analysis, deposit is the independent variable (Y) and performing asset is dependent variable (X). The purpose of computing the coefficient of correlation is justify whether the deposits are significant used in performing assets or not and whether there is any relationship between these two variables. To find out the correlation (r) various calculations are done.

Table 4.42

Correlation Coefficient and Probable Error between Total Deposits and Performing Assets of Nabil, NIB and NIC

Banks	r_{xy}	PE(r)	6PE(r)	Condition
Nabil	0.9998	0.0001	0.0008	$r_{xy} > 6PE(r)$
NIB	0.9987	0.0008	0.0046	$r_{xy} > 6PE(r)$
NIC	0.9991	0.0005	0.0032	$r_{xy} > 6PE(r)$

(See Appendix 7.5)

Table 4.42 depicts that the correlation coefficient appeared greater than six times the probable error i.e. $r_{xy} > 6PE(r)$ for all sampled banks. This indicates highly positive relation between Total Deposits and Performing Assets. The empirical test of significance of correlation with the help of probable error shows that the relation is significant for Nabil, NIC and NIB. It implies that all three banks have utilized its total deposits on the income generating assets effectively. Between three banks, Nabil has the higher value of r which shows better relationship as well as utilization of deposits on performing assets than NIC & NIB.

4.3.6 Correlation Analysis between EPS and MVPS

Correlation coefficient between MPS and EPS measures the degree of the relationship between two variables. In correlation Analysis, EPS is the independent variable (Y) and MVPS is dependent variables (X). The purpose of computing the coefficient of correlation is justify whether the MVPS significantly relation in EPS or not and whether there is any relationship between these two variables. To find out the correlation (r) various calculations are done.

Table 4.43

Correlation Coefficient and Probable Error between EPS and MVPS of Nabil, NIB and NIC

Banks	r_{xy}	PE(r)	6PE(r)	Condition
Nabil	0.0912	0.2986	1.7917	$r_{xy} < 6PE(r)$
NIB	0.5671	0.2043	1.2256	$r_{xy} < 6PE(r)$
NIC	0.7258	0.1425	0.8549	$r_{xy} < 6PE(r)$

(See Appendix 7.6)

Table 4.43 exhibits that the coefficient of correlation of Nabil, NIC & NIB is moderate or negative. The relationship between EPS and MVPS is insignificant due to $r_{xy} < 6PE(r)$. To sum up, the relation between EPS and MVPS is negative & insignificant.

4.3.7 Correlation Analysis between MPS and NWPS

Correlation Coefficient between MPS and NWPS measures the degree of the relationship between Market value per share and book value per share or net worth per share. The purpose of computing the coefficient of correlation is to justify whether the MPS significantly relation in NWPS or not and whether there is any relationship between these two variables. To find out the correlation (r) various calculations are done.

Table 4.44

Correlation Coefficient and Probable Error between MPS and NWPS of Nabil, NIB and NIC

Banks	r_{xy}	PE(r)	6PE(r)	Condition
Nabil	0.1657	0.2928	1.7571	r _{xy} < 6PE(r)
NIB	0.2834	0.2769	1.6616	r _{xy} < 6PE(r)
NIC	0.5836	0.1986	1.1914	r _{xy} < 6PE(r)

(See Appendix 7.7)

As shown in Table 4.44, the correlation between MPS and NWPS is negative for all the banks. The testing of significance empirically proves that there insignificant relationship for all the banks since $r_{xy} < 6PE(r)$ for all of them. To sum up, the relation between MPS and NWPS is negative & insignificant. In other words, MPS will change in the same direction with NWPS but independently.

4.4 Trend Analysis

Trend analysis is very useful to predict the future events on the basis of the past tendencies. This method is based on the assumption that past tendency continues in the future. The future trend of any variable is forecasted using the equation,

$$Y_c = a + bX$$

Where,

Y_c = The dependent variable

a = Y-intercept

b = The slope of the trend line

X = Year-2006/07 (with regard to the data used in the study)

The normal equations on fitting the trend equation are:

$$Y = Na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2 \quad \text{Since } \Sigma X = 0 \quad a = \frac{\Sigma Y}{N}, b = \frac{\Sigma XY}{\Sigma X^2}$$

With the help of the trend equation, future values of the following variables for coming five years have been predicted:

- Total Deposits
- Loan and Advances
- Performing Assets
- Net Worth
- Net Profit

4.4.1 Trend Analysis of Total Deposits

Table 4.45

Least Square Trend Equation & Its Determinant of Total Deposits

Bank	a	b	Yc = a + bX
Nabil	25,307,919,356.20	5,809,094,229.30	25,307,919,356.20 + 5,809,094,229.30X
NIB	27,764,112,317.80	8,041,147,302.10	27,764,112,317.80 + 8,041,147,302.10X
NIC	10,748,035,848.60	2,299,584,352.20	10,748,035,848.60 + 2,299,584,352.20X

(See: Appendix 8.1)

Table 4.45 depicts that total deposits in Nabil, NIB & NIC showed increasing trend. On the average, total deposit in Nabil, NIB & NIC increased by Rs. 5,809,094,229.30, Rs. 8,041,147,302.10 & Rs. 2,299,584,352.20 per year in the past period respectively. Therefore, trend equation of the total deposit in Nabil, NIB & NIC are, $Y_c = 25,307,919,356.20 + 5,809,094,229.30X$; $Y_c = 27,764,112,317.80 + 8,041,147,302.10X$ & $Y_c = 10,748,035,848.60 + 2,299,584,352.20X$ respectively.

On the basis of the trend equation, the forecasted value of the total deposit in Nabil, NIB & NIC for FY 2009/10 was Rs. 42,735,202,044.10, Rs. 51,887,554,224.10 & Rs. 17,646,788,905.20 respectively and for FY 2010/11 was Rs. 48,544,296,273.40, Rs. 59,928,701,526.20 & Rs. 19,946,373,257.40 respectively.

Between three banks, average deposit and rate of the increment in total deposit seem higher in NIB. In other words, total deposit of NIB will increase in higher rate for forecasted periods if the past trend continues.

4.4.2 Trend Analysis of Loans and Advances

Table 4.46

Least Square Trend Equation & Its Determinant of Loans and Advances

Bank	a	b	$Y_c = a + bX$
Nabil	17,977,403,001.20	4,258,522,906.30	$17,977,403,001.20 + 4,258,522,906.30X$
NIB	21,151,375,573.80	6,709,913,973.60	$21,151,375,573.80 + 6,709,913,973.60X$
NIC	9,264,262,478	2,257,619,973.10	$9,264,262,478 + 2,257,619,973.10X$

(See: Appendix 8.2)

Table 4.46 highlights that loans and advances of all banks revealed increasing trend throughout the study period. On the average, loans and advances in Nabil, NIB & NIC increased by Rs. 4,258,522,906.30; Rs. 6,709,913,973.60 & Rs. 2,257,619,973.10 respectively per year in the past period. Therefore, trend equation of loans and advances in Nabil, NIB & NIC are, $Y_c=17,977,403,001.20 + 4,258,522,906.30X$; $Y_c=21,151,375,573.80 + 6,709,913,973.60X$ & $Y_c=9,264,262,478 + 2,257,619,973.10X$ respectively.

On the basis of above trend equation, the forecasted value of the loan and advances for FY 2009/10 are Rs. 30,752,971,720.10; Rs. 41,281,117,494.60 & Rs.

16,037,122,397.30 respectively and for FY 2010/11 is Rs. 35,011,494,626.40; Rs. 47,991,031,468.20 & Rs. 18,294,742,370.40 respectively.

Between two banks, average Loans and advances and rate of the increase both seem higher in NIB. In other words, Loans and Advances will increase with higher rate in NIB forecasted periods if the past trend continues.

4.4.3 Trend Analysis of Performing Assets

Table 4.47

Least Square Trend Equation & Its Determinant of Performing Assets

Bank	a	b	$Y_c = a + bX$
Nabil	27,161,423,917.40	5,916,780,661.60	$27,161,423,917.40 + 5,916,780,661.60X$
NIB	27,331,024,107.60	7,496,354,069.60	$27,331,024,107.60 + 7,496,354,069.60X$
NIC	11,653,065,040.40	2,456,507,561.30	$11,653,065,040.40 + 2,456,507,561.30X$

(See: Appendix 8.3)

Table 4.47 explains that investment of all banks showed increasing trend. On the average, investment in Nabil, NIB & NIC increased by Rs. 5,916,780,661.60; Rs. 7,496,354,069.60 & Rs. 2,456,507,561.30 respectively per year in the past period. Therefore, trend equation of investment in Nabil, NIB & NIC are, $Y_c = 27,161,423,917.40 + 5,916,780,661.60X$; $Y_c = 27,331,024,107.60 + 7,496,354,069.60X$ & $Y_c = 11,653,065,040.40 + 2,456,507,561.30X$ respectively.

On the basis of above trend equation, the forecasted value of the deposits for FY 2009/10 are Rs. 44,911,765,902.20; Rs. 49,820,086,316.40 & Rs. 19,022,587,724.30 respectively and for FY 2010/11 are Rs. 50,828,546,563.80; Rs. 57,316,440,386 & Rs. 21,479,095,285.60 respectively.

On comparing three banks, average investment and rate of the increase in total investment both appeared higher in NIB. It means performing assets will increase in higher rate in NIB for forecasted periods if past trend continues.

4.4.4 Trend Analysis of Net Worth

Table 4.48

Least Square Trend Equation & Its Determinant of Net Worth

Bank	a	b	$Y_c = a + bX$
Nabil	2,230,807,780.80	351,091,128	$2,230,807,780.80 + 351,091,128X$
NIB	2,213,672,600	672,668,000	$2,213,672,600 + 672,668,000X$
NIC	1,066,566,600	248,908,500	$1,066,566,600 + 248,908,500X$

(See: Appendix 8.4)

In above Table 4.48, the performing assets of all banks revealed increasing trend in review period. Average rate of increase in the amount of net worth in Nabil, NIB & NIC were Rs 351,091,128; Rs 672,668,000 & Rs 248,908,500 respectively per year. Hence, the trend equations of net worth is, $Y_c=2,230,807,780.80 + 351,091,128X$; $Y_c=2,213,672,600 + 672,668,000X$ & $Y_c=1,066,566,600 + 248,908,500X$ respectively. From the trend above equation, the forecasted values of the deposits for FY 2009/10 is Rs. 3,284,081,164.80; Rs. 4,231,676,600 & Rs. 1,813,292,100 respectively and for FY 2010/11 is Rs. 3,635,172,292.80; Rs. 4,904,344,600 & Rs. 2,062,200,600 respectively.

On observing the past trend, both average and rate of increase of net worth seems higher in NIB. Therefore, net worth of NIB will increase of net worth seems higher speed for forecasted periods if past trend continues.

4.4.5 Trend Analysis of Net Profit

Table 4.49

Least Square Trend Equation & Its Determinant of Net Profit

Bank	a	b	$Y_c = a + bX$
Nabil	721,371,524.80	113,308,407.10	$721,371,524.80 + 113,308,407.10X$
NIB	536,286,590.20	168,313,905.10	$536,286,590.20 + 168,313,905.10X$
NIC	185,862,127.40	55,382,717.40	$185,862,127.40 + 55,382,717.40X$

(See: Appendix 8.5)

Table 4.49 explores that net profit of all banks showed increasing trend. Average rate of increase in the amount of net profits in Nabil, NIB & NIC were Rs 113,308,407.10; Rs 168,313,905.10 & Rs 55,382,717.40 respectively per year. Therefore, trend equations of net profit are, $Y_c=721,371,524.80 + 113,308,407.10X$; $Y_c=536,286,590.20 + 168,313,905.10X$ & $Y_c=185,862,127.40 + 55,382,717.40X$ respectively. From the trend above equation, the forecasted values of the deposits for FY 2009/10 are Rs. 1,061,296,746.10; Rs. 1,041,228,305.50 & Rs. 352,010,279.60 respectively and for FY 2010/11 is Rs. 1,174,605,153.20; Rs. 1,209,542,210.60 & Rs. 407,392,997 respectively.

Between two banks, average of the net profit appeared higher in Nabil but rate of increase is higher in NIB. It means net profit will increase in higher rate in NIB for forecasted periods if the past trend continues.

4.5 Major Findings

Major findings of this study during the period of five years in Nabil, NIB and NIC from the analysis are summarized as:

a) Ratio analysis

Ratio analysis is one of the important financial tools to analyze the financial performance. The study mainly focused on the ratio analysis. For the analysis purpose each ratios are analyzed by calculating means and C.V of the ratio of three sampled banks.

⇒ Liquidity Position

The analysis of liquidity position of these three banks have shows different position. If we study, quick ratio, cash and Bank balance to short-term deposit ratio, cash and bank balance to total deposits ratio, NRB balance to current and saving deposit ratio and NRB balance to fixed deposit ratio describes that NIC has more short-term assets under reserves than NIB and Nabil. So, its liquidity position is higher in. In summary, the three banks liquidity position (except current

ratio and quick ratio which lies under the standard of 2:1 and 1:1 respectively) is good and in comparison NIC has better liquidity position. But Nabil has to improve the liquidity position as compared to NIC & NIB.

At the CV Analysis, quick ratio, NRB balance to Fixed deposits ratio and NRB balance to saving and current deposits seems more variation in the ratio of NIC than Nabil & NIB because it has more CV whereas other remaining ratio like current ratio, cash & bank balance to current asset ratio, cash & bank balance to total deposit ratio seems more variation in the ratio of Nabil.

⇒ **Activity /Turnover Position**

The conclusions exacted about turnover position of these three banks are differing from each other. First two ratios i.e. Loans and advances to total deposits and Loans and advances to saving deposits ratio shows better turnover in NIC and remaining three i.e. Loans and advances to fixed deposits ratio, investment to total deposit ratios and performing assets to total assets ratios shows better activity position in Nabil. In comparison to NIC & NIB, Nabil is success in utilization its depositors' fund in investment. In other words, Nabil utilizes its income generating assets more efficiently than NIC & NIB.

If we looks at the CV analysis, loans & advances to total deposit and saving deposit & investment to total deposit ratio indicates there is more uniform in utilization of its resources in NIC and the two ratios i.e. loan and advance to fixed deposit & performing asset to total assets ratio show less uniform. Similarly, loans and advances to saving deposit & performing asset to total assets ratio indicates there is more consistence in utilization of its resources in Nabil due to low CV. In the same way performing assets to total assets ratio indicates there is more uniform in the ratio of NIB. Likewise, CV analysis of three banks in term of loans and advances to total deposits, loans and advances to saving deposits & loans and advances to fixed deposit ratio differ significantly.

⇒ Profitability Position

The analysis of profitability of three banks with the help of profitability ratios have drawn different conclusion. Some ratios show the earning position and profit position of Nabil is better and effective than NIB & NIC and after Nabil, NIB is better than NIC. In term of ROA, ROE and Return on total deposits ratio within these last five years is better profitable in Nabil than two banks, and total interest income to interest expenses, interest earned to total assets ratios of NIC is better than that of two banks. In summary, expenses of Nabil is higher, its profit making capacity also efficiency as compared to NIC & NIB.

The profitability ratios are less consistency in Nabil except interest earned to total assets and interest expenses to total interest income because of higher CV appeared. Similarly, there in not significant differences of mean profitability ratios between NIB & NIC except interest expenses to interest income ratio. NIC paid higher interest on deposit so that the banks are successful in saving its interest income more amounts.

⇒ Capital Structure Position

The analysis of capital structure ratios of debt-equity ratio and debt assets ratio is higher in NIB. Likewise, Interest coverage ratio of Nabil is higher which indicates that it has better debt servicing capacity than two banks. Debt-equity ratio and interest coverage ratio are greater variation in Nabil than two banks whereas debt-asset ratio is less uniform. This analysis shows Nabil seems more levered than NIC & NIB.

⇒ Capital Adequacy Position

In this adequacy ratios, Nabil and NIC show the more successful to maintain sufficient capital than that of NIB. Net worth to total deposits ratio and net worth to total assets ratio in NIC is greater than two banks. But net worth to total credit ratios is greater in Nabil which indicated Nabil is more successful to build up confidence among creditors and it has used significantly larger extent of net worth

to creation. There is greater variation of ratios from mean in Nabil in net worth to total deposit ratio and net worth to total assets and net worth to total credit ratio.

⇒ **Assets Quality Position**

Assets quality contained by the banks with the help of asset quality ratio gives fixed result. Loan Loss coverage ratio, loan loss provision to total income and loan loss provision to total deposit ratio all are greater in NIC but Nabil has greater in accrued interest to total interest income. It indicates that major portion of loan is risky in NIC. In summary, loans and advances granted by the NIC are riskier than two banks. Similarly, Loan Loss coverage ratio, loan loss provision to total income and loan loss provision to total deposit ratios are more consistence in NIB than that of NIC & Nabil but in accrued interest to total interest income ratio has less uniform in NIC at CV analysis

⇒ **Other Financial Position**

- Greater EPS in Nabil shows that earning on per share basis is higher in Nabil. EPS greatly varied from mean in NIB than Nabil & NIC.
- Higher P/E ratios in Nabil than in NIB & NIC indicate greater expectation of market toward the achievement of firm. In the same way, Nabil has greater variability from mean than two banks.
- Higher mean ratio and greater variation of MVPS to BVPS ratio in Nabil signifies strong management and organization in Nabil than in NIB & NIC.

b) Income and Expenditure Analysis

In summary, we can clarify the operating income is highly contributed by interest income and similarly the operating expenses is highly contributed by interest expenses from above analysis of operating income and operating expenditure of these three banks. In the total operating income, average proportion of interest income is higher in NIC than that of two banks whereas average proportion of commission & discount is higher in NIB and average proportion of Foreign

exchange fluctuating income & average proportion of operating income is higher in Nabil. If we look at operating expenses, the average proportion of interest expenses and average proportion of office operation expenses is higher in NIC & NIB respectively and average proportion staff expenses and average proportion of staff bonus provision is higher in Nabil.

Finally if we concentrate in operating profit or loss analysis, Nabil is better position in earning operating profit than that of NIB & NIC and NIB than that of NIC in an average. If we analysis year by year the operating profit earned by Nabil and NIB has better than that of NIC by large amount.

c) Correlation Analysis

In correlation analysis, Karl Pearson's coefficient of correlation is used and also calculated the probable error of them. Total deposit and loan & advances, total deposit & net profit, Loans and advances & net profit, Performing assets & Net profit, total deposit & performing assets all are positively correlated at significant level in Nabil, NIB and NIC, where $r_{xy} > 6PE(r)$, but the relation between MPS & NWPS and EPS & MVPS gives no result because $r_{xy} < 6PE(r)$ which means negative or insignificant to all three banks.

d) Trend Analysis

In trend analysis, least squared trend analysis is analyzed by calculating the parameters *a* and *b*. Total deposits, loans and advances, Performing Assets, Net worth and Net profit shows increasing trend in all three banks. Average amount of Total deposits, Loan & advances, Performing assets and Net worth are higher in NIB than Nabil & NIC. Similarly, in terms of net profit, average amount is higher in Nabil and speed of increment rate is higher in NIB.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

It has identified the problem and set objectives to solve problems about financial performance of sampled commercial bank i.e. Nabil Bank Limited, Nepal Investment Bank Limited & Nepal Industrial and Commercial bank Limited. To make this study more effective, related literatures have been reviewed. The review of literature provides the foundation of knowledge in order to under take this study more precisely.

Research methodology has been described in third chapter, which is a way to solve the problems with the help of various tools and techniques. This chapter includes the various financial as well as statistical tools to analyze the data in order to come to the decisions. This chapter includes the research design, population and sample data collection procedure, data period covered and method of analysis. These studies is mainly conducted on the basis of secondary data collected from annual reports of concern banks, financial statement, etc. and authorized web site of three sampled banks and NRB.

The presentation and analysis of data has been made comparative analytical and their interpretation has done in chapter four by applying the wide varieties of methodology as stated in chapter three. It includes the various financial and statistical tools. In case of financial tools ratio analysis and income & expenditure analysis is done. Ratio analysis includes liquidity, turnover, profitability, solvency, capital adequacy, asset quality & other indicators. Other indicators consist of EPS, PE ratio and MPS. Various statistical tools such as arithmetic mean, standard deviation, coefficient of correlation and trend analysis have been applied to fulfill the objectives of this study. The analysis has been done mainly through secondary.

The major findings of the study are also included in the final section of the presentation and analysis chapter.

The basic task of commercial banks is to deal in exchange currency, accepting deposits, giving loans and doing commercial transaction. So, bank is an institution that deals with money by accepting various types of deposits, disbursing loan and rendering other financial services. Broadly speaking, bank draws money from the people who are not using it at time and lend to those who are in position to use it for productive purposes. Since banks are rendering a wide range of services to the people from different walk of life, they have become an essential part of modern society. Commercial banks are the real intermediaries who transfer savings to the borrowers so that the money can be used in the productive sector. As a financial intermediary, commercial banks are giving greater contribution to GDP for economic development i.e. 9.9% (Radesh Pant: NRB Arthik Mimansha 2064; column C; 57). At present, there are 27 commercial banks operating in the country. They are guided & regulated under Company Act 2053, Commercial Bank Act 2031 & NRB directives.

Every country in the world developed or underdeveloped is in pursuit of attaining the goal of rapid economic development in the same way or other depending upon the prevailing prospectus and nature of instrument for economic growth. In this context, commercial banks play the role of financial intermediary collecting the fund from surplus unit (i.e. Investors). The structure of modern economy will be no better than ancient period of better system without financial intermediaries. Therefore, commercial banks play an important role in boosting the national economy. They play the vital role in the affairs of the economy in various ways. Their operations record the economic pulse of the economy. They have played an important role in giving a direction to economy's development over time by financing the requirement of trade and industry in the country. It should not be forgotten that the country can hardly achieve its goal of economic development

with out strong capital base and commercial banks have pivotal role in forming such base.

Financial performance as part of the financial management in the main indicators of the success or failure of the firm (i.e. Banks) so, the financial performance analysis can be considered as the heart of financial decision the growth and development of the firm is directly influences by the financial policies of their firm. There are different persons / institutions that are affects by the financial decision of the firm, stakeholder such as owners, managers, creditors, tax authorities etc are directly interrelated in the final information analysis of the bank's position.

Financial analysis shows the relationship between the various component from Balance Sheet and Profit & Loss statement. The analyzed statements contain such information which is useful for management, shareholders, creditors, investors, depositors, etc. As in other industries, banking industries also need financial analysis for evaluating a bank's performance as compare to the other and also with own past performance.

Therefore, the study has been conducted to evaluate the financial performance of Nabil Bank Limited, Nepal Investment Bank Limited (NIB) and Nepal Industrial & Commercial Bank Limited (NIC) and to find out their strength and weakness. The main objective of the study is an analysis of financial performance of the private Sectors commercial banks which are fully managed and ownership of Nepalese entrepreneur. To fulfill this objective and other specific objectives as described in Chapter one, an appropriate research methodology has been adopted which includes financial tools- ratio analysis, income and expenditure analysis and statistical tools-mean, S.D; C.V, correlation coefficient, trend analysis have been used. The major study consists of liquidity, turnover, profitability, capital structure, capital adequacy and assets quality position. Under these main ratios, their mean, Coefficient of Variation are analyzed. In order to test the relationship

between various components of financial indicators Karl Pearson's correlation coefficient 'r' is calculated and analyzed.

The necessary data are derived from the balance sheets and profit and loss accounts of Nabil, NIB and NIC for the period of five years from FY 2004/05 to FY 2008/09. Chapter-V includes the summary of major findings, conclusions and recommendations.

5.2 Conclusions

After analyzing the data in chapter four, the conclusion is that the financial performance of such types of commercial bank is improved year by year. In other words, all private sector banks which are under Nepalese Management are being run efficiently and doing well.

As of FY 2008/09, private sector commercial banks accept more than Rs 200 billion in deposits and utilized Rs 155 billion through loans and advances with gross credit deposit ratio of nearly 80%. So, the market growth can be attributed to private sector commercial banks of the country. If we compared the main financial indicators of sampled banks for example total deposit and loan and advances ratio in FY 2007/08 and FY 2008/09 are 68.18% & 74.97% in Nabil bank and 79.91% & 78.86% in NIB & 87.62% and 89.32% in NIC.

In commercial banks, the liquidity position affects external and internal factors such as saving for investment situation, internal banks requirement, the lending policies, management capability, prevailing interest rate etc. Liquidity and profitability trend move opposite direction as they have negative correlation. To meet the liquidity needs, the banks need cash reserves, which are not earning assets. Profit on the other hand derived from loans and advance. So from the point of view of profitability the three banks are at the satisfactory level but they are poor liquidity position especially current and quick ratios, which are below the

prescribe standard. In summary, financial performance of sample banks are seemed satisfactory. In comparison, profitability, turnover position, capital structure, and other indicators (EPS, P/E ratio and MVPS to BVPS) are better than in Nabil as compared to NIB & NIC whereas capital adequacy and assets quality ratio is better in NIC than Nabil & NIB. In totality, Nabil bank is better as compared to NIB & NIC because Nabil is less risky than two banks and it is successful to attract the investor and have strong management. In other word Nabil bank investing in less risky sector. Total operating income and financial indicators between the three sampled banks do not differ significantly except the net working capital, leverage and Capital adequacy position.

5.3 Recommendations

The private financial institutions can survive if they earn better net profit. With an objective to maximize the economic profit banks compete in the industry. It is applicable to both domestically run and joint venture banks. Their profit depends on how much customers they can attract in a competitive way. Both types of banks can increase their clients if they have good management team, efficient technology, and good public relations. In the light of above facts and figures, the objective of present study is to find out to what extent these banks have succeeded in realizing the stated objectives. Such in depth study will provide the basis for evaluating financial success or failure and also suggest suitable measures to improve their operating financial performance of Nabil, NIB and NIC are listed below:

- i) These three banks could not maintain the conventional standard of liquidity and quick ratios. It indicates the poor liquidity position in these banks especially in Nabil & NIB. It may create the problem of working capital if they need to pay the short-term obligation at demand. With the delay in

payment of liabilities of banks may lose their goodwill and may have the problem in winning the confidence of current depositors and short term lenders. So, the three banks are recommended to maintain the adequate net working capital.

- ii) Government Securities such as Treasury bills, Development bonds, saving certificates etc. are risk free investment alternatives because they are free of default risk as well as liquidity risk and can be easily sold in the market. In this study, it has found that tree sampled banks have made some amount of fund in Government securities. But Nabil, NIB & NIC are recommended to invest more funds in Government securities instead of keeping them idle.
- iii) From the above analysis, NIB is maintaining more amount as money at call and short notice than NIC & Nabil. So, NIB is recommended to decrease its amount to call by increasing loan and advances. Similarly, it is also recommended to these three banks to hold its amount in form of cash and cash equivalent items only to extent of requirement. Through it is difficult to find exactly the suitable liquidity ratio; estimation can be done on the basis of past experience, nature of depositors, situation of financial market and nature of competition.
- iv) The bank must collect more funds from current deposits, compared to other interest bearing deposits. The banks must located and explore new technique and facilities for collection. There should be continuous flow of financial information among various groups of employees. The goal and objective of banks should be carefully communicated to lower level of management.
- v) All the three banks have maintained NRB Balance total deposit ratio remarkable higher than standard prescribed by NRB. The fund tied in NRB balance cannot yield a good return. So these banks are suggested to lower this ratio and invest the surplus fund in other current assets such as loans and

advances, bill purchase discount & money at call and short notice. The banks have employed a considerably greater portion of debt in their capitals. Therefore they should be aware of possible risk that may arise due to slackness in the business activities. In this regard NIB & NIC should adopt suitable measures so as to check the risk factors.

- vi) Turnover of fund raised from outsiders appeared less satisfactory in NIB than Nabil & NIC. So NIB has to allocate the deposits in Income generating sectors. It will be better for these three banks to open the branches in other cities & rural areas in order to find the more profitable opportunities.
- vii) Capital adequacy position of NIB seems less satisfactory than that of two banks. So NIB needs to raise its net worth. It will be better for the banks to distribute the stock dividend rather than the cash dividend.
- viii) The imbalance between the operating income and operating expenses has made banks less profitable. In our analysis, the operating income operating expenses of NIB is higher and lower in NIC. So, from the view of operating profit in the Nabil is better than NIB & NIC in average and NIB is better than NIC in average. So every commercial bank should increase the operating income and cut down the unnecessary expenses by using modern banking technology, computer networking, expert and well trained personnel. Introducing the latest and sophisticated banking system, developing the high motivational strength in management and increasing turnovers etc are some of techniques to improve and increase the gap between income and expenses.
- ix) A systematic approach of financial performance analysis should be made annually. This would considerably contribute to increase the financial strength of banks. The banks should have debt analysis of their financial strength and weakness. It should try to come out its weakness by using its

strength aspect. The financial performance of these sampled banks is at the satisfactory level. The best is yet to come.

- x) Relation between the major components of income generating assets i.e. performing assets and net profit are highly positive in these three sampled banks but relation between income generating assets and major sources of fund i.e. total deposits is poor in NIC, due to newly bank as compared to these two banks. NIC is recommended to invest its fund in the secured and profitable sector, which generates high profit.
- xi) Political instability directly affects the economic sector such as hotels & tourism, manufacturing & trading sector. Bank loan & advances is decreasing in this sector. So, banks should give priority to these sectors as well as banks should create new investing sector to mobilize deposit.
- xii) Different systematic, modern & statistical tools should be used for the upcoming thesis in order to find out the actual financial performance of concern bank as clearly as previously. A sampled must be taken more than three banks to gain the knowledge and comparative analysis of sampled banks.

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Appendix-1

Calculation of Current Assets of Nabil Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Cash and Bank Bal.	559,380,614	630,238,588	1,399,825,851	2,671,141,055	3,372,512,471
Invest. in Govt. Sec.	2,413,939,370	2,301,463,338	4,808,348,503	4,646,883,136	3,706,102,662
Money at call and Short Notice	868,428,307	1,734,901,943	563,532,632	1,952,360,700	552,888,297
Total Quick Assets	3,841,748,291	4,666,603,869	6,771,706,986	9,270,384,891	7,631,503,430
Loan and Advances Net	10,586,170,002	12,922,543,153	15,545,778,730	21,365,053,318	27,589,933,041
Other Current Assets	480,995,917	532,419,845	509,370,309	533,260,016	694,414,364
Tot. Current Assets	14,908,914,210	18,121,566,867	22,826,856,025	31,168,698,225	35,915,850,835

Calculation of Current Assets of Nepal Investment Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Cash and Bank Balance	1,340,480,845	2,336,521,396	2,441,514,200	3,754,941,568	7,918,003,890
Invest. in Govt. Securities	1,948,500,000	2,522,300,000	3,256,400,000	3,155,000,000	2,531,300,000
Money at call & Short Notice	140,000,000	70,000,000	362,970,000	0	0
Total Quick Assets	3,428,980,845	4,928,821,396	6,060,884,200	6,909,941,568	10,449,303,890
Loan and Advances Net	10,128,004,827	12,776,208,037	17,285,427,389	26,996,652,258	36,241,206,558
Other Current Assets	398,032,991	81,221,511	77,988,411	115,370,684	185,238,819
Total Current Assets	13,955,018,663	17,786,250,944	23,424,300,000	34,021,964,510	46,875,749,267

Calculation of Current Assets of Nepal Industrial & Commercial Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Cash and Bank Bal.	1,005,549,425	749,139,079	599,758,632	1,192,348,786	1,461,150,549
Invest. and Govt. Securities	1,194,313,877	1,756,585,150	1,104,060,515	1,545,375,347	2,195,003,685
Money at call and Short Notice	89,880,961	353,515,103	163,009,044	160,000,000	0
Total Quick Assets	2,289,744,263	2,859,239,332	1,866,828,191	2,897,724,133	3,656,154,234
Loan and Advances (with bills) Net	4,711,712,301	6,655,964,020	8,941,397,651	11,264,678,096	13,679,393,779
Other Current Assets	59,931,067	102,561,503	220,344,613	112,705,573	320,937,903
Total Current Assets	7,061,387,631	9,617,764,855	11,028,570,455	14,275,107,802	17,656,485,916

Appendix-2

Calculation of Current Liabilities of Nabil Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Total Deposits (Except FD)	12,508,073,572	15,898,305,291	17,907,095,607	23,450,961,354	29,037,547,543
Bills payable	119,753,038	92,536,853	83,514,820	238,421,890	463,138,615
Mis. Other Liab.	89,853,175	372,149,741	378,552,721	465,940,930	502,899,934
Total Current Liab.	12,717,679,785	16,362,991,885	18,369,163,148	24,155,324,174	30,003,586,092

Calculation of Current Liabilities of Nepal Investment Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Tot. Deposits (Expt. FD)	11,042,307,911	13,514,336,379	16,972,168,830	26,507,493,633	35,064,719,847
Bills payable	15,008,198	18,820,120	32,401,462	78,838,643	82,338,018
Mis. Other Liab.	474,308,843	287,626,214	347,518,664	488,404,288	709,975,092
Total Current Liab.	11,531,624,952	13,820,782,713	17,352,088,956	27,074,736,564	35,857,032,957

Calculation of Current Liabilities of Nepal Industrial & Commercial Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Tot. Deposits (Expt. FD)	3,310,758,219	4,701,449,657	5,993,667,639	7,208,737,137	7,999,871,140
Bills payable	28,329,320	91,508,236	31,691,544	32,564,394	265,106,722
Mis. Other Liab.	103,795,434	86,390,394	97,007,703	256,654,384	363,044,430
Total Current Liab.	3,442,882,973	4,879,348,287	6,122,366,886	7,497,955,915	8,628,022,292

Appendix-3

Calculation of Loans and Advance of Nabil Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Loan and Advances with bill purchase & discount	10,946,736,577	13,278,782,259	15,903,023,765	21,759,460,334	27,999,012,071
Total Risk Assets	10,946,736,577	13,278,782,259	15,903,023,765	21,759,460,334	27,999,012,071
Loan Loss Provision	360,566,575	356,239,106	357,245,035	394,407,016	409,079,030
Loan and Advances (With Bills) Net	10,586,170,002	12,922,543,153	15,545,778,730	21,365,053,318	27,589,933,041

Calculation of Loans and Advance of Nepal Investment Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Loan and Advances with bill purchase & discount	10,453,163,997	13,178,151,824	17,769,099,903	27,529,304,736	36,827,157,409
Total Risk Assets	10,453,163,997	13,178,151,824	17,769,099,903	27,529,304,736	36,827,157,409
Loan Loss Provision	325,159,170	401,943,787	483,672,514	532,652,478	585,950,852
Loan and Advances(With Bills) Net	10,128,004,827	12,776,208,037	17,285,427,389	26,996,652,258	36,241,206,557

Calculation of Loans and Advance of Nepal Industrial & Commercial Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Loan and Advances with bill purchase & discount	4,909,355,200	6,902,123,944	9,128,649,206	11,465,334,005	13,915,850,035
Total Risk Assets	4,909,355,200	6,902,123,944	9,128,649,206	11,465,334,005	13,915,850,035
Loan Loss Provision	197,642,899	246,159,924	187,251,555	200,655,909	236,456,256
Loan and Advances(With Bills) Net	4,711,712,301	6,655,964,020	8,941,397,651	11,264,678,096	13,679,393,779

Appendix-4

Calculation of Performing Assets of Nabil Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Loan and Advances with bill purchase & discount	10,946,736,577	13,278,782,259	15,903,023,765	21,759,460,334	27,999,012,071
Investment	4,269,658,178	6,180,658,108	8,956,308,672	9,966,562,208	10,874,805,536
Money at call and Short Notice	868,428,307	1,734,901,943	563,532,632	1,952,360,700	552,888,297
Total Performing Assets	16,084,823,062	21,194,342,310	25,422,865,069	33,678,383,242	39,426,705,904

Calculation of Performing Assets of Nepal Investment Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Loan and Advances with bill purchase & discount	10,453,163,997	13,178,151,824	17,769,099,903	27,529,304,736	36,827,157,409
Investment	3,934,188,708	5,602,868,649	6,505,679,987	6,879,423,625	7,403,111,700
Money at call and Short Notice	140,000,000	70,000,000	362,970,000	0	0
Total Performing Assets	14,527,352,705	18,851,020,473	24,637,749,890	34,408,728,361	44,230,269,109

Calculation of Performing Assets of Nepal Industrial & Commercial Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Loan and Advances with bill purchase & discount	4,909,355,200	6,902,123,944	9,128,649,206	11,465,334,005	13,915,850,035
Investment	1,760,723,628	2,479,912,524	1,599,481,050	2,311,468,317	3,026,022,185
Money at call and Short Notice	89,880,961	353,515,103	163,009,044	160,000,000	0
Total Performing Assets	6,759,959,789	9,735,551,571	10,891,139,300	13,936,802,322	16,941,872,220

Appendix-5

Calculation of Total Debt & Longterm debt of Nabil Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Current Liabilities	12,717,679,785	16,362,991,885	18,369,163,148	24,155,324,174	30,003,586,092
Fixed Deposits	2,078,535,135	3,449,094,149	5,435,189,720	8,464,086,113	8,310,708,297
Loan & Advances	10,946,736,577	13,278,782,259	15,903,023,765	21,759,460,334	27,999,012,071
Total Long-term Debts (FD+Loan & advance)	13,025,271,712	16,727,876,408	21,338,213,485	30,223,546,447	36,309,720,368
Total Liabilities(Debt)	25,742,951,497	33,090,868,293	39,707,376,633	54,378,870,621	66,313,306,460

Calculation of Total Debt & Longterm debt of Nepal Investment Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Current Liabilities	11,531,624,952	13,820,782,713	17,352,088,956	27,074,736,564	46,875,749,267
Fixed Deposits	3,212,265,752	5,412,969,595	7,516,686,866	7,944,232,558	11,633,380,218
Loan & Advances	10,453,163,997	13,178,151,824	17,769,099,903	27,529,304,736	36,827,157,409
Total Long-term Debts (FD+Loan n advance)	13,665,429,749	18,591,121,419	25,285,786,769	35,473,537,294	48,460,537,627
Total Liabilities(Debt)	25,197,054,701	32,411,904,132	42,637,875,725	62,548,273,858	95,336,286,894

Calculation of Total Debt & Longterm debt of Nepal Industrial & Commercial Bank Limited

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Current Liabilities	3,442,882,973	4,879,348,287	6,122,366,886	7,497,955,915	8,628,022,292
Fixed Deposits	2,930,619,941	4,064,500,981	4,074,563,221	5,875,951,533	7,580,059,764
Loan & Advances	4,909,355,200	6,902,123,944	9,128,649,206	11,465,334,005	13,915,850,035
Total Long-term Debts (FD+Loan n advance)	7,839,975,141	10,966,624,925	13,203,212,427	17,341,285,538	21,495,909,799
Total Liabilities(Debt)	11,282,858,114	15,845,973,212	19,325,579,313	24,839,241,453	30,123,932,091

Appendix-6

Net Profit of Nabil Bank Ltd.

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Interest Income	1,068,746,769	1,309,998,500	1,587,758,714	1,978,696,727	2,798,486,196
Commission & Discount	128,883,480	138,293,913	150,608,550	156,234,754	179,693,027
Foreign Ex. Fluctuation Income	184,878,868	185,483,662	209,926,167	196,487,415	251,919,712
Other Operating Income	55,933,830	82,897,862	87,574,553	97,444,578	144,164,143
Non-Operating Income	72,241,283	73,557,805	43,594,929	50,780,834	46,359,479
Total Income	1,510,684,230	1,790,231,742	2,079,462,913	2,479,644,308	3,420,622,557
Interest Expenses	243,544,611	357,161,304	555,710,109	758,436,212	1,153,280,052
Staff Expenses	199,516,217	219,780,853	240,161,275	262,907,576	339,897,913
Other operating Expenses	190,299,470	182,696,413	188,183,330	220,750,570	265,158,033
Staff Bonus Provision	84,198,357	89,800,379	99,504,596	108,899,000	147,866,771
Total Expenses	717,558,655	849,438,949	1,083,559,310	1,350,993,358	1,906,202,769
NPBT & Provision	793,125,575	940,792,793	995,903,603	1,128,650,950	1,514,419,788
Provision for Loan Loss	35,340,362	42,789,000	857,642	39,660,946	35,752,078
Income Tax	237,671,128	262,741,444	321,086,263	342,521,610	447,614,612
Net Profit After Tax	520,114,085	635,262,349	673,959,698	746,468,394	1,031,053,098
Income Tax	237,671,128	262,741,444	321,086,263	342,521,610	447,614,612
Profit Before Tax	757,785,213	898,003,793	995,045,961	1,088,990,004	1,478,667,710
Interest Paid	243,544,611	357,161,304	555,710,109	758,436,212	1,153,280,052
EBIT	1,001,329,824	1,255,165,097	1,550,756,070	1,847,426,216	2,631,947,762

Net Profit of NIB

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Interest Income	886,799,959	1,172,742,193	1,584,987,354	2,194,275,722	3,267,941,142
Commission & Discount	93,550,933	115,942,016	163,899,110	215,292,193	262,791,664
Foreign Ex. Fluctuation Income	102,517,923	125,747,407	135,355,345	165,838,748	185,327,111
Other Operating Income	56,567,142	35,902,340	47,318,720	66,376,659	87,574,794
Non-Operating Income	6,192,496	390,742	1,426,134	7,047,735	2,953,012
Total Income	1,145,628,453	1,450,724,698	1,932,986,663	2,648,831,057	3,806,587,723
Interest Expenses	354,549,207	490,946,961	685,530,264	992,158,398	1,686,973,130
Staff Expenses	97,004,160	120,663,710	145,370,601	187,149,985	225,721,490
Other operating Expenses	182,915,061	190,605,132	243,430,632	313,153,795	413,883,755
Staff Bonus Provision	37,075,093	50,491,407	72,337,548	101,996,038	129,860,089
Total Expenses	671,543,521	852,707,210	1,146,669,045	1,594,458,216	2,456,438,464
NPBT & Provision	474,084,932	598,017,488	786,317,618	1,054,372,841	1,350,149,259
Provision for Loan Loss	140,409,094	93,103,425	62,942,138	34,412,466	51,548,373
Income Tax	101,528,740	154,377,650	221,976,628	323,228,859	397,981,814
Net Profit After Tax	232,147,098	350,536,413	501,398,852	696,731,516	900,619,072
Income Tax	101,528,740	154,377,650	221,976,628	323,228,859	397,981,814
Profit Before Tax	333,675,838	504,914,063	723,375,480	1,019,960,375	1,298,600,886
Interest Paid	354,549,207	490,946,961	685,530,264	992,158,398	1,686,973,130
EBIT	688,225,045	995,861,024	1,408,905,744	2,012,118,773	2,985,574,016

Net Profit of NIC

FY	2004/05	2005/06	2006/07	2007/08	2008/09
Interest Income	457,609,969	579,979,428	725,819,040	931,400,562	1,283,520,711
Commission & Discount	27,101,792	29,447,261	36,017,034	43,373,395	61,895,316
Foreign Ex. Fluctuation Income	24,605,930	25,387,941	44,276,889	39,657,785	97,673,440
Other Operating Income	9,180,305	20,242,413	26,174,612	37,905,045	44,028,178
Non-Operating Income	284,887	59,335	409,114	10,649,150	2,489,084
Total Income	518,782,883	655,116,378	832,696,689	1,062,985,937	1,489,606,729
Interest Expenses	225,992,488	340,221,921	421,374,951	505,995,879	767,196,816
Staff Expenses	39,003,504	45,494,167	54,920,384	72,073,510	84,544,834
Other operating Expenses	51,629,103	57,356,334	64,631,218	81,203,334	109,784,146
Staff Bonus Provision	18,302,979	13,739,169	23,090,854	35,519,269	45,463,799
Total Expenses	334,928,074	456,811,591	564,017,407	694,791,992	1,006,989,595
NPBT & Provision	183,854,809	198,304,787	268,679,282	368,193,945	482,617,134
Provision for Loan Loss	19,127,998	60,913,102	37,770,737	13,001,251	27,979,145
Income Tax	50,971,077	40,804,011	72,433,494	112,134,654	137,203,851
Net Profit After Tax	113,755,734	96,587,674	158,475,051	243,058,040	317,434,138
Income Tax	50,971,077	40,804,011	72,433,494	112,134,654	137,203,851
Profit Before Tax	164,726,811	137,391,685	230,908,545	355,192,694	454,637,989
Interest Paid	225,992,488	340,221,921	421,374,951	505,995,879	767,196,816
EBIT	390,719,299	477,613,606	652,283,496	861,188,573	1,221,834,805

Appendix-7

7.1 (A) Calculation of Correlation Coefficient between Total Deposit and Loan and advances of Nabil

Rs in Million					
Year	Total Deposit (X)	X ²	Loan & Advance (Y)	Y ²	XY
2004/05	14,586.61	212,769,162.12	10,946.74	119,831,050.95	159,675,772.44
2005/06	19,347.40	374,321,848.07	13,278.78	176,326,051.40	256,909,893.59
2006/07	23,342.29	544,862,269.02	15,903.02	252,906,172.34	371,212,918.57
2007/08	31,915.05	1,018,570,225.01	21,759.46	473,474,099.49	694,454,188.59
2008/09	37,348.27	1,394,893,271.99	27,999.01	783,944,560.98	1,045,714,585.21
	ΣX = 126,539.61	ΣX² = 3,545,416,776.21	ΣY = 89,887.01	ΣY² = 1,806,481,935.17	ΣXY = 2,527,967,358.41

$$\begin{aligned}
 r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 \times 2,527,967,358.41 - 126,539.61 \times 89,887.01}{\sqrt{5 \times 3,545,416,776.21 - (126,539.61)^2} \sqrt{5 \times 1,806,481,935.17 - (89,887.01)^2}} \\
 &= \frac{12,639,836,792.05 - 11,374,267,569.08}{\sqrt{17,727,083,881.05 - 16,012,272,898.95} \sqrt{9,032,409,675.83 - 8,079,675,106.06}} \\
 &= \frac{1,265,569,222.97}{\sqrt{1,714,810,982.10} \sqrt{952,734,569.77}} \\
 &= \frac{1,265,569,222.97}{41,410.28 \times 30,866.40} \\
 &= \frac{1,265,569,222.97}{1,278,186,098.84} \\
 &= 0.9901
 \end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$P.E(r) = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$\begin{aligned}
&= 0.6745 \times \frac{1 - (0.9901)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1 - 0.9804}{2.24} \\
&= \frac{0.6745 \times 0.0196}{2.24} \\
&= \frac{0.0133}{2.24} \\
&= 0.0059
\end{aligned}$$

And, $6PE(r) = 6 \times 0.0059$

$$= 0.0355$$

B) Calculation of Correlation Coefficient between Total Deposit and Loan and Advances of NIB

Rs in Million					
Year	Total Deposit (X)	X ²	Loan & Advance (Y)	Y ²	XY
2004/05	14,254.57	203,192,879.92	10,453.16	109,268,637.61	149,005,399.77
2005/06	18,927.31	358,242,912.42	13,178.15	173,663,690.14	249,426,915.42
2006/07	24,488.86	599,704,068.19	17,769.10	315,740,914.81	435,144,931.15
2007/08	34,451.73	1,186,921,424.38	27,529.31	757,862,633.78	948,432,072.83
2008/09	46,698.10	2180712544	36,827.16	1356239714	1719758400
	ΣX = 138,820.56	ΣX² = 4,528,773,828.52	ΣY = 105,756.88	ΣY² = 2,712,775,590.00	ΣXY = 3,501,767,719.57

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 3,501,767,719.57 - 138,820.56 \times 105,756.88}{\sqrt{5 \times 4,528,773,828.52 - (138,820.56)^2} \sqrt{5 \times 2,712,775,590.00 - (105,756.88)^2}} \\
&= \frac{17,508,838,597.83 - 14,681,229,655.79}{\sqrt{22,643,869,142.58 - 19,271,148,434.00} \sqrt{13,563,877,950.02 - 11,184,517,878.85}}
\end{aligned}$$

$$\begin{aligned}
&= \frac{2,827,608,942.05}{\sqrt{3,372,720,708.59} \sqrt{2,379,360,071.17}} \\
&= \frac{2,827,608,942.05}{58,075.13 \times 48,778.68} \\
&= \frac{2,827,608,942.05}{2,832,828,442.61} \\
&= 0.9982
\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
P.E(r) &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\
&= 0.6745 \times \frac{1-(0.9982)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1-0.9963}{2.24} \\
&= \frac{0.0025}{2.24} \\
&= 0.0011
\end{aligned}$$

$$\begin{aligned}
\text{And, } 6PE(r) &= 6 \times 0.0011 \\
&= 0.0067
\end{aligned}$$

C) Calculation of Correlation Coefficient between Total Deposit and Loan and Advances of NIC

Rs in Million					
Year	Total Deposit (X)	X ²	Loan & Advance (Y)	Y ²	XY
2004/05	6,241.38	38,954,799.34	4,909.36	24,101,766.52	30,641,140.29
2005/06	8,765.95	76,841,896.93	6,902.12	47,639,315.71	60,503,680.78
2006/07	10,068.23	101,369,275.47	9,128.65	83,332,232.57	91,909,346.85
2007/08	13,084.69	171,209,112.40	11,465.33	131,453,883.73	150,020,341.14
2008/09	15,579.93	242,734,218.80	13,915.85	193,650,881.22	216,807,968.89
	ΣX = 53,740.18	ΣX² = 631,109,302.94	ΣY = 46,321.31	ΣY² = 480,178,079.75	ΣXY = 549,882,477.95

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 549,882,477.95 - 53,740.18 \times 46,321.31}{\sqrt{5 \times 631,109,302.94 - (53,740.18)^2} \sqrt{5 \times 480,178,079.75 - (46,321.31)^2}} \\
&= \frac{2,749,412,389.74 - 2,489,315,644.72}{\sqrt{3,155,546,514.72 - 2,888,006,946.43} \sqrt{2,400,890,398.73 - 2,145,663,945.40}} \\
&= \frac{260,096,745.02}{\sqrt{267,539,568.29} \sqrt{255,226,453.33}} \\
&= \frac{260,096,745.02}{16,356.64 \times 15,975.81} \\
&= \frac{260,096,745.02}{261,310,495.66} \\
&= 0.9954
\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
P.E(r) &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\
&= 0.6745 \times \frac{1 - (0.9954)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1 - 0.9907}{2.24} \\
&= 0.6745 \times \frac{0.0093}{2.24} \\
&= \frac{0.0063}{2.24} \\
&= 0.0028
\end{aligned}$$

$$\begin{aligned}
\text{And, } 6PE(r) &= 6 \times 0.0028 \\
&= 0.0167
\end{aligned}$$

7.2 (A) Calculation of Correlation Coefficient between Total Deposit and Net Profit of Nabil

Rs in Million					
Year	Total Deposit (X)	X ²	Net profit (Y)	Y ²	XY
2004/05	14,586.61	212,769,162.12	520.11	270,518.57	7,586,699.55
2005/06	19,347.40	374,321,848.07	635.26	403,557.81	12,290,667.38
2006/07	23,342.29	544,862,269.02	673.96	454,222.08	15,731,766.40
2007/08	31,915.05	1,018,570,225.01	746.47	557,214.48	23,823,561.30
2008/09	37,348.27	1,394,893,271.99	1,031.05	1,063,064.10	38,507,933.78
	ΣX = 126,539.61	ΣX² = 3,545,416,776.21	ΣY = 3,606.85	ΣY² = 2,748,577.04	ΣXY = 97,940,628.42

$$\begin{aligned}
 r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 \times 97,940,628.42 - 126,539.61 \times 3,606.85}{\sqrt{5 \times 3,545,416,776.21 - (126,539.61)^2} \sqrt{5 \times 2,748,577.04 - (3,606.85)^2}} \\
 &= \frac{489,703,142.12 - 456,409,898.49}{\sqrt{17,727,083,881.05 - 16,012,272,898.95} \sqrt{13,742,885.20 - 13,009,395.78}} \\
 &= \frac{33,293,243.63}{\sqrt{1,714,810,982.10} \sqrt{733,489.43}} \\
 &= \frac{33,293,243.63}{41,410.28 \times 856.44} \\
 &= \frac{33,293,243.63}{35,465,415.88} \\
 &= 0.9388
 \end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
 P.E(r) &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\
 &= 0.6745 \times \frac{1 - (0.9388)^2}{\sqrt{5}}
 \end{aligned}$$

$$\begin{aligned}
&= 0.6745 \times \frac{1 - 0.8813}{2.24} \\
&= \frac{0.6745 \times 0.1187}{2.24} \\
&= \frac{0.0801}{2.24} \\
&= 0.0358
\end{aligned}$$

And, $6PE(r) = 6 \times 0.0358$
 $= 0.2145$

B) Calculation of Correlation Coefficient between Total Deposit and Net Profit of NIB

Rs in Million					
Year	Total Deposit (X)	X ²	Net profit (Y)	Y ²	XY
2004/05	14,254.57	203,192,879.92	232.15	53,892.23	3,309,156.59
2005/06	18,927.31	358,242,912.42	350.54	122,875.49	6,634,702.14
2006/07	24,488.86	599,704,068.19	501.40	251,400.96	12,278,687.91
2007/08	34,451.73	1,186,921,424.38	696.73	485,435.48	24,003,619.96
2008/09	46,698.10	2,180,712,543.61	900.62	811,116.38	42,057,242.82
	ΣX = 138,820.56	ΣX² = 4,528,773,828.52	ΣY = 2,681.43	ΣY² = 1,724,720.54	ΣXY = 88,283,409.42

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 88,283,409.42 - 138,820.56 \times 2,681.43}{\sqrt{5 \times 4,528,773,828.52 - (138,820.56)^2} \sqrt{5 \times 1,724,720.54 - (2,681.43)^2}} \\
&= \frac{441,417,047.09 - 372,238,174.85}{\sqrt{22,643,869,142.58 - 19,271,148,434.00} \sqrt{8,623,602.69 - 7,190,088.30}} \\
&= \frac{69,178,872.24}{\sqrt{3,372,720,708.59} \sqrt{1,433,514.40}}
\end{aligned}$$

$$= \frac{69,178,872.24}{58,075.13 \times 1,197.29}$$

$$= \frac{69,178,872.24}{69,533,040.25}$$

$$= 0.9949$$

Probable Error of Correlation Coefficient PE(r)

$$\text{P.E}(r) = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1-(0.9949)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1-0.9898}{2.24}$$

$$= \frac{0.6745 \times 0.0102}{2.24}$$

$$= \frac{0.0069}{2.24}$$

$$= 0.0031$$

And, $6\text{PE}(r) = 6 \times 0.0031$

$$= 0.0184$$

C) Calculation of Correlation Coefficient between Total Deposit and Net Profit of NIC

Rs in Million					
Year	Total Deposit (X)	X ²	Net profit (Y)	Y ²	XY
2004/05	6,241.38	38,954,799.34	113.76	12,940.43	709,994.20
2005/06	8,765.95	76,841,896.93	96.59	9,329.24	846,685.68
2006/07	10,068.23	101,369,275.47	158.48	25,114.33	1,595,562.91
2007/08	13,084.69	171,209,112.40	243.06	59,077.19	3,180,338.58
2008/09	15,579.93	242,734,218.80	317.43	100,761.80	4,945,537.18
	ΣX = 53,740.18	ΣX² = 631,109,302.94	ΣY = 929.31	ΣY² = 207,222.99	ΣXY = 11,278,118.54

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 11,278,118.54 - 53,740.18 \times 929.31}{\sqrt{5 \times 631,109,302.94 - (53,740.18)^2} \sqrt{5 \times 207,222.99 - (929.31)^2}} \\
&= \frac{56,390,592.70 - 49,941,125.46}{\sqrt{3,155,546,514.72 - 2,888,006,946.43} \sqrt{1,036,114.96 - 863,611.50}} \\
&= \frac{6,449,467.25}{\sqrt{267,539,568.29} \sqrt{172,503.46}} \\
&= \frac{6,449,467.25}{16,356.64 \times 415.34} \\
&= \frac{6,449,467.25}{6,793,489.53} \\
&= 0.9494
\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
P.E(r) &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\
&= 0.6745 \times \frac{1 - (0.9494)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1 - 0.9013}{2.24} \\
&= 0.6745 \times \frac{0.0987}{2.24} \\
&= \frac{0.0666}{2.24} \\
&= 0.0297
\end{aligned}$$

$$\begin{aligned}
\text{And, } 6PE(r) &= 6 \times 0.0297 \\
&= 0.1783
\end{aligned}$$

7.3 (A) Calculation of Correlation Coefficient between Net Profit and Loan and Advances of Nabil

Rs in Million					
Year	Net profit (X)	X ²	Loan & Advance (Y)	Y ²	XY
2004/05	520.11	270,518.57	10,946.74	119,831,050.95	5,693,551.17
2005/06	635.26	403,557.81	13,278.78	176,326,051.40	8,435,505.61
2006/07	673.96	454,222.08	15,903.02	252,906,172.34	10,718,002.06
2007/08	746.47	557,214.48	21,759.46	473,474,099.49	16,242,740.59
2008/09	1,031.05	1,063,064.10	27,999.01	783,944,560.98	28,868,379.26
	ΣX = 3,606.85	ΣX² = 2,748,577.04	ΣY = 89,887.01	ΣY² = 1,806,481,935.17	ΣXY = 69,958,178.68

$$\begin{aligned}
 r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 \times 69,958,178.68 - 3,606.85 \times 89,887.01}{\sqrt{5 \times 2,748,577.04 - (3,606.85)^2} \sqrt{5 \times 1,806,481,935.17 - (89,887.01)^2}} \\
 &= \frac{349,790,893.41 - 324,209,332.39}{\sqrt{13,742,885.20 - 13,009,395.78} \sqrt{9,032,409,675.83 - 8,079,675,106.06}} \\
 &= \frac{25,581,561.02}{\sqrt{733,489.43} \sqrt{952,734,569.77}} \\
 &= \frac{25,581,561.02}{856.44 \times 30,866.40} \\
 &= \frac{25,581,561.02}{26,435,217.67} \\
 &= 0.9677
 \end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
 P.E(r) &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\
 &= 0.6745 \times \frac{1 - (0.9677)^2}{\sqrt{5}} \\
 &= 0.6745 \times \frac{1 - 0.9365}{2.24}
 \end{aligned}$$

$$\begin{aligned}
&= \frac{0.6745 \times 0.0635}{2.24} \\
&= \frac{0.0429}{2.24} \\
&= 0.0191
\end{aligned}$$

$$\begin{aligned}
\text{And, } 6PE(r) &= 6 \times 0.0191 \\
&= 0.1148
\end{aligned}$$

(B) Calculation of Correlation Coefficient between Net Profit and Loan and Advances of NIB

Rs in Million					
Year	Net profit (X)	X ²	Loan & Advance (Y)	Y ²	XY
2004/05	232.15	53,892.23	10,453.16	109,268,637.61	2,426,670.66
2005/06	350.54	122,875.49	13,178.15	173,663,690.14	4,619,416.69
2006/07	501.40	251,400.96	17,769.10	315,740,914.81	8,909,408.97
2007/08	696.73	485,435.48	27,529.31	757,862,633.78	19,180,547.73
2008/09	900.62	811,116.38	36,827.16	1,356,239,713.67	33,167,276.84
	ΣX = 2,681.43	ΣX² = 1,724,720.54	ΣY = 105,756.88	ΣY² = 2,712,775,590.00	ΣXY = 68,303,320.89

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 68,303,320.89 - 2,681.43 \times 105,756.88}{\sqrt{5 \times 1,724,720.54 - (2,681.43)^2} \sqrt{5 \times 2,712,775,590 - (105,756.88)^2}} \\
&= \frac{341,516,604.47 - 283,580,096.45}{\sqrt{8,623,602.69 - 7,190,088.30} \sqrt{13,563,877,950.02 - 11,184,517,878.85}} \\
&= \frac{57,936,508.02}{\sqrt{1,433,514.40} \sqrt{2,379,360,071.17}} \\
&= \frac{57,936,508.02}{1,197.29 \times 48,778.68}
\end{aligned}$$

$$= \frac{57,936,508.02}{58,402,456.40}$$

$$= 0.9920$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned} P.E(r) &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-(0.9920)^2}{\sqrt{5}} \\ &= 0.6745 \times \frac{1-0.9841}{2.24} \\ &= \frac{0.6745 \times 0.0159}{2.24} \\ &= \frac{0.0107}{2.24} \\ &= 0.0048 \end{aligned}$$

And, $6PE(r) = 6 \times 0.0048$

$$= 0.0287$$

(C) Calculation of Correlation Coefficient between Net Profit and Loan and Advances of NIC

Rs in Million					
Year	Net profit (X)	X ²	Loan & Advance (Y)	Y ²	XY
2004/05	113.76	12,940.43	4,909.36	24,101,766.52	558,468.59
2005/06	96.59	9,329.24	6,902.12	47,639,315.71	666,662.35
2006/07	158.48	25,114.33	9,128.65	83,332,232.57	1,446,662.65
2007/08	243.06	59,077.19	11,465.33	131,453,883.73	2,786,741.15
2008/09	317.43	100,761.80	13,915.85	193,650,881.22	4,417,308.27
	ΣX = 929.31	ΣX² = 207,222.99	ΣY = 46,321.31	ΣY² = 480,178,079.75	ΣXY = 9,875,843.01

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 9,875,843.01 - 929.31 \times 46,321.31}{\sqrt{5 \times 207,222.99 - (929.31)^2} \sqrt{5 \times 480,178,079.75 - (46,321.31)^2}} \\
&= \frac{49,379,215.04 - 43,046,719.49}{\sqrt{1,036,114.96 - 863,611.50} \sqrt{2,400,890,398.73 - 2,145,663,945.40}} \\
&= \frac{6,332,495.55}{\sqrt{172,503.46} \sqrt{255,226,453.33}} \\
&= \frac{6,332,495.55}{415.34 \times 15,975.81} \\
&= \frac{6,332,495.55}{6,635,318.01} \\
&= 0.9544
\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
P.E(r) &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\
&= 0.6745 \times \frac{1-(0.9544)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1-0.9108}{2.24} \\
&= 0.6745 \times \frac{0.0892}{2.24} \\
&= \frac{0.0602}{2.24} \\
&= 0.0269
\end{aligned}$$

And, $6PE(r) = 6 \times 0.0269$

$= 0.1611$

7.4(A) Calculation of Correlation Coefficient between Performing Assets and Net Profit of Nabil

Rs in Million					
Year	Performing Assets (X)	X ²	Net profit (Y)	Y ²	XY
2004/05	16,084.82	258,721,530.94	520.11	270,518.57	8,365,941.63
2005/06	21,194.34	449,200,132.81	635.26	403,557.81	13,463,960.09
2006/07	25,422.87	646,322,064.81	673.96	454,222.08	17,133,994.10
2007/08	33,678.38	1,134,233,481.49	746.47	557,214.48	25,139,835.20
2008/09	39,426.71	1,554,465,461.42	1,031.05	1,063,064.10	40,650,909.35
	ΣX = 135,807.12	ΣX² = 4,042,942,671.48	ΣY = 3,606.85	ΣY² = 2,748,577.04	ΣXY = 104,754,640.36

$$\begin{aligned}
 r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 \times 104,754,640.36 - 135,807.12 \times 3,606.85}{\sqrt{5 \times 4,042,942,671.48 - (135,807.12)^2} \sqrt{5 \times 2,748,577.04 - (3,606.85)^2}} \\
 &= \frac{523,773,201.80 - 489,836,464.82}{\sqrt{20,214,713,357.41 - 18,443,574,657.54} \sqrt{13,742,885.20 - 13,009,395.78}} \\
 &= \frac{33,936,736.98}{\sqrt{1,771,138,699.87} \sqrt{733,489.43}} \\
 &= \frac{33,936,736.98}{42,084.90 \times 856.44} \\
 &= \frac{33,936,736.98}{36,043,189.50} \\
 &= 0.9416
 \end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
 P.E(r) &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\
 &= 0.6745 \times \frac{1 - (0.9416)^2}{\sqrt{5}}
 \end{aligned}$$

$$\begin{aligned}
&= 0.6745 \times \frac{1 - 0.8865}{2.24} \\
&= \frac{0.6745 \times 0.1135}{2.24} \\
&= \frac{0.0765}{2.24} \\
&= 0.0342
\end{aligned}$$

And, $6PE(r) = 6 \times 0.0342$
 $= 0.2050$

(B) Calculation of Correlation Coefficient between Performing Assets and Net Profit of NIB

Rs in Million					
Year	Performing Assets (X)	X ²	Net profit (Y)	Y ²	XY
2004/05	14,527.35	211,043,985.19	232.15	53,892.23	3,372,481.42
2005/06	18,851.02	355,360,955.04	350.54	122,875.49	6,607,961.15
2006/07	24,637.75	607,018,725.06	501.40	251,400.96	12,353,343.21
2007/08	34,408.73	1,183,960,700.21	696.73	485,435.48	23,973,663.27
2008/09	44,230.27	1,956,316,784.27	900.62	811,116.38	39,834,665.77
	ΣX = 136,655.12	ΣX² = 4,313,701,149.78	ΣY = 2,681.43	ΣY² = 1,724,720.54	ΣXY = 86,142,114.81

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 86,142,114.81 - 136,655.12 \times 2,681.43}{\sqrt{5 \times 4,313,701,149.78 - (136,655.12)^2} \sqrt{5 \times 1,724,720.54 - (2,681.43)^2}} \\
&= \frac{430,710,574.07 - 366,431,693.09}{\sqrt{21,568,505,748.88 - 18,674,622,642.15} \sqrt{8,623,602.69 - 7,190,088.30}}
\end{aligned}$$

$$\begin{aligned}
&= \frac{64,278,880.98}{\sqrt{2,893,883,106.73} \sqrt{1,433,514.40}} \\
&= \frac{64,278,880.98}{53,794.82 \times 1,197.29} \\
&= \frac{64,278,880.98}{64,408,253.29} \\
&= 0.9980
\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
P.E(r) &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\
&= 0.6745 \times \frac{1-(0.9980)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1-0.9960}{2.24} \\
&= \frac{0.6745 \times 0.0040}{2.24} \\
&= \frac{0.0027}{2.24} \\
&= 0.0012
\end{aligned}$$

$$\begin{aligned}
\text{And, } 6PE(r) &= 6 \times 0.0012 \\
&= 0.0073
\end{aligned}$$

(C) Calculation of Correlation Coefficient between Performing Assets and Net Profit of NIC

Rs in Million					
Year	Performing Assets (X)	X ²	Net profit (Y)	Y ²	XY
2004/05	6,759.96	45,697,059.20	113.76	12,940.43	768,986.01
2005/06	9,735.55	94,780,972.74	96.59	9,329.24	940,337.50
2006/07	10,891.14	118,616,908.72	158.48	25,114.33	1,725,973.25
2007/08	13,936.80	194,234,449.99	243.06	59,077.19	3,387,451.22
2008/09	16,941.87	287,026,959.10	317.43	100,761.80	5,377,857.79
	ΣX = 58,265.32	ΣX² = 740,356,349.75	ΣY = 929.31	ΣY² = 207,222.99	ΣXY = 12,200,605.77

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 12,200,605.77 - 58,265.32 \times 929.31}{\sqrt{5 \times 740,356,349.75 - (58,265.32)^2} \sqrt{5 \times 207,222.99 - (929.31)^2}} \\
&= \frac{61,003,028.87 - 54,146,372.52}{\sqrt{3,701,781,748.74 - 3,394,847,864.29} \sqrt{1,036,114.96 - 863,611.50}} \\
&= \frac{6,856,656.35}{\sqrt{306,933,884.44} \sqrt{172,503.46}} \\
&= \frac{6,856,656.35}{17,519.53 \times 415.34} \\
&= \frac{6,856,656.35}{7,276,479.62} \\
&= 0.9423
\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
P.E(r) &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\
&= 0.6745 \times \frac{1 - (0.9423)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1 - 0.8879}{2.24} \\
&= 0.6745 \times \frac{0.1121}{2.24} \\
&= \frac{0.0756}{2.24} \\
&= 0.0337
\end{aligned}$$

$$\begin{aligned}
\text{And, } 6PE(r) &= 6 \times 0.0337 \\
&= 0.2025
\end{aligned}$$

7.5 (A) Calculation of Correlation Coefficient between Total Deposits and Performing Assets of Nabil

Rs in Million					
Year	Performing Assets (X)	X ²	Total Deposit (Y)	Y ²	XY
2004/05	16,084.82	258,721,530.94	14,586.61	212,769,162.12	234,623,023.94
2005/06	21,194.34	449,200,132.81	19,347.40	374,321,848.07	410,055,391.22
2006/07	25,422.87	646,322,064.81	23,342.29	544,862,269.02	593,427,760.35
2007/08	33,678.38	1,134,233,481.49	31,915.05	1,018,570,225.01	1,074,847,176.33
2008/09	39,426.71	1,554,465,461.42	37,348.27	1,394,893,271.99	1,472,519,410.29
	ΣX = 135,807.12	ΣX² = 4,042,942,671.48	ΣY = 126,539.61	ΣY² = 3,545,416,776.21	ΣXY = 3,785,472,762.12

$$\begin{aligned}
 r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 \times 3,785,472,762.12 - 135,807.12 \times 126,539.61}{\sqrt{5 \times 4,042,942,671.48 - (135,807.12)^2} \sqrt{5 \times 3,545,416,776.21 - (126,539.61)^2}} \\
 &= \frac{18,927,363,810.59 - 17,184,980,379.64}{\sqrt{20,214,713,357.41 - 18,443,574,657.54} \sqrt{17,727,083,881.05 - 16,012,272,898.95}} \\
 &= \frac{1,742,383,430.95}{\sqrt{1,771,138,699.87} \sqrt{1,714,810,982.10}} \\
 &= \frac{1,742,383,430.95}{42,084.90 \times 41,410.28} \\
 &= \frac{1,742,383,430.95}{1,742,747,283.27} \\
 &= 0.9998
 \end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$P.E(r) = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$\begin{aligned}
&= 0.6745 \times \frac{1 - (0.9998)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1 - 0.9996}{2.24} \\
&= \frac{0.6745 \times 0.0004}{2.24} \\
&= \frac{0.0003}{2.24} \\
&= 0.0001
\end{aligned}$$

And, $6PE(r) = 6 \times 0.0001$
 $= 0.0008$

(B) Calculation of Correlation Coefficient between Total Deposits and Performing Assets of NIB

Rs in Million					
Year	Performing Assets (X)	X ²	Total Deposit (Y)	Y ²	XY
2004/05	14,527.35	211,043,985.19	14,254.57	203,192,879.92	207,081,228.36
2005/06	18,851.02	355,360,955.04	18,927.31	358,242,912.42	356,799,023.95
2006/07	24,637.75	607,018,725.06	24,488.86	599,704,068.19	603,350,311.91
2007/08	34,408.73	1,183,960,700.21	34,451.73	1,186,921,424.38	1,185,440,137.97
2008/09	44,230.27	1,956,316,784.27	46,698.10	2,180,712,543.61	2,065,469,571.49
	ΣX = 136,655.12	ΣX² = 4,313,701,149.78	ΣY = 138,820.56	ΣY² = 4,528,773,828.52	ΣXY = 4,418,140,273.68

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

$$\begin{aligned}
&= \frac{5 \times 4,418,140,273.68 - 136,655.12 \times 138,820.56}{\sqrt{5 \times 4,313,701,149.78 - (136,655.12)^2} \sqrt{5 \times 4,528,773,828.52 - (138,820.56)^2}} \\
&= \frac{22,090,701,368.42 - 18,970,540,975.04}{\sqrt{21,568,505,748.88 - 18,674,622,642.15} \sqrt{22,643,869,142.58 - 19,271,148,434.00}} \\
&= \frac{3,120,160,393.38}{\sqrt{2,893,883,106.73} \sqrt{3,372,720,708.59}} \\
&= \frac{3,120,160,393.38}{53,794.82 \times 58,075.13} \\
&= \frac{3,120,160,393.38}{3,124,141,399.22} \\
&= 0.9987
\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
\text{P.E}(r) &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\
&= 0.6745 \times \frac{1 - (0.9987)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1 - 0.9975}{2.24} \\
&= \frac{0.6745 \times 0.0025}{2.24} \\
&= \frac{0.0017}{2.24} \\
&= 0.0008
\end{aligned}$$

And, $6\text{PE}(r) = 6 \times 0.0008$

$= 0.0046$

(C) Calculation of Correlation Coefficient between Total Deposits and Performing Assets of NIC

Rs in Million					
Year	Performing Assets (X)	X ²	Total Deposit (Y)	Y ²	XY
2004/05	6,759.96	45,697,059.20	6,241.38	38,954,799.34	42,191,465.62
2005/06	9,735.55	94,780,972.74	8,765.95	76,841,896.93	85,341,371.79
2006/07	10,891.14	118,616,908.72	10,068.23	101,369,275.47	109,654,503.31
2007/08	13,936.80	194,234,449.99	13,084.69	171,209,112.40	182,358,733.76
2008/09	16,941.87	287,026,959.10	15,579.93	242,734,218.80	263,953,148.67
	ΣX = 58,265.32	ΣX² = 740,356,349.75	ΣY = 53,740.18	ΣY² = 631,109,302.94	ΣXY = 683,499,223.15

$$\begin{aligned}
 r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 \times 683,499,223.15 - 58,265.32 \times 53,740.18}{\sqrt{5 \times 740,356,349.75 - (58,265.32)^2} \sqrt{5 \times 631,109,302.94 - (53,740.18)^2}} \\
 &= \frac{3,417,496,115.75 - 3,131,188,945.78}{\sqrt{3,701,781,748.74 - 3,394,847,864.29} \sqrt{3,155,546,514.72 - 2,888,006,946.43}} \\
 &= \frac{286,307,169.97}{\sqrt{306,933,884.44} \sqrt{267,539,568.298}} \\
 &= \frac{286,307,169.97}{17,519.53 \times 16,356.64} \\
 &= \frac{286,307,169.97}{286,560,567.66} \\
 &= 0.9991
 \end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$P.E(r) = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$\begin{aligned}
&= 0.6745 \times \frac{1 - (0.9991)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1 - 0.9982}{2.24} \\
&= 0.6745 \times \frac{0.0018}{2.24} \\
&= \frac{0.0012}{2.24} \\
&= 0.0005
\end{aligned}$$

And, $6PE(r) = 6 \times 0.0005$

$$= 0.0032$$

7.6 (A) Calculation of Correlation Coefficient between EPS and MPS of Nabil

Year	MPS (X)	X ²	EPS (Y)	Y ²	XY
2004/05	1,505	2,265,025	105	11,025	158,025
2005/06	2,240	5,017,600	129	16,641	288,960
2006/07	5,050	25,502,500	137	18,769	691,850
2007/08	5,275	27,825,625	108	11,664	569,700
2008/09	4,899	24,000,201	107	11,449	524,193
	ΣX = 18,969	ΣX² =84,610,951	ΣY =586	ΣY² = 69,548	ΣXY =2,232,728

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 2,232,728 - 18,969 \times 586}{\sqrt{5 \times 84,610,951 - (18,969)^2} \sqrt{5 \times 69,548 - (586)^2}} \\
&= \frac{11,163,640 - 11,115,834}{\sqrt{423,054,755 - 359,822,961} \sqrt{347,740 - 343,396}}
\end{aligned}$$

$$\begin{aligned}
&= \frac{47,806}{\sqrt{63,231,794} \sqrt{4,344}} \\
&= \frac{47,806}{7,951.84 \times 65.91} \\
&= \frac{47,806}{524,098.19} \\
&= 0.0912
\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
P.E(r) &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\
&= 0.6745 \times \frac{1-(0.0912)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1-0.0083}{2.24} \\
&= 0.6745 \times \frac{0.9917}{2.24} \\
&= \frac{0.6689}{2.24} \\
&= 0.2986
\end{aligned}$$

$$\begin{aligned}
\text{And, } 6PE(r) &= 6 \times 0.2986 \\
&= 1.7917
\end{aligned}$$

(B) Calculation of Correlation Coefficient between EPS and MPS of NIB

Year	MPS (X)	X ²	EPS (Y)	Y ²	XY
2004/05	800	640,000	40	1,600	32,000
2005/06	1,260	1,587,600	59	3,481	74,340
2006/07	1,729	2,989,441	63	3,969	108,927
2007/08	2,450	6,002,500	58	3,364	142,100
2008/09	1,388	1,926,544	37	1,369	51,356
	ΣX = 7,627	ΣX² = 13,146,085	ΣY = 257	ΣY² = 13,783	ΣXY = 408,723

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 408,723 - 7,627 \times 257}{\sqrt{5 \times 13,146,085 - (7,627)^2} \sqrt{5 \times 13,783 - (257)^2}} \\
&= \frac{2,043,615 - 1,960,139}{\sqrt{65,730,425.00 - 58,171,129} \sqrt{68,915 - 66,049}} \\
&= \frac{83,476}{\sqrt{7,559,296} \sqrt{2,866}} \\
&= \frac{83,476}{2,749.42 \times 53.54} \\
&= \frac{83,476}{147,190.16} \\
&= 0.5671
\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
P.E(r) &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\
&= 0.6745 \times \frac{1 - (0.5671)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1 - 0.3216}{2.24} \\
&= 0.6745 \times \frac{0.6784}{2.24} \\
&= \frac{0.4576}{2.24} \\
&= 0.2043
\end{aligned}$$

$$\begin{aligned}
\text{And, } 6PE(r) &= 6 \times 0.2043 \\
&= 1.2256
\end{aligned}$$

(C) Calculation of Correlation Coefficient between EPS and MPS of NIC

Year	MPS (X)	X ²	EPS (Y)	Y ²	XY
2004/05	366	133,956	23	529	8,418
2005/06	496	246,016	16	256	7,936
2006/07	950	902,500	24	576	22,800
2007/08	1,284	1,648,656	26	676	33,384
2008/09	1,126	1,267,876	28	784	31,528
	ΣX = 4,222	ΣX² = 4,199,004	ΣY = 117	ΣY² = 2,821	ΣXY = 104,066

$$\begin{aligned}r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\&= \frac{5 \times 104,066 - 4,222 \times 117}{\sqrt{5 \times 4,199,004 - (4,222)^2} \sqrt{5 \times 2,821 - (117)^2}} \\&= \frac{520,330 - 493,974}{\sqrt{20,995,020 - 17,825,284} \sqrt{14,105 - 13,689}} \\&= \frac{26,356}{\sqrt{3,169,736} \sqrt{416}} \\&= \frac{26,356}{1,780.38 \times 20.40} \\&= \frac{26,356}{36,312.67} \\&= 0.7258\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}\text{P.E}(r) &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\&= 0.6745 \times \frac{1 - (0.7258)^2}{\sqrt{5}} \\&= 0.6745 \times \frac{1 - 0.5268}{2.24}\end{aligned}$$

$$\begin{aligned}
&= 0.6745 \times \frac{0.4732}{2.24} \\
&= \frac{0.3192}{2.24} \\
&= 0.1425
\end{aligned}$$

And, 6PE(r) = 6 x 0.1425
= 0.8549

7.7 (A) Calculation of Correlation Coefficient between MPS and NWPS of Nabil

Year	MPS (X)	X ²	NWPS (Y)	Y ²	XY
2004/05	1,505	2,265,025	337	113,569	507,185
2005/06	2,240	5,017,600	381	145,161	853,440
2006/07	5,050	25,502,500	418	174,724	2,110,900
2007/08	5,275	27,825,625	354	125,316	1,867,350
2008/09	4,899	24,000,201	324	104,976	1,587,276
	ΣX = 18,969	ΣX² = 84,610,951	ΣY = 1,814	ΣY² = 663,746	ΣXY = 6,926,151

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 6,926,151 - 18,969 \times 1,814}{\sqrt{5 \times 84,610,951 - (18,969)^2} \sqrt{5 \times 663,746 - (1,814)^2}} \\
&= \frac{34,630,755 - 34,409,766}{\sqrt{423,054,755 - 359,822,961} \sqrt{3,318,730 - 3,290,596}} \\
&= \frac{220,989}{\sqrt{63,231,794} \sqrt{28,134}} \\
&= \frac{220,989}{7,951.84 \times 167.73} \\
&= \frac{220,989}{1,333,777.83}
\end{aligned}$$

$$= 0.1657$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned} \text{P.E}(r) &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-(0.1657)^2}{\sqrt{5}} \\ &= 0.6745 \times \frac{1-0.0275}{2.24} \\ &= 0.6745 \times \frac{0.9725}{2.24} \\ &= \frac{0.6560}{2.24} \\ &= 0.2928 \end{aligned}$$

$$\begin{aligned} \text{And, } 6\text{PE}(r) &= 6 \times 0.2928 \\ &= 1.7571 \end{aligned}$$

(B) Calculation of Correlation Coefficient between MPS and NWPS of NIB

Year	MPS (X)	X ²	NWPS (Y)	Y ²	XY
2004/05	800	640,000	201	40,401	160,800
2005/06	1,260	1,587,600	240	57,600	302,400
2006/07	1,729	2,989,441	234	54,756	404,586
2007/08	2,450	6,002,500	223	49,729	546,350
2008/09	1,388	1,926,544	162	26,244	224,856
	ΣX = 7,627	ΣX² = 13,146,085	ΣY = 1,060	ΣY² = 228,730	ΣXY = 1,638,992

$$\begin{aligned} r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\ &= \frac{5 \times 1,638,992 - 7,627 \times 1,060}{\sqrt{5 \times 13,146,085 - (7,627)^2} \sqrt{5 \times 228,730 - (1,060)^2}} \end{aligned}$$

$$\begin{aligned}
&= \frac{8,194,960 - 8,084,620}{\sqrt{65,730,425 - 58,171,129} \sqrt{1,143,650 - 1,123,600}} \\
&= \frac{110,340}{\sqrt{7,559,296} \sqrt{20,050}} \\
&= \frac{110,340}{2,749.42 \times 141.60} \\
&= \frac{110,340}{389,312.07} \\
&= 0.2834
\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
P.E(r) &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\
&= 0.6745 \times \frac{1 - (0.2834)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{1 - 0.0803}{2.24} \\
&= 0.6745 \times \frac{0.9197}{2.24} \\
&= \frac{0.6203}{2.24} \\
&= 0.2769
\end{aligned}$$

$$\begin{aligned}
\text{And, } 6PE(r) &= 6 \times 0.2769 \\
&= 1.6616
\end{aligned}$$

(C) Calculation of Correlation Coefficient between MPS and NWPS of NIC

Year	MPS (X)	X ²	NWPS (Y)	Y ²	XY
2004/05	366	133,956	137	18,769	50,142
2005/06	496	246,016	116	13,456	57,536
2006/07	950	902,500	139	19,321	132,050
2007/08	1,284	1,648,656	138	19,044	177,192
2008/09	1,126	1,267,876	146	21,316	164,396
	ΣX = 4,222	ΣX² = 4,199,004	ΣY = 676	ΣY² = 91,906	ΣXY = 581,316

$$\begin{aligned}
r_{XY} &= \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
&= \frac{5 \times 581,316 - 4,222 \times 676}{\sqrt{5 \times 4,199,004 - (4,222)^2} \sqrt{5 \times 91,906 - (676)^2}} \\
&= \frac{2,906,580 - 2,854,072}{\sqrt{20,995,020 - 17,825,284} \sqrt{459,530 - 456,976}} \\
&= \frac{52,508}{\sqrt{3,169,736} \sqrt{2,554}} \\
&= \frac{52,508}{1,780.38 \times 50.54} \\
&= \frac{52,508}{89,975.03} \\
&= 0.5836
\end{aligned}$$

Probable Error of Correlation Coefficient PE(r)

$$\begin{aligned}
P.E(r) &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\
&= 0.6745 \times \frac{1 - (0.5836)^2}{\sqrt{5}} \\
&= 0.6745 \times \frac{0.6594}{2.24} \\
&= \frac{0.4448}{2.24} \\
&= 0.1986
\end{aligned}$$

And, $6PE(r) = 6 \times 0.1986$

$$= 1.1914$$

Appendix-8

8.1 Calculation of Least Square Trend Value of Total Deposits

Year	X (Year 06/07)	X ²	Nabil		NIB		NIC	
			Y ₁	XY ₁	Y ₂	XY ₂	Y ₃	XY ₃
2004/05	-2	4	14,586,608,707	-29,173,217,414	14,254,573,663	-28,509,147,326	6,241,378,160	-12,482,756,320
2005/06	-1	1	19,347,399,440	-19,347,399,440	18,927,305,974	-18,927,305,974	8,765,950,638	-8,765,950,638
2006/07	0	0	23,342,285,327	0	24,488,855,696	0	10,068,230,869	0
2007/08	1	1	31,915,047,467	31,915,047,467	34,451,726,191	34,451,726,191	13,084,688,672	13,084,688,672
2008/09	2	4	37,348,255,840	74,696,511,680	46,698,100,065	93,396,200,130	15,579,930,904	31,159,861,808
Σ	0	10	126,539,596,781	58,090,942,293	138,820,561,589	80,411,473,021	53,740,179,243	22,995,843,522

NABIL

$$a = \frac{\sum Y_1}{N} = \frac{126,539,596,781}{5} = 25,307,919,356.20 \quad b = \frac{\sum XY_1}{\sum X^2} = \frac{58,090,942,293}{10} = 5,809,094,229.30$$

NIB

$$a = \frac{\sum Y_2}{N} = \frac{138,820,561,589}{5} = 27,764,112,317.80 \quad b = \frac{\sum XY_2}{\sum X^2} = \frac{80,411,473,021}{10} = 8,041,147,302.10$$

NIC

$$a = \frac{\sum Y_3}{N} = \frac{53,740,179,243}{5} = 10,748,035,848.60 \quad b = \frac{\sum XY_3}{\sum X^2} = \frac{22,995,843,522}{10} = 2,299,584,352.20$$

8.2 Calculation of Least Square Trend Value of Loan and Advances

Year	X (Year 06/07)	X ²	Nabil		NIB		NIC	
			Y ₁	XY ₁	Y ₂	XY ₂	Y ₃	XY ₃
2004/05	-2	4	10,946,736,577	-21,893,473,154	10,453,163,997	-20,906,327,994	4,909,355,200	-9,818,710,400
2005/06	-1	1	13,278,782,259	-13,278,782,259	13,178,151,824	-13,178,151,824	6,902,123,944	-6,902,123,944
2006/07	0	0	15,903,023,765	0	17,769,099,903	0	9,128,649,206	0
2007/08	1	1	21,759,460,334	21,759,460,334	27,529,304,736	27,529,304,736	11,465,334,005	11,465,334,005
2008/09	2	4	27,999,012,071	55,998,024,142	36,827,157,409	73,654,314,818	13,915,850,035	27,831,700,070
Σ	0	10	89,887,015,006	42,585,229,063	105,756,877,869	67,099,139,736	46,321,312,390	22,576,199,731

NABIL

$$a = \frac{\sum Y_1}{N} = \frac{89,887,015,006}{5} = 17,977,403,001.20 \quad b = \frac{\sum XY_1}{\sum X^2} = \frac{42,585,229,063}{10} = 4,258,522,906.30$$

NIB

$$a = \frac{\sum Y_2}{N} = \frac{105,756,877,869}{5} = 21,151,375,573.80 \quad b = \frac{\sum XY_2}{\sum X^2} = \frac{67,099,139,736}{10} = 6,709,913,973.60$$

NIC

$$a = \frac{\sum Y_3}{N} = \frac{46,321,312,390}{5} = 9,264,262,478 \quad b = \frac{\sum XY_3}{\sum X^2} = \frac{22,576,199,731}{10} = 2,257,619,973.10$$

8.3 Calculation of Least Square Trend Value of Performing Assets

Year	X (Year 06/07)	X ²	Nabil		NIB		NIC	
			Y ₁	XY ₁	Y ₂	XY ₂	Y ₃	XY ₃
2004/05	-2	4	16,084,823,062	-32169646124	14,527,352,705	-29054705410	6,759,959,789	-13519919578
2005/06	-1	1	21,194,342,310	-21,194,342,310	18,851,020,473	-18,851,020,473	9,735,551,571	-9,735,551,571
2006/07	0	0	25,422,865,069	0	24,637,749,890	0	10,891,139,300	0
2007/08	1	1	33,678,383,242	33,678,383,242	34,408,728,361	34,408,728,361	13,936,802,322	13,936,802,322
2008/09	2	4	39,426,705,904	78,853,411,808	44,230,269,109	88,460,538,218	16,941,872,220	33,883,744,440
Σ	0	10	135,807,119,587	59,167,806,616	136,655,120,538	74,963,540,696	58,265,325,202	24,565,075,613

NABIL

$$a = \frac{\sum Y_1}{N} = \frac{135,807,119,587}{5} = 27,161,423,917.40 \quad b = \frac{\sum XY_1}{\sum X^2} = \frac{59,167,806,616}{10} = 5,916,780,661.60$$

NIB

$$a = \frac{\sum Y_2}{N} = \frac{136,655,120,538}{5} = 27,331,024,107.60 \quad b = \frac{\sum XY_2}{\sum X^2} = \frac{74,963,540,696}{10} = 7,496,354,069.60$$

NIC

$$a = \frac{\sum Y_3}{N} = \frac{58,265,325,202}{5} = 11,653,065,040.40 \quad b = \frac{\sum XY_3}{\sum X^2} = \frac{24,565,075,613}{10} = 2,456,507,561.30$$

8.4 Calculation of Least Square Trend Value of Net Worth

Year	X (Year 06/07)	X ²	Nabil		NIB		NIC	
			Y ₁	XY ₁	Y ₂	XY ₂	Y ₃	XY ₃
2004/05	-2	4	1,656,875,328	-3,313,750,656	1,180,173,000	-2,360,346,000	684,194,000	-1,368,388,000
2005/06	-1	1	1,873,203,264	-1,873,203,264	1,415,440,000	-1,415,440,000	766,462,000	-766,462,000
2006/07	0	0	2,055,115,392	0	1,878,124,000	0	918,496,000	0
2007/08	1	1	2,439,824,640	2,439,824,640	2,686,786,000	2,686,786,000	1,303,427,000	1,303,427,000
2008/09	2	4	3,129,020,280	6,258,040,560	3,907,840,000	7,815,680,000	1,660,254,000	3,320,508,000
Σ	0	10	11,154,038,904	3,510,911,280	11,068,363,000	6,726,680,000	5,332,833,000	2,489,085,000

NABIL

$$a = \frac{\sum Y_1}{N} = \frac{11,154,038,904}{5} = 2,230,807,780.80 \quad b = \frac{\sum XY_1}{\sum X^2} = \frac{3,510,911,280}{10} = 351,091,128$$

NIB

$$a = \frac{\sum Y_2}{N} = \frac{11,068,363,000}{5} = 2,213,672,600 \quad b = \frac{\sum XY_2}{\sum X^2} = \frac{6,726,680,000}{10} = 672,668,000$$

NIC

$$a = \frac{\sum Y_3}{N} = \frac{5,332,833,000}{5} = 1,066,566,600 \quad b = \frac{\sum XY_3}{\sum X^2} = \frac{2,489,085,000}{10} = 248,908,500$$

8.5 Calculation of Least Square Trend Value of Net Profit

Year	X (Year 06/07)	X ²	Nabil		NIB		NIC	
			Y ₁	XY ₁	Y ₂	XY ₂	Y ₃	XY ₃
2004/05	-2	4	520,114,085	-1040,228,170	232,147,098	-464,294,196	113,755,734	-227,511,468
2005/06	-1	1	635,262,349	-635,262,349	350,536,413	-350,536,413	96,587,674	-96,587,674
2006/07	0	0	673,959,698	0	501,398,852	0	158,475,051	0
2007/08	1	1	746,468,394	746,468,394	696,731,516	696,731,516	243,058,040	243,058,040
2008/09	2	4	1,031,053,098	2,062,106,196	900,619,072	1,801,238,144	317,434,138	634,868,276
Σ	0	10	3,606,857,624	1,133,084,071	2,681,432,951	1,683,139,051	929,310,637	553,827,174

NABIL

$$a = \frac{\sum Y_1}{N} = \frac{3,606,857,624}{5} = 721,371,524.80 \quad b = \frac{\sum XY_1}{\sum X^2} = \frac{1,133,084,071}{10} = 113,308,407.10$$

NIB

$$a = \frac{\sum Y_2}{N} = \frac{2,681,432,951}{5} = 536,286,590.20 \quad b = \frac{\sum XY_2}{\sum X^2} = \frac{1,683,139,051}{10} = 168,313,905.10$$

NIC

$$a = \frac{\sum Y_3}{N} = \frac{929,310,637}{5} = 185,862,127.40 \quad b = \frac{\sum XY_3}{\sum X^2} = \frac{553,827,174}{10} = 55,382,717.40$$