CHAPTER - IV
PRESENTATION AND ANALYSIS OF DATA

This chapter will present the data on table & figure. The main objective of the study is to present data and analyze them with the help of various financial and statistical tools. This chapter consists of analysis and presentation of empirical data. The important variables are very sensitive and taken into consideration, so this chapter will present the analysis of components of NPA and profitability.

Nowadays Non-Performing Assets (NPA) have been occupying major space in the total assets and total lending of the bank. Commercial banks have been suffering by high level of NPA, and the efforts of the banks have been diverted to reduce it. Keeping this fact into consideration, a provision has set up by Nepal Rastra Bank in Fiscal year 2057/58 to control the level of NPA of Nepalese commercial banks. According to that provision, every bank has to classify its total loan and advances (including purchased and discounted bills) as pass loan, substandard loan, doubtful loan and bad loan, based on overdue against schedule. Commercial banks are also directed to maintain loan loss provision as stated in section 11 of directives no. 2 of NRB s directives for commercial banks 2059. Main purpose is to find out the level of NPA in Nepalese commercial banks and to take necessary steps to control the level of NPA in future. Here in the study, data of five fiscal year starting from F/Y 2065/66 to 2069/70, have been presented to study and analyze the level of NPA in total assets, total lending and total deposits of the commercial banks. Data are also presented to examine or analyze the efforts to NPA on the profitability of the banks under study.

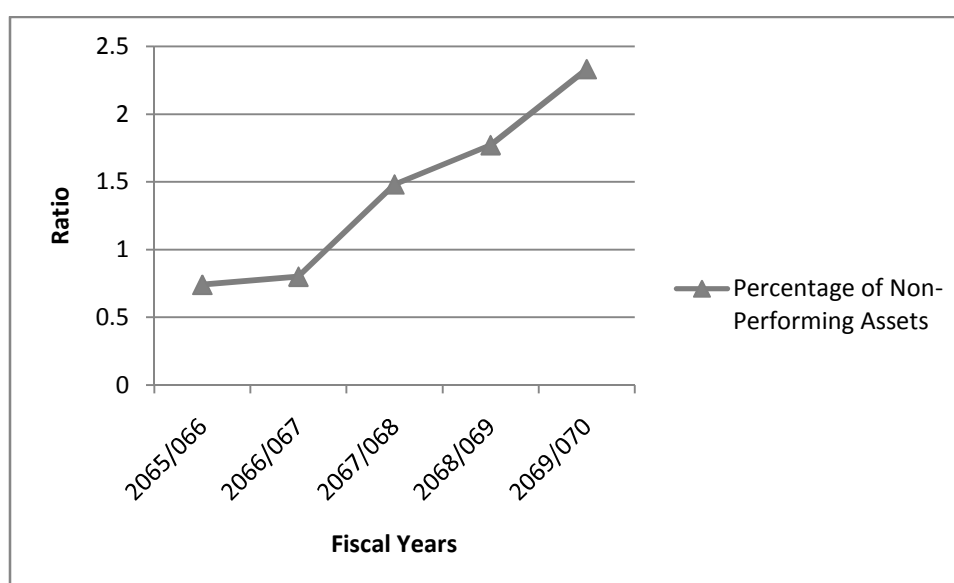## 4.1   Analysis of NPA Percentage

Non Performing Assets means the loan provided by commercial bank and the consumer has not paid it until the time is already matured which has been classified by a bank or financial institution as sub-standard, doubtful or loss loan, in accordance with the directions or guidelines relating to loan classification issued by Nepal Rastra Bank. NPA percentage is the proportion of NPA out of the total loan and advance.

Table: 4.1

NPA Ratio of NABIL Bank

Year	Non-Performing Assets	Total Loan & Advance	Percentage of Non-Performing Assets
2065/066	161.08	21759.46	0.74
2066/067	224.82	27999.01	0.80
2067/068	487.54	33030.97	1.48
2068/069	689.85	38905.49	1.77
2069/070	1000.05	42867.77	2.33
Average			1.43
SD			0.67
CV			47.12

Source: Annual reports FY 2065/066 to 2069/070

Figure: 4.1

Trend of NPA Ratio of NABIL Bank

The above table 4.1 and figure 4.1 shows that NPA of NABIL is increasing trend during the study period and total loan & advance is in also increasing trend over the study period. The lowest amounts of NPA and loan & advance are Rs. 161.08 & Rs. 21759.46 millions in the fiscal year 2065/066 and the highest amount is Rs. 1000.05 & 42867.77 millions in the fiscal year 2069/070 respectively.
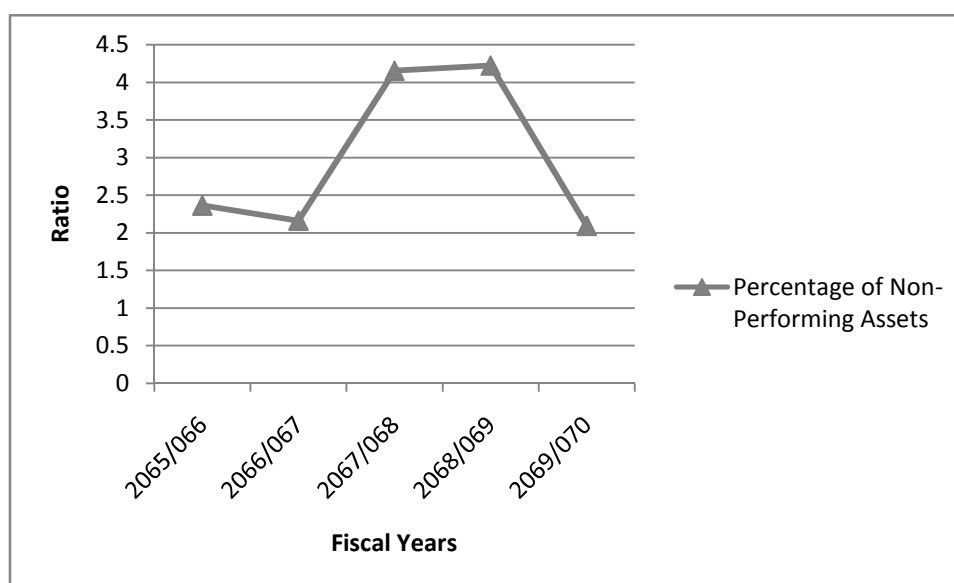
The percentage of NPA ratio is increasing during the study period. The highest ratio is 2.33% and lowest ratio is 0.74% in the fiscal year 2069/070 and 2065/066 respectively. The average nonperforming assets ratio of the bank is 1.43%, standard deviation is 0.67% and coefficient of variation is 47.12%, which shows the moderate variation in the ratio of respective year.

Table: 4.2

NPA Ratio of HBL

Year	Non-Performing Assets	Total Loan & Advance	Percentage of Non-Performing Assets
2065/066	477.23	20179.61	2.36
2066/067	551.31	25519.52	2.16
2067/068	1208.11	29123.75	4.15
2068/069	1391.7	32968.27	4.22
2069/070	751.16	35968.47	2.09
Average			3.00
SD			1.09
CV			36.36

Source: Annual reports FY 2065/066 to 2069/070

Figure: 4.2

Trend of NPA Ratio of HBL

The above table 4.3 and figure 4.3 shows that NPA of HBL is increasing trend except the fiscal year 2069/070 and total loan & advance is in increasing trend during the study period. The lowest amounts of NPA and loan & advance are Rs. 477.23 & Rs. 20179.61millions in the fiscal year 2065/066 and the highest amount is Rs. 1391.7 & 35968.47 millions in the fiscal year 2068/069 & 2069/070 respectively.

The percentage of NPA ratio is decreasing in the fiscal year 2066/067 than previous year and increasing in the fiscal year 2067/068 & 2068/069 and finally it is decreasing in the fiscal year 2060/068 than previous year. The highest ratio is 4.22% and lowest ratio is 2.09% in the fiscal year 2068/069 and 2069/070 respectively. The average ratio of the bank is 3.00%, standard deviation is 1.09% and coefficient of variation is 36.36%, which shows the moderate variation in the ratio of respective year.

Table: 4.3

Comparative Statistical Analysis of NPA Ratio of Sample Banks

Factor/Banks	NABIL	HBL
Average	1.43	3.00
SD	0.67	1.09
CV	47.12	36.36

Source: Table 1, &2

The average NPA ratio of HBL is 3% which is higher than the NABIL i.e. 1.43%. The Standard Deviations of NABIL and HBL are 0.67% & 1.09% respectively, it means HBL has more variability in compare to NABIL. The CV of NPA ratio of NABIL & HBL are 47.12% and 36.36% respectively which indicate that NABIL is more variable than HBL.

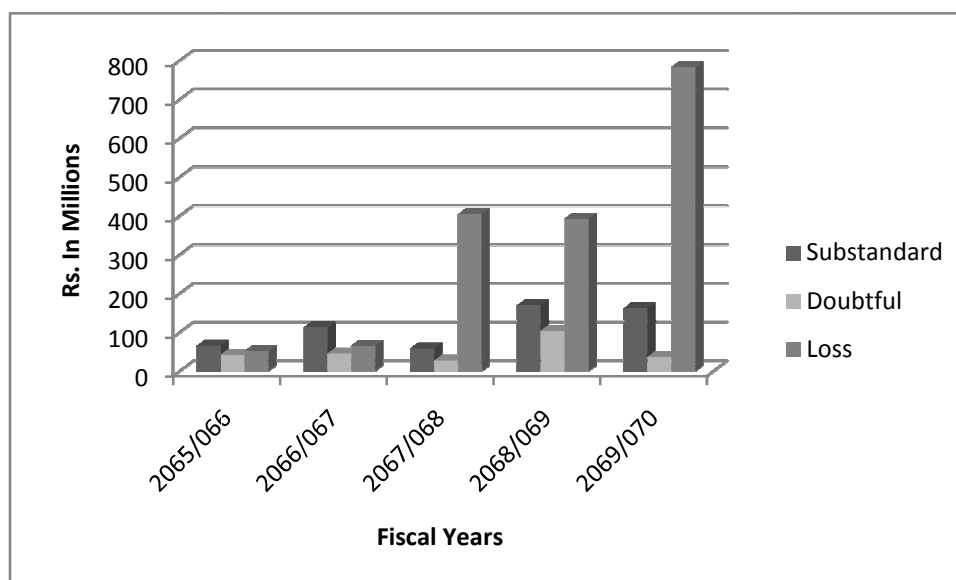## 4.2 Analysis of Composition of Non-Performing Assets (NPA)

Composition of NPA means the breakdown of NPA figures into Substandard, Doubtful and Loss. Some banks deliberately hide their NPA showing it in rescheduled/restructured heading. Though these figures do not formally fall in NPA, they are past NPAs and have tendency to fall back in NPA so considering the figures may be helpful to see clear picture of NPA.

Table: 4.4

Composition of NPA & Rescheduled/Restructured Loans of NABIL

(Rs. In millions)

Year	Substandard	Doubtful	Loss	Restructured/Rescheduled
2065/066	66.22	42.58	52.29	10.63
2066/067	113.31	45.76	65.76	7.19
2067/068	59.02	27.73	404.53	1.20
2068/069	170.21	104.66	392.84	22.14
2069/070	162.44	36.78	783.63	17.20

Source: Annual reports FY 2065/066 to 2069/070

Figure: 4.3

Composition of NPA & Rescheduled/Restructured Loans of NABIL

Above table 4.5 shows the composition of NPA of NABIL. NPA consists the three types of loan substandard, doubtful and loss. Substandard loan is fluctuating trend during the study period the highest value of substandard loan is Rs. 170.21 and that of lowest is Rs. 59.02 million in the fiscal year 2068/069 & 2067/068 respectively. Doubtful loan is in fluctuating trend it is increasing in 2066/067, 2066/068 and decreasing in 2065/066 & 2069/070 than previous year the highest value of doubtful loan is Rs. 104.66 and that of lowest is Rs. 27.73 million is the fiscal year 2068/069 & 2066.067 respectively. Similarly, loss loan is increasing trend except the year 2068/069. The highest amount consists by loss loan is Rs. 783.63 & and that of lowest
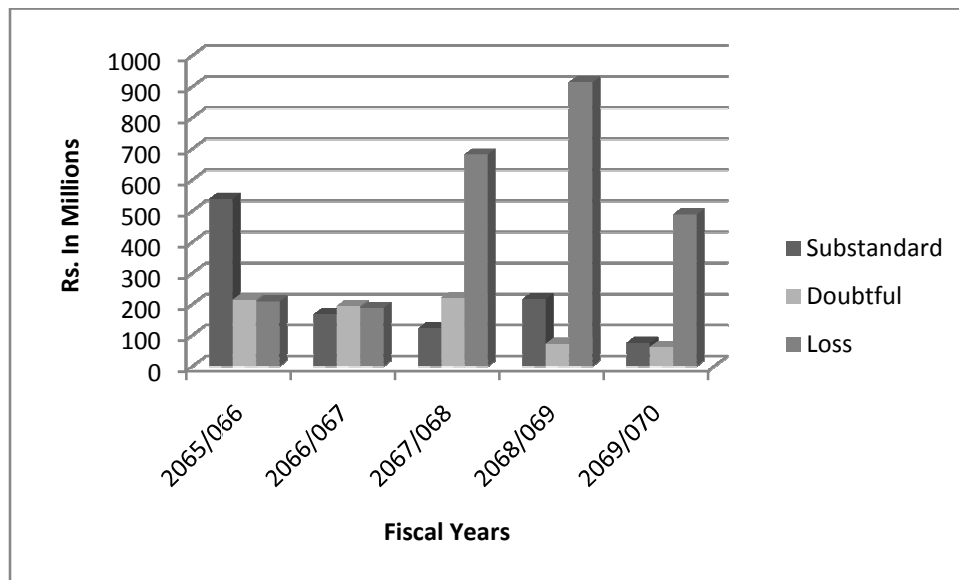
is Rs. 52.29 million in the fiscal year 2068.069 & 2066/067 respectively. The restructured of loan is decreasing up to 2067/068 after that it is increases in 2068/069 and finally decreases in 2069/070. The highest value of restructured loan is Rs. 22.14 & that of lowest is Rs. 1.20 million in the fiscal year 2068/069 & 2067/068 respectively.

Table: 4.5

Composition of NPA & Rescheduled/Restructured Loans of HBL

(Rs. In millions)

Year	Substandard	Doubtful	Loss	Restructured/Rescheduled
2065/066	539.19	214.48	208.83	344.78
2066/067	167.83	194.69	188.78	301.57
2067/068	122.76	220.52	681.55	183.28
2068/069	216.05	73.45	913.78	188.46
2069/070	76.41	62.07	488.90	123.79

Source: Annual reports FY 2065/066 to 2069/070

Figure: 4.4

Composition of NPA & Rescheduled/Restructured Loans of HBL

Above table 4.7 shows the composition of NPA of HBL. NPA consists the three types of loan substandard, doubtful and loss. Substandard loan is decreasing up to 2067/068 after that it is increasing in the fiscal year 2068/069 and finally decreases in the fiscal year 2069/070 the highest value of substandard loan is Rs. 539.19 and that of lowest

is Rs. 76.41 million in the fiscal year 2065/066 & 2069/070 respectively. Doubtful loan is in fluctuating trend during the study period the highest value of doubtful loan is Rs. 220.52 and that of lowest is Rs. 62.07 million is the fiscal year 2067/068 & 2069/070 respectively. Similarly, loss loan is fluctuating during the study period the highest amount consists by loss loan is Rs. 913.78 & that of lowest is Rs. 188.78 million in the fiscal year 2068/069 & 2066/067 respectively. The restructured of loan is decreasing up to 2067/068 after that it is increases in 2068/069 and finally decreases in 2069/070. The highest value of restructured loan is Rs. 344.78 & that of lowest is Rs. 123.79 million in the fiscal year 2065/066 & 2069/070 respectively.

4.3   Profitability Analysis

The term 'profitability' is composed of two words profit and ability. It reflects the capacity of a business organization to earn profit. It is also referred to as earning capacity or earning power of the concern investment. Thus, the term profitability may be taken as the ability to earn profit. According to Howard and Upton, "The word profitability may be defined as the ability of a given investment to earn return on its use"
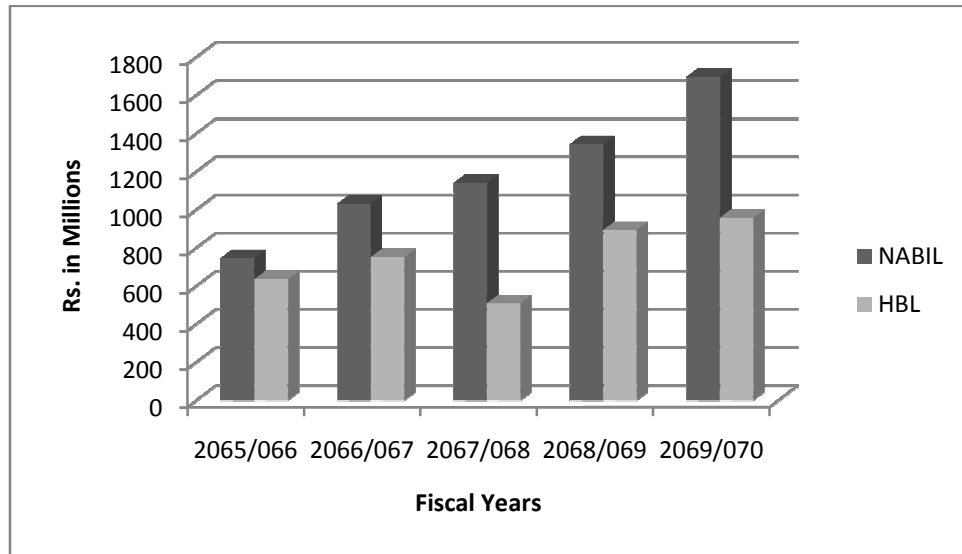
Table: 4.6

NPAT of Sample Banks

(Rs. In millions)

Year	NABIL	HBL
2065/066	746.47	635.89
2066/067	1031.05	752.83
2067/068	1140.52	508.79
2068/069	1344.18	893.12
2069/070	1696.28	958.64
Average	1191.70	749.85
SD	355.14	183.86
CV	29.80	24.52

Source: Annual Reports of Sample Banks from 2065/066 to 2069/070

Figure: 4.5

NPAT Position of Sample Banks

The above table & figure shows the NPAT of sample banks with in the five-year study period. The NPAT of NABIL is in increasing every year but the net profit of HBL is decreasing in the fiscal year 2067/068 than previous year. HBL with the average value of Rs. 749.85 million the NABIL is better with the average value of Rs.1191.70 million. The Standard Deviations of NABIL and HBL are Rs. 355.14 & 183.86 million respectively, it means NABIL has more variability in compare to HBL. The CV of NPAT of NABIL & HBL are 29.80% and 24.52% respectively which indicate that NABIL is more variable than HBL.
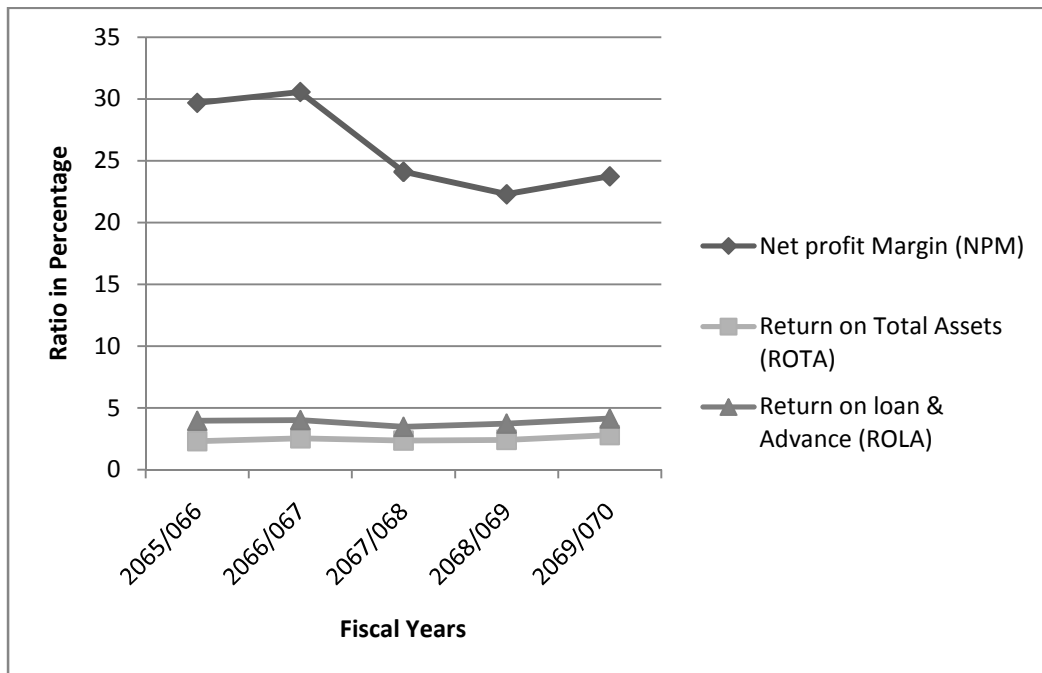
Table: 4.7

Major Profitability Indicator of NABIL

Year	Net profit Margin (NPM)	Return on Total Assets (ROTA)	Return on loan & Advance (ROLA)
2065/066	29.68	2.32	3.96
2066/067	30.56	2.55	4.02
2067/068	24.11	2.37	3.47
2068/069	22.29	2.43	3.73
2069/070	23.74	2.80	4.14
Average	26.08	2.49	3.86
SD	3.77	0.19	0.27
CV	14.44	7.67	6.88

Source: Annual Report 2069/070, NABIL Bank Ltd, Schedule 31

Figure: 4.6

Trend of Profitability Indicator of NABIL

The above table and figure shows that the net profit margin of NABIL is decreasing except the fiscal year 2066/067 the highest ratio is 30.56% and the lowest ratio is 22.29% in the fiscal year 2066/067 & 2068/069 respectively. The ROTA ratio is increasing than previous year except the fiscal year 2067/068 it is highest in the fiscal year 2069/070 i.e. 2.80% and lowest in the fiscal year 2065/066 i. e. 2.32%. Similarly, the ROLA ratio is also fluctuating trend during the study period the highest ratio and lowest ratio are 4.14% & 3.37% in the fiscal year 2069/070 & 2068/069 respectively.

An average Net Profit Margin is Rs. 23.74%, standard deviation is 3.77% and coefficient of variation is 14.44%, which shows the low variation in the ratios of the respective years. The average return on total assets ratio is 2.49%, standard deviation is 0.19% & coefficient of variation is 7.67%. Similarly, the average return on loan and advance ratio is 3.86%, standard deviation is 0.27 & coefficient of variation is 6.88% it shows the less variation in the ratio of respective year.
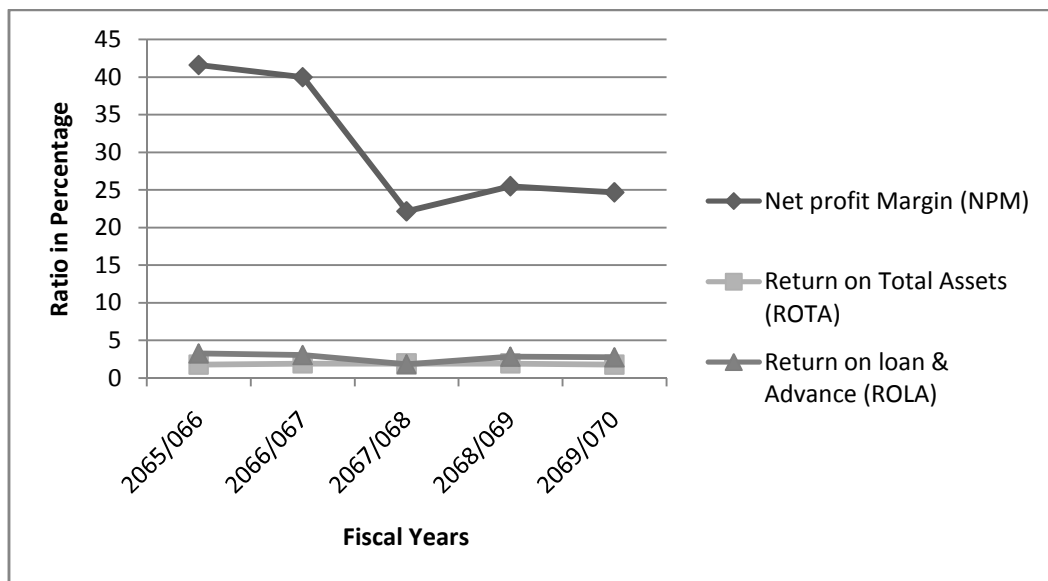
Table: 4.8

Major Profitability Indicator of HBL

Year	Net profit Margin (NPM)	Return on Total Assets (ROTA)	Return on loan & Advance (ROLA)
2065/066	41.58	1.76	3.26
2066/067	39.96	1.91	3.04
2067/068	22.13	1.91	1.82
2068/069	25.46	1.91	2.83
2069/070	24.65	1.76	2.74
Average	30.76	1.85	2.74
SD	9.24	0.08	0.55
CV	30.05	4.44	20.13

Source: Annual Report 2069/070, HBL, Schedule 31

Figure: 4.7

Trend of Profitability Indicator of HBL

The above table and figure shows that the net profit margin of HBL is decreasing than previous year during the study period except the fiscal year 2068/069 the highest ratio is 41.58% and the lowest ratio is 22.13% in the fiscal year 2065/066 & 2067/068 respectively. The ROTA ratio is increasing trend during the study period it is highest in the fiscal year 2068/069 i.e. 1.91% and lowest in the fiscal year 2065/066 i. e. 1.76%. Similarly, the ROLA ratio is also fluctuating trend during the study period the

highest ratio and lowest ratio are 3.26% & 1.82% in the fiscal year 2065/066 & 2067/068 respectively.

An average Net Profit Margin of HBL is 30.76%, standard deviation is 9.24% and coefficient of variation is 30.05%, which shows the moderate variation in the ratios of the respective years. The average return on total assets ratio is 1.85%, standard deviation is 0.08% & coefficient of variation is 4.44%. Similarly, the average return on loan and advance ratio is 2.74%, standard deviation is 0.55 & coefficient of variation is 20.13% it shows the moderate variation in the ratio of respective year.

Table: 4.9

Comparative Statistical Analysis of NPM of Sample Banks

Factor/Banks	NABIL	HBL
Average	26.08	30.76
SD	3.77	9.24
CV	14.44	30.05

Source: Table 7 & 8

Comparing to NABIL & HBL with the average net profit margin ratio of 26.08% & 30.76% the HBL is higher than NABIL. The Standard Deviations of NABIL and HBL are 3.77% & 9.24% respectively, it means HBL has more variability in compare to NABIL. The CV of NPM of NABIL & HBL are 14.44% and 30.05% respectively which indicate that HBL is more variable than NABIL.

Table: 4.10

Comparative Statistical Analysis of ROTA of Sample Banks

Factor/Banks	NABIL	HBL
Average	2.49	1.85
SD	0.19	0.08
CV	7.67	4.44

Source: Table 7& 8

The mean value of return on total assets ratio of NABIL has 2.49% and HBL has 1.85%. It means NABIL bank has maintained higher ratio than HBL. The Standard Deviations of NABIL and HBL are 0.19% & 0.08% respectively, it means NABIL has more variability in compare to HBL. The CV of ROTA of NABIL bank is 7.76% and the CV of HBL is 4.44. Thus, the ROTA ratio of NABIL is more variable than HBL.

Table: 4.11

Comparative Statistical Analysis of ROLA of Sample Banks

Factor/Banks	NABIL	HBL
Average	3.86	2.74
SD	0.27	0.55
CV	6.88	20.13

Table: Appendix 7&8

The average return on loan and advance ratio of NABIL bank has 3.86%, and HBL has maintained 2.74% mean ratio. Thus, the NABIL bank has managed its profit level to its highest against HBL. The Standard Deviations of NABIL and HBL are 0.27% & 0.55% respectively, it means HBL has more variability in compare to NABIL. The CV of NABIL bank is 6.88 and the CV of HBL is 20.13%.

4.4   Correlation Analysis

Correlation is a statistical tool design to measure the degree of association between two or more variables. In other word if the changes in one variable affects the changes in other variable, then the variable are said to be co-related when it is used to measure the relationship between two variables, then it is called simple correlation. The coefficient of correlation measures the degree of relationship between two sets of figures. One of the very convenient and useful way of interpreting the value of coefficient of correlation (r) between the two variables is coefficient of determination, which is denoted by r^2. It explains the total variation in dependent variable is explained by independent variable.

The significant of coefficient of correlation (r) is tested with the help of 't' test. If calculated 't' is less than or equal to tabulated value of 't' it falls in the accepted

region and null hypothesis is accepted or 'r' is not significant of correlation in the population and if calculated 't' is greater than tabulated 't' null hypothesis is rejected or 'r' is significant of correlation in the population.

4.4.1 Relationship between Non-Performing Assets (NPA) & Net Profit after Tax (NPAT)

Coefficient of correlation measures the degree of relationship between two variables, NPA & NPAT. NPA is independent variable (X_1) and NPAT is dependent variable (X_2). The purpose of computing is to find out the relationship between NPA and NPAT is going to same direction or opposite direction

Table 4.12

Correlation between NPA and NPAT of NABIL

Correlation (r)	Coefficient of Determination (r²)	Calculated 't' Value	Tabulated 't' Value	Remarks
0.9734	0.9474	10.33	2.201	Significant

Source: Appendix-I

Above table describes the relationship between NPA and NPAT during the study period. The coefficient of correlation (r) between NPA and NPAT of NABIL is 0.9734. This figure shows the positive association between NPA and NPAT. It means NPA and NPAT both move towards same direction. The coefficient of determination (r^2) is 0.9474 it shows that 94.74% of the variation in the dependent variable (i.e. NPAT) has been explained by the independent variable (i.e. NPA). The calculated 't' value of NABIL is more than the tabulated value i.e. 10.337 > 2.201, therefore it reveals that the relationship between NPA and NPAT is significant.

Table 4.13

Correlation between NPA and NPAT of HBL

Correlation (r)	Coefficient of Determination (r²)	Calculated 't' Value	Tabulated 't' Value	Remarks
0.0411	0.0017	1.32	2.201	insignificant

Source: Appendix-II

The coefficient of correlation (r) between NPA and NPAT of HBL is 0.0411. This figure shows the low degree of positive association between NPA and NPAT. It means NPA and NPAT both move towards same direction. The coefficient of determination (r^2) is 0.0017 it shows that only 0.017% of the variation in the dependent variable (i.e. NPAT) has been explained by the independent variable (i.e. NPA). The calculated 't' value of HBL is less than the tabulated value i.e. 1.32 < 2.201, therefore it reveals that the relationship between NPA and NPAT is insignificant.

4.5   Trend Analysis

Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms. On the basis of tendencies in the dependent variables in the past periods, the future trend is predicted. This analysis takes the historical data as the basis of forecasting. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variable are repeated in the future or the past events affect the future events significantly The future trend is forecasted by using the following formula.

$$Y = a + bx$$

where,

Y = the dependent variable

a = Y intercept

b = the slope or the rate of change of Y per unit change in x

x = the independent variable

Under this topic, trend analysis of loan loss provisions is studied during the period. The objective of this topic is to forecast the NPA for the next two years. The projections are based on the following assumptions.

- The bank will run in the present style.
- Nepal Rastra Bank and the Government of Nepal will not make any amendments in the guidelines for the operation of commercial banks.
- Other all the things also remain constant.

The following table describes the actual and trend values of NPA of sampled banks for seven years.

Table: 4.14

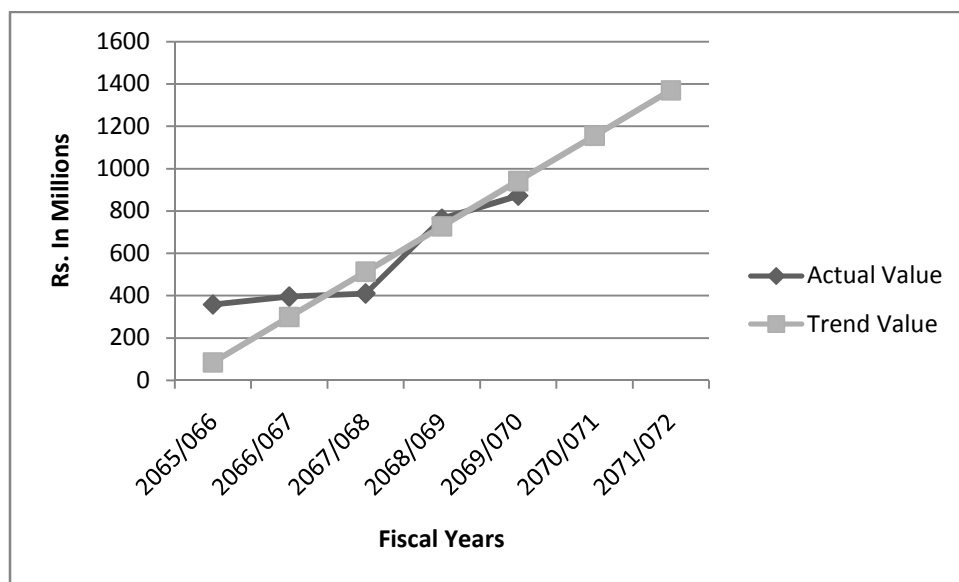## Actual value & Trend Value of NPA of NABIL

Rs. In million

Fiscal Year	Actual Value	Trend Value
2065/066	357.25	84.09
2066/067	394.41	298.38
2067/068	409.07	512.67
2068/069	762.09	726.92
2069/070	871.39	941.25
2070/071	-	1155.54
2071/072	-	1369.83
Mean (a)	512.67	
Intercept (b)	214.29	
Trend Line (Y)	Y = 512.67 + 214.29X	

Source: Appendix IV

Figure: 4.8

Actual & trend Line of NPA of NABIL

The above table 4.18 and figure 4.11 show the increasing trend of NPA of NABIL. Since, the calculated value of 'b' is positive; it is found that the bank's NPA is increasing with time. It shows that the NPA increasing by Rs. 214.29 million every

year. Based on this calculation, it can be forecasted that the bank's NPA will be Rs. 1155.54 million in the year 2069/70 and it will be Rs. 1369.86 million in the year 2071/072.
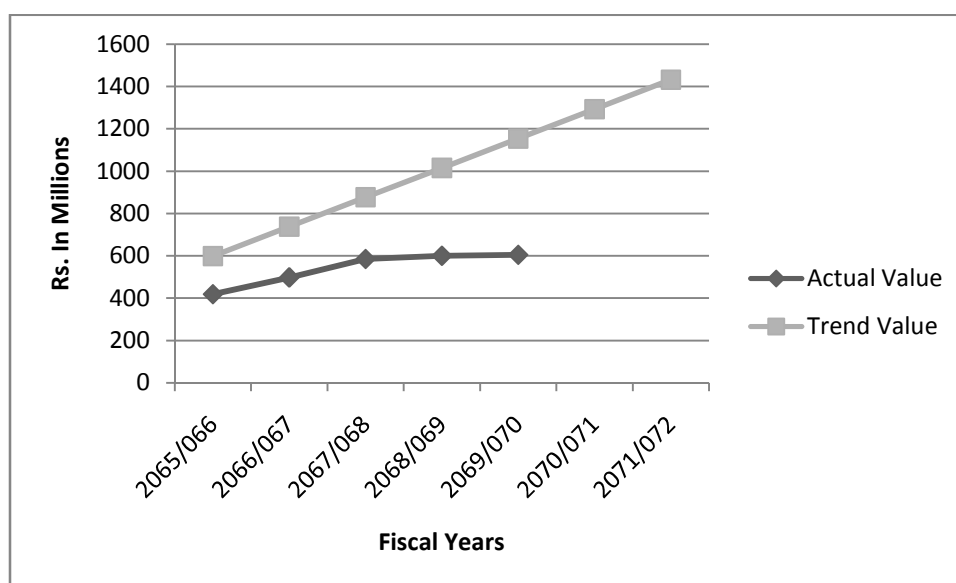
Table: 4.15

Actual value & Trend Value of NPA of HBL

Rs. In million

Fiscal Year	Actual Value	Trend Value
2065/066	418.6	598.26
2066/067	497.35	737.08
2067/068	584.88	875.9
2068/069	600.04	1014.72
2069/070	604.15	1153.54
2070/071	-	1292.36
2071/072	-	1431.18
Mean (a)	875.9	
Intercept (b)	138.82	
Trend Line (Y)	Y = 875.9 + 138.82X	

Source: Appendix V

Figure: 4.9

Actual & trend Line of NPA of HBL

Above table and figure show the increasing trend of NPA of HBL. Since, the calculated value of 'b' is positive; it is found that the bank's NPA is increasing with time. It shows that the NPA increasing by Rs. 138.82 million every year. Based on this calculation, it can be forecast that the bank's NPA will be Rs. 1292.36 million in the year 2069/70 and it will be Rs. 1431.18 million in the year 2071/072 respectively.

4.6   Major Finding

- The percentage of NPA ratio of NABIL is increasing during the study period. The average nonperforming assets ratio of the bank is 1.43%, standard deviation is 0.67% and coefficient of variation is 47.12%.

- The percentage of NPA ratio of HBL is fluctuating during the study period. average NPA ratio of HBL is 3.00%, standard deviation is 1.09% and coefficient of variation is 36.36%.

- Comparing to HBL with the average value of Rs. 749.85 million the NABIL is better with the average value of Rs. 1191.70 million.

- NABIL has more variability in compare to HBL. The CV of NPAT of NABIL, HBL are 29.80% and 24.52% respectively which indicate that NABIL is more variable than HBL.

- Comparing to NABIL & HBL with the average net profit margin ratio of 26.08% & 30.76% the HBL is better with the average value of 40.04%.

- The CV of NPM of NABIL & HBL are 14.44% and 30.05% respectively which indicate that HBL is more variable than NABIL.

- The mean value of return on total assets ratio of NABIL has 2.49%, and HBL has 1.85%. It means NABIL bank has maintained higher ratio than HBL have.

- The Standard Deviations of NABIL and HBL are 0.19% & 0.08% respectively, it means NABIL has more variability in compare to HBL.

- The average return on loan and advance ratio of NABIL bank has 3.86%, and HBL has maintained 2.74% mean ratio. Thus, the NABIL bank has managed its profit level to its highest against HBL.

- The coefficient of correlation (r) between NPA and NPAT of NABIL is 0.9734. This figure shows the positive association between NPA and NPAT. The calculated 't' value of NABIL is more than the tabulated value i.e. 10.337

> 2.201, therefore it reveals that the relationship between NPA and NPAT is significant.

- The coefficient of correlation (r) between NPA and NPAT of HBL is 0.0411. The calculated 't' value of HBL is less than the tabulated value i.e. 1.32 < 2.201, therefore it reveals that the relationship between NPA and NPAT is insignificant.

- The NPA of NABIL is increasing by Rs. 214.29 million every year, it can be forecasted that the bank's NPA will be Rs. 1155.54 million in the year 2069/70 and it will be Rs. 1369.86 million in the year 2071/072.

- The NPA of HBL is increasing by Rs. 138.82 million every year, it can be forecast that the bank's NPA will be Rs. 1292.36 million in the year 2069/70 and it will be Rs. 1431.18 million in the year 2071/072 respectively.

CHAPTER - V
SUMMARY CONCLUSION AND RECOMMENDATION

This Chapter includes the conclusion derived from the analysis of the study. Summary of the study has been mentioned the First section. The Second section has been designed for the finding and conclusion drawn from the study. The recommendation to eliminate the weakness, drawbacks of the common stock investment observed on the basis of finding have been labeled in the Third section.

5.1   Summary

A commercial bank means the bank, which deals with exchanging currency, accepting deposits, giving loans doing other various commercial transactions. Therefore, the major function of commercial bank is to accept deposits and provide loans. There is not so long history of commercial bank in Nepal. Nepal Bank Limited established in 1994 B. S. was the first commercial bank of the Nepal. Now there are thirty-two commercial banks all over the country and they have been expanding their services by establishing branches in every corner of the country.

The assets of commercial bank indicate the manner in which the funds entrusted to the bank are employed. The successful working of the bank depends on ability of the management to distribute the fund among the various kind of investment known as assets outstanding loan advance of the bank. These assets constitute primary source of income to the bank. As being a business unit a bank aims at making huge profit since loan and advances are more profitable than any other assets of the bank, it is willing to lend as much as its fund as possible. However, the bank has to be careful about the repayment of loan and interest giving loan. If the bank is too timid, it may fail to obtain the adequate return on the fund, which is confined to it for use. Similarly, if the bank is too liberal, it may easily impair its profits by bad debts. Therefore, bank should not forget the reality that most of the bank failures in the world are due to shrinkage in the value of the loan and advances. Despites of being loan and advances more profitable than other assets, it creates risk of non-repayment for the bank. Such risk is known as credit risk or default risk. Therefore, like other assets, the loan and

advances are classified into performing and non-performing assets based on overdue aging schedule. If the dues in the form of principal and the interest are not paid, by borrower within a maturity period, that amount of principal and interest is called non performing loan or assets. It means NPA could wreak branch profitability both through loss of interest income and need to write off the principal loan amount. Performing assets have multiple benefits to the company as well as to the society while non-performing assets erode even existing capital of the bank. Escalating level of NPAs has been becoming great problem in banking business in the world. In this context, Nepal cannot be run off from this situation. The level of NPA in Nepalese banking system is very alarming. It is well known fact that the bank and financial institution in Nepal have been facing the problem of swelling nonperforming assets and the issue of becoming more and more unmanageable day by day. It is well known from different financial reports, newspapers and news that the total NPA in Nepalese banking system is about 16 Billion while it is very worse in case of two largest commercial banks RBB and NBL. (Nepal Rastra Bank, Banking and financial statistics, 2010: 06)

Therefore, this study is concerned to find out the level of NPA and its effects on the profitability of the Nepalese commercial bank. This study especially focuses on two commercial banks of Nepal, viz. HBL and NABIL only, out of the 31 commercial banks operating in the banking industry of Nepal. To fulfill the research objectives this study is divided into five main chapters. The first chapter includes general background of the study, statements of the problems, objectives of the study, significances of the study, limitations of the study and organization of the study. The second chapter deals with review of the different literature in regards to the theoretical analysis and review of books, articles and thesis related to the study field. The third chapter includes research design, population and sample, sources of the information used, period of the study, financial indicators and the statistical tools used. Similarly, the fourth chapter includes presentation of the financial variables and statistical tools used while interpreting the data so collected from the different sources and major findings of the study is also include in this chapter and the last chapter briefly represents the summery of the whole study and the conclusions and the

recommendations for the effective and smooth running of the concerned commercial banks under the study.

5.2 Conclusions

NPA affect all sectors (in particular, if parallel issues with defaulting trade credit is also considered). The most serious impact, however, is on the financial institutions, which tend to own large portfolios, indirectly; the customers of these   financial intermediaries are also implicated; deposit holders, share holders and so forth. Add to this, NPA is not only affecting the banks and its intermediaries, it is having impact on the development of the nation as well. For a bank, NPA means unsettled loan, for which they have to incur financial losses. The cost for recovering NPA is as well considerable. There are banking failures because of the mounting NPA since it is affecting the profitability and long run survival of the bank.

Non-performing assets of bank affect the profitability of Nepalese commercial bank. The performance of the NABIL is found to be satisfactory as the average level of NPA is gradually low and net profit is gradually increasing over the years covered by this study period, followed by HBL. Theoretically, when the level of non-performing assets is increasing then the profit of the bank is decreasing and vice versa. However, the NPA and profitability of the sample bans have positive correlation it means when NPA increasing the profit of banks also increasing. In case of profitability, the performance of the all sample banks is found to be satisfactory as the level of NPAT is gradually increasing but in case of NPA is increasing in current days. Every commercial bank is trying to exactly meet the NRB's directives regarding nonperforming assets.

5.3 Recommendations

High level of nonperforming assets not only decreases the profitability of the banks but also entire financial as well as operational health of the country. If the NPA were not control immediately, it would be proved as a curse for the banks in near future. Therefore, following are some of the recommendations, which will help to reduce the level of NPA of the Nepalese commercial banks.

- Corporate structure of bank plays key role in the effective loan management. Being loan a risky asset, efforts should be made to have proper control in every steps of loan management. The banks should establish separate department for credit appraisal, documentation, disbursement, inspection and recovery of loan, which have possibility of finding mistakes of one department by the others, so that the effectiveness can be achieved.

- Loan must be given if the banker is satisfied that the borrower can repay money from the cash flow generated from operating activities. However, the banks want to ensure that their loan is repaid even in case of failure of business. To prevent banks from such happenings, the bank take collateral is disposed for the recovery of loan. Therefore the bank should take proper valuation of collateral so that the bank at least will be able to recover its principal and interest amount in case of failure of the borrower to repay the loan.

- Lack of proper financial analysis of the borrower by the banks, is one of the major cause behind increasing NPA of Nepalese commercial banks. Therefore, proper financial analysis should be performed before giving loan to the borrower.

- Those banks, which have high level of NPA, should take necessary action towards recovering their bad loan as possible. In case of doubtful to repay the loan by the borrower, the bank should dispose of the collateral taken from them and recover the principal and the interest amount thereof.

- Diversification of the loan should be managed by the individual banks. In the context of Nepal, it is provided to the borrower so often go to the bank not in the new sector. Default by older borrower can be found, which should be avoided.

- Control mechanism of the bank should be managed properly. Black listed customers should not be given the new loan, as it would lead to the same situation to the bank.

- Political influences in the loan disbursement should be avoided as it may lead to worse condition to the bank as it may increase the non-performing loan of the bank.

- Every commercial bank should maintain loan loss provision as per NRBs directives regarding nonperforming assets.

- Further studies can be conducted by using others organization as sample, by using other sophisticated tools and techniques, by using other aspects as well.

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Appendix I

Calculation for Mean Value & Correlation Between

NPA & NPAT of NABIL

Year	LA (X_1)	NPA (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 \cdot x_2$	x_1^2	x_2^2
2065/066	746.47	161.08	-445.23	-351.59	156537.53	198229.75	123614.12
2066/067	1031.05	224.82	-160.65	-287.85	46242.78	25808.42	82856.47
2067/068	1140.52	487.54	-51.18	-25.13	1286.05	2619.39	631.42
2068/069	1344.18	689.85	152.48	177.18	27016.71	23250.15	31393.46
2069/070	1696.28	1000.05	504.58	487.38	245923.21	254600.98	237541.21
$N_1 = 5$ $N_2 = 5$	$\sum X_1$ =5958.50	$\sum X_2 =$ 2563.34	-	-	$\sum x_1 . x_2 =$ 477006.28	$\sum x_1^2 =$ 504508.69	$\sum x_2^2 =$ 476036.68

For NPA,

$$\text{Mean } (\overline{X}) = \frac{\sum X_1}{N_1} \qquad = \frac{5958.50}{5} = 1191.70$$

For NPAT,

$$\text{Mean } (\overline{X}) = \frac{\sum X_2}{N_2} \qquad = \frac{2563.34}{5} = 2563.34$$

Correlation between NPA & NPAT,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \ \sum x_2^2}}$$

$$= \frac{477006.28}{\sqrt{504508.69 \times 476036.68}} \quad = 0.9734$$

$$r^2 = 0.9734^2 = 0.9474 \text{ or, } 94.74\%$$

T-value,

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

$$= \frac{0.9734}{\sqrt{1-0.9734^2}} \times \sqrt{5-2} \quad = 10.3374$$

Calculation for Mean Value & Correlation Between

NPA & NPAT of HBL

Year	LA (X_1)	NPA (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 \cdot x_2$	x_1^2	x_2^2
2065/066	635.89	477.23	-113.96	-398.67	45434.26	12987.79	158939.36
2066/067	752.83	551.31	2.98	-324.59	-965.99	8.86	105359.97
2067/068	508.79	1208.11	-241.06	332.21	-80083.39	58111.85	110362.16
2068/069	893.12	1391.7	143.27	515.80	73896.32	20525.15	266047.58
2069/070	958.64	751.16	208.79	-124.74	-26044.38	43591.59	15560.57
$N_1 = 5$ $N_2 = 5$	$\sum X_1$ =3749.27	$\sum X_2 =$ 4379.51	-	-	$\sum x_1 . x_2 =$ 12236.81	$\sum x_1^2 =$ 135225.24	$\sum x_2^2 =$ 656269.63

For NPA,

$$\text{Mean } (\overline{X}) = \frac{\sum X_1}{N_1} \qquad = \frac{3749.27}{5} \quad = 749.85$$

For NPAT,

$$\text{Mean } (\overline{X}) = \frac{\sum X_2}{N_2} \qquad = \frac{4379.51}{5} \quad = 875.90$$

Correlation between NPA & NPAT,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \ \sum x_2^2}}$$

$$= \frac{12236.81}{\sqrt{135225.24 \times 656269.63}} \quad = 0.0411$$

$$r^2 = 0.0411^2 = 0.0017 \text{ or, } 0.017\%$$

T-value,

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

$$= \frac{0.7604}{\sqrt{1-0.0411^2}} \times \sqrt{5-2} \quad = 1.32$$

Appendix III

Calculation of Trend Value of LLP of EBL, NABIL & SCBNL

Fiscal Year	t	X=t-3	x^2	NABIL		HBL	
				Y_1	XY_1	Y_3	XY_3
2065/066	1	-2	4	161.08	-322.16	477.23	-954.46
2066/067	2	-1	1	224.82	-224.82	551.31	-551.31
2067/068	3	0	0	487.54	0	1208.11	0
2068/069	4	1	1	689.85	689.85	1391.7	1391.7
2069/070	5	2	4	1000.05	2000.1	751.16	1502.32
Total	N=5		10	2563.34	2142.97	4379.51	1388.25

Calculation of intercept of 'y' when t = 0

$$a_1 = \frac{Y_1}{N_1} = \frac{2563.34}{5} = 512.67$$

$$a_2 = \frac{Y_2}{N_2} = \frac{1447.98}{5} = 289.60$$

$$a_3 = \frac{Y_3}{N_3} = \frac{4379.51}{5} = 875.9$$

Calculation of Slope of Trend Line

$$b_1 = \frac{XY_1}{x^2} = \frac{2142.97}{10} = 214.29$$

$$b_2 = \frac{XY_2}{x^2} = \frac{540.06}{10} = 54.01$$

$$b_3 = \frac{XY_3}{N_3} = \frac{1388.25}{10} = 138.82$$

Therefore the trend line equations are:

$$Y_1 = a_1 + b_1 x$$

$$Y_2 = a_2 + b_2 x$$

$$Y_3 = a_3 + b_3$$

Forecasted Value

Rs. In million

Year	X	NABIL	
		Actual Value	**Trend Value**
2065/066	-2	357.25	$512.67 + 214.29 \times (-2) = 84.09$
2066/067	-1	394.41	$512.67 + 214.29 \times (-1) = 298.38$
2067/068	0	409.07	$512.67 + 214.29 \times 0 = 512.67$
2068/069	1	762.09	$512.67 + 214.29 \times 1 = 726.92$
2069/070	2	871.39	$512.67 + 214.29 \times 2 = 941.25$
2070/071	3	-	$512.67 + 214.29 \times 3 = 1155.54$
2071/072	4	-	$512.67 + 214.29 \times 4 = 1369.83$
Mean (a)			512.67
Intercept (b)			214.29
Y = a + bX			Y = 512.67 + 214.29X

Appendix V

Forecasted Value

Rs. In million

Year	X	HBL	
		Actual Value	**Trend Value**
2065/066	-2	418.6	$875.9 + 138.82 \times (-2) = 598.26$
2066/067	-1	497.35	$875.9 + 138.82 \times (-1) = 737.08$
2067/068	0	584.88	$875.9 + 138.82 \times 0 = 875.9$
2068/069	1	600.04	$875.9 + 138.82 \times 1 = 1014.72$
2069/070	2	604.15	$875.9 + 138.82 \times 2 = 1153.54$
2070/071	3	-	$875.9 + 138.82 \times 3 = 1292.36$
2071/072	4	-	$875.9 + 138.82 \times 4 = 1431.18$
Mean (a)			875.9
Intercept (b)			138.82
Y = a + bX			Y = 875.9 + 138.82X

CHAPTER - IV
PRESENTATION AND ANALYSIS OF DATA

This chapter will present the data on table & figure. The main objective of the study is to present data and analyze them with the help of various financial and statistical tools. This chapter consists of analysis and presentation of empirical data. The important variables are very sensitive and taken into consideration, so this chapter will present the analysis of components of NPA and profitability.

Nowadays Non-Performing Assets (NPA) have been occupying major space in the total assets and total lending of the bank. Commercial banks have been suffering by high level of NPA, and the efforts of the banks have been diverted to reduce it. Keeping this fact into consideration, a provision has set up by Nepal Rastra Bank in Fiscal year 2057/58 to control the level of NPA of Nepalese commercial banks. According to that provision, every bank has to classify its total loan and advances (including purchased and discounted bills) as pass loan, substandard loan, doubtful loan and bad loan, based on overdue against schedule. Commercial banks are also directed to maintain loan loss provision as stated in section 11 of directives no. 2 of NRB s directives for commercial banks 2059. Main purpose is to find out the level of NPA in Nepalese commercial banks and to take necessary steps to control the level of NPA in future. Here in the study, data of five fiscal year starting from F/Y 2065/66 to 2069/70, have been presented to study and analyze the level of NPA in total assets, total lending and total deposits of the commercial banks. Data are also presented to examine or analyze the efforts to NPA on the profitability of the banks under study.
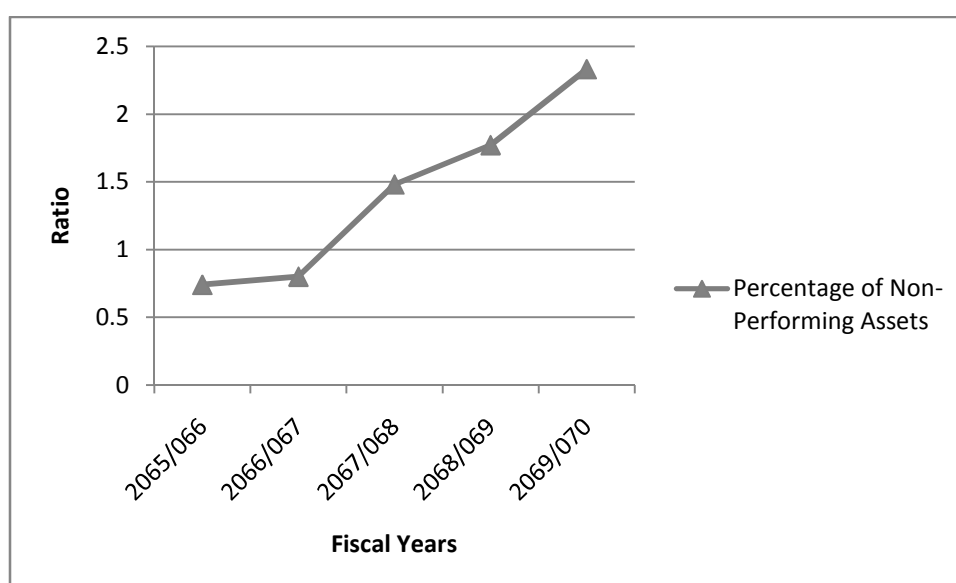
4.1   Analysis of NPA Percentage

Non Performing Assets means the loan provided by commercial bank and the consumer has not paid it until the time is already matured which has been classified by a bank or financial institution as sub-standard, doubtful or loss loan, in accordance with the directions or guidelines relating to loan classification issued by Nepal Rastra Bank. NPA percentage is the proportion of NPA out of the total loan and advance.

Table: 4.1

NPA Ratio of NABIL Bank

Year	Non-Performing Assets	Total Loan & Advance	Percentage of Non-Performing Assets
2065/066	161.08	21759.46	0.74
2066/067	224.82	27999.01	0.80
2067/068	487.54	33030.97	1.48
2068/069	689.85	38905.49	1.77
2069/070	1000.05	42867.77	2.33
Average			1.43
SD			0.67
CV			47.12

Source: Annual reports FY 2065/066 to 2069/070

Figure: 4.1

Trend of NPA Ratio of NABIL Bank

The above table 4.1 and figure 4.1 shows that NPA of NABIL is increasing trend during the study period and total loan & advance is in also increasing trend over the study period. The lowest amounts of NPA and loan & advance are Rs. 161.08 & Rs. 21759.46 millions in the fiscal year 2065/066 and the highest amount is Rs. 1000.05 & 42867.77 millions in the fiscal year 2069/070 respectively.
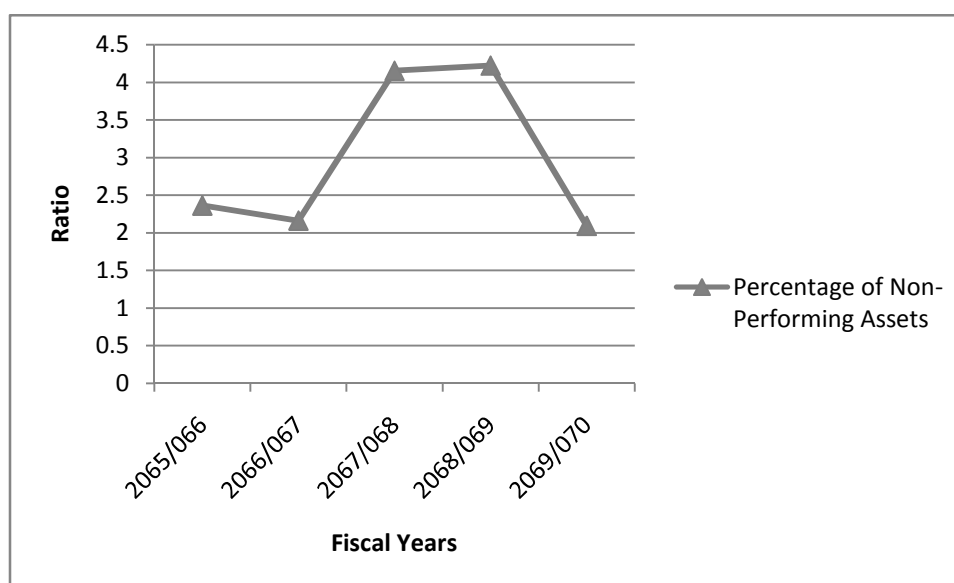
The percentage of NPA ratio is increasing during the study period. The highest ratio is 2.33% and lowest ratio is 0.74% in the fiscal year 2069/070 and 2065/066 respectively. The average nonperforming assets ratio of the bank is 1.43%, standard deviation is 0.67% and coefficient of variation is 47.12%, which shows the moderate variation in the ratio of respective year.

Table: 4.2

NPA Ratio of HBL

Year	Non-Performing Assets	Total Loan & Advance	Percentage of Non-Performing Assets
2065/066	477.23	20179.61	2.36
2066/067	551.31	25519.52	2.16
2067/068	1208.11	29123.75	4.15
2068/069	1391.7	32968.27	4.22
2069/070	751.16	35968.47	2.09
Average			3.00
SD			1.09
CV			36.36

Source: Annual reports FY 2065/066 to 2069/070

Figure: 4.2

Trend of NPA Ratio of HBL

The above table 4.3 and figure 4.3 shows that NPA of HBL is increasing trend except the fiscal year 2069/070 and total loan & advance is in increasing trend during the study period. The lowest amounts of NPA and loan & advance are Rs. 477.23 & Rs. 20179.61millions in the fiscal year 2065/066 and the highest amount is Rs. 1391.7 & 35968.47 millions in the fiscal year 2068/069 & 2069/070 respectively.

The percentage of NPA ratio is decreasing in the fiscal year 2066/067 than previous year and increasing in the fiscal year 2067/068 & 2068/069 and finally it is decreasing in the fiscal year 2060/068 than previous year. The highest ratio is 4.22% and lowest ratio is 2.09% in the fiscal year 2068/069 and 2069/070 respectively. The average ratio of the bank is 3.00%, standard deviation is 1.09% and coefficient of variation is 36.36%, which shows the moderate variation in the ratio of respective year.

Table: 4.3

Comparative Statistical Analysis of NPA Ratio of Sample Banks

Factor/Banks	NABIL	HBL
Average	1.43	3.00
SD	0.67	1.09
CV	47.12	36.36

Source: Table 1, &2

The average NPA ratio of HBL is 3% which is higher than the NABIL i.e. 1.43%. The Standard Deviations of NABIL and HBL are 0.67% & 1.09% respectively, it means HBL has more variability in compare to NABIL. The CV of NPA ratio of NABIL & HBL are 47.12% and 36.36% respectively which indicate that NABIL is more variable than HBL.

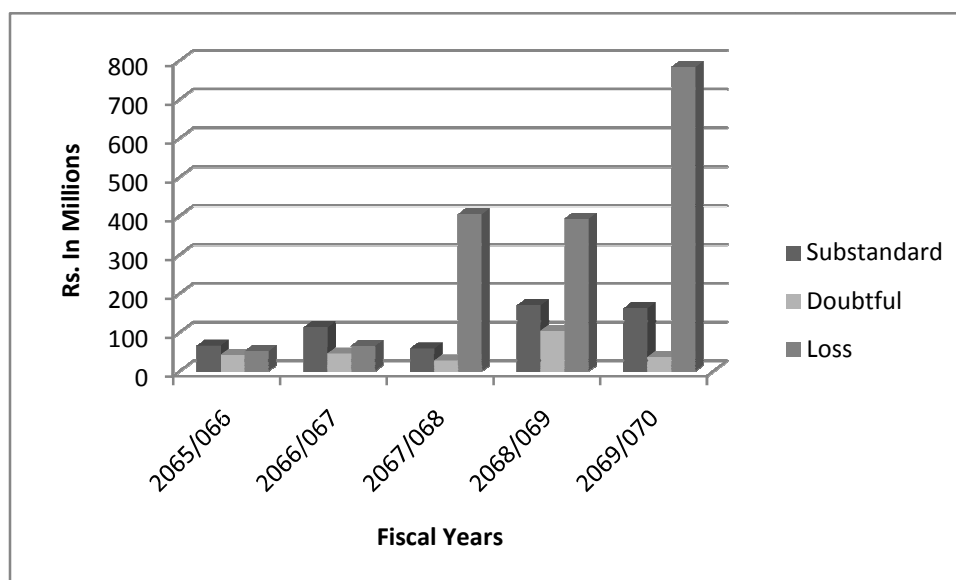## 4.2   Analysis of Composition of Non-Performing Assets (NPA)

Composition of NPA means the breakdown of NPA figures into Substandard, Doubtful and Loss. Some banks deliberately hide their NPA showing it in rescheduled/restructured heading. Though these figures do not formally fall in NPA, they are past NPAs and have tendency to fall back in NPA so considering the figures may be helpful to see clear picture of NPA.

Composition of NPA & Rescheduled/Restructured Loans of NABIL

(Rs. In millions)

Year	Substandard	Doubtful	Loss	Restructured/Rescheduled
2065/066	66.22	42.58	52.29	10.63
2066/067	113.31	45.76	65.76	7.19
2067/068	59.02	27.73	404.53	1.20
2068/069	170.21	104.66	392.84	22.14
2069/070	162.44	36.78	783.63	17.20

Source: Annual reports FY 2065/066 to 2069/070

Figure: 4.3

Composition of NPA & Rescheduled/Restructured Loans of NABIL

Above table 4.5 shows the composition of NPA of NABIL. NPA consists the three types of loan substandard, doubtful and loss. Substandard loan is fluctuating trend during the study period the highest value of substandard loan is Rs. 170.21 and that of lowest is Rs. 59.02 million in the fiscal year 2068/069 & 2067/068 respectively. Doubtful loan is in fluctuating trend it is increasing in 2066/067, 2066/068 and decreasing in 2065/066 & 2069/070 than previous year the highest value of doubtful loan is Rs. 104.66 and that of lowest is Rs. 27.73 million is the fiscal year 2068/069 & 2066.067 respectively. Similarly, loss loan is increasing trend except the year 2068/069. The highest amount consists by loss loan is Rs. 783.63 & and that of lowest
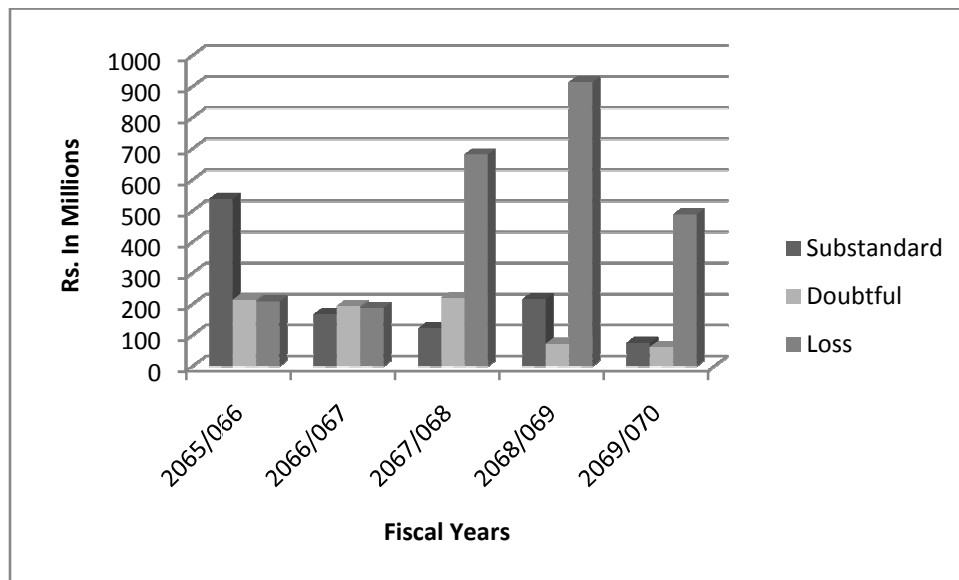
is Rs. 52.29 million in the fiscal year 2068.069 & 2066/067 respectively. The restructured of loan is decreasing up to 2067/068 after that it is increases in 2068/069 and finally decreases in 2069/070. The highest value of restructured loan is Rs. 22.14 & that of lowest is Rs. 1.20 million in the fiscal year 2068/069 & 2067/068 respectively.

Table: 4.5

Composition of NPA & Rescheduled/Restructured Loans of HBL

(Rs. In millions)

Year	Substandard	Doubtful	Loss	Restructured/Rescheduled
2065/066	539.19	214.48	208.83	344.78
2066/067	167.83	194.69	188.78	301.57
2067/068	122.76	220.52	681.55	183.28
2068/069	216.05	73.45	913.78	188.46
2069/070	76.41	62.07	488.90	123.79

Source: Annual reports FY 2065/066 to 2069/070

Figure: 4.4

Composition of NPA & Rescheduled/Restructured Loans of HBL

Above table 4.7 shows the composition of NPA of HBL. NPA consists the three types of loan substandard, doubtful and loss. Substandard loan is decreasing up to 2067/068 after that it is increasing in the fiscal year 2068/069 and finally decreases in the fiscal year 2069/070 the highest value of substandard loan is Rs. 539.19 and that of lowest

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is Rs. 76.41 million in the fiscal year 2065/066 & 2069/070 respectively. Doubtful loan is in fluctuating trend during the study period the highest value of doubtful loan is Rs. 220.52 and that of lowest is Rs. 62.07 million is the fiscal year 2067/068 & 2069/070 respectively. Similarly, loss loan is fluctuating during the study period the highest amount consists by loss loan is Rs. 913.78 & that of lowest is Rs. 188.78 million in the fiscal year 2068/069 & 2066/067 respectively. The restructured of loan is decreasing up to 2067/068 after that it is increases in 2068/069 and finally decreases in 2069/070. The highest value of restructured loan is Rs. 344.78 & that of lowest is Rs. 123.79 million in the fiscal year 2065/066 & 2069/070 respectively.

4.3   Profitability Analysis

The term 'profitability' is composed of two words profit and ability. It reflects the capacity of a business organization to earn profit. It is also referred to as earning capacity or earning power of the concern investment. Thus, the term profitability may be taken as the ability to earn profit. According to Howard and Upton, "The word profitability may be defined as the ability of a given investment to earn return on its use"
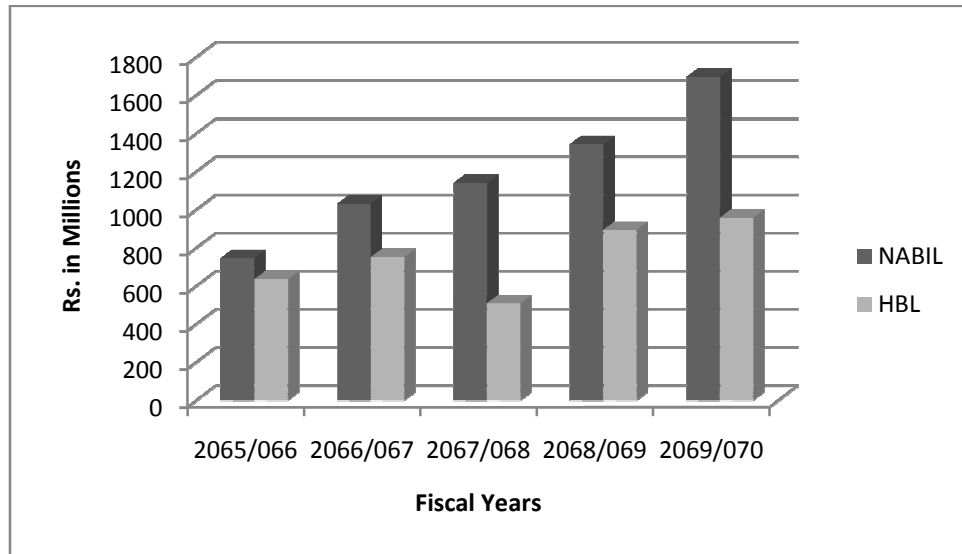
Table: 4.6

NPAT of Sample Banks

(Rs. In millions)

Year	NABIL	HBL
2065/066	746.47	635.89
2066/067	1031.05	752.83
2067/068	1140.52	508.79
2068/069	1344.18	893.12
2069/070	1696.28	958.64
Average	1191.70	749.85
SD	355.14	183.86
CV	29.80	24.52

Source: Annual Reports of Sample Banks from 2065/066 to 2069/070

Figure: 4.5

NPAT Position of Sample Banks

The above table & figure shows the NPAT of sample banks with in the five-year study period. The NPAT of NABIL is in increasing every year but the net profit of HBL is decreasing in the fiscal year 2067/068 than previous year. HBL with the average value of Rs. 749.85 million the NABIL is better with the average value of Rs.1191.70 million. The Standard Deviations of NABIL and HBL are Rs. 355.14 & 183.86 million respectively, it means NABIL has more variability in compare to HBL. The CV of NPAT of NABIL & HBL are 29.80% and 24.52% respectively which indicate that NABIL is more variable than HBL.
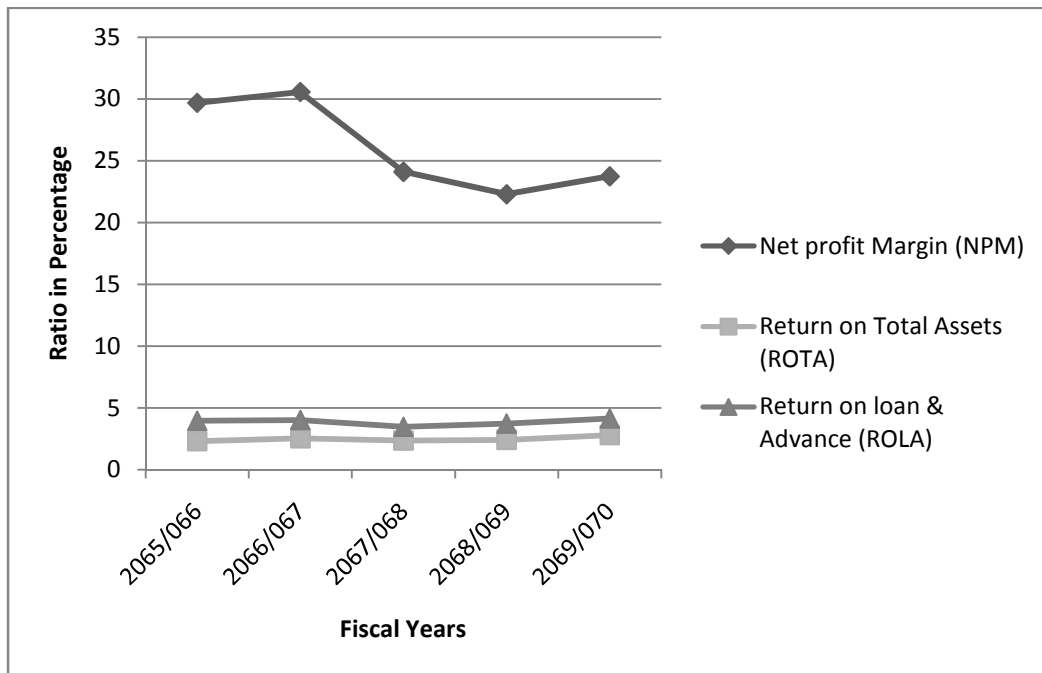
Table: 4.7

Major Profitability Indicator of NABIL

Year	Net profit Margin (NPM)	Return on Total Assets (ROTA)	Return on loan & Advance (ROLA)
2065/066	29.68	2.32	3.96
2066/067	30.56	2.55	4.02
2067/068	24.11	2.37	3.47
2068/069	22.29	2.43	3.73
2069/070	23.74	2.80	4.14
Average	26.08	2.49	3.86
SD	3.77	0.19	0.27
CV	14.44	7.67	6.88

Source: Annual Report 2069/070, NABIL Bank Ltd, Schedule 31

Figure: 4.6

Trend of Profitability Indicator of NABIL

The above table and figure shows that the net profit margin of NABIL is decreasing except the fiscal year 2066/067 the highest ratio is 30.56% and the lowest ratio is 22.29% in the fiscal year 2066/067 & 2068/069 respectively. The ROTA ratio is increasing than previous year except the fiscal year 2067/068 it is highest in the fiscal year 2069/070 i.e. 2.80% and lowest in the fiscal year 2065/066 i. e. 2.32%. Similarly, the ROLA ratio is also fluctuating trend during the study period the highest ratio and lowest ratio are 4.14% & 3.37% in the fiscal year 2069/070 & 2068/069 respectively.

An average Net Profit Margin is Rs. 23.74%, standard deviation is 3.77% and coefficient of variation is 14.44%, which shows the low variation in the ratios of the respective years. The average return on total assets ratio is 2.49%, standard deviation is 0.19% & coefficient of variation is 7.67%. Similarly, the average return on loan and advance ratio is 3.86%, standard deviation is 0.27 & coefficient of variation is 6.88% it shows the less variation in the ratio of respective year.
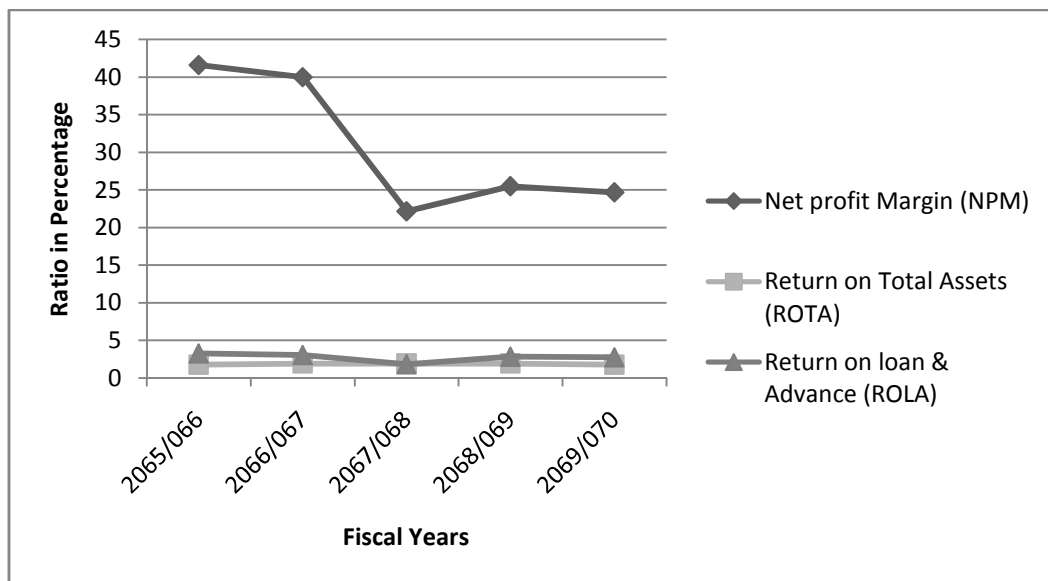
Table: 4.8

Major Profitability Indicator of HBL

Year	Net profit Margin (NPM)	Return on Total Assets (ROTA)	Return on loan & Advance (ROLA)
2065/066	41.58	1.76	3.26
2066/067	39.96	1.91	3.04
2067/068	22.13	1.91	1.82
2068/069	25.46	1.91	2.83
2069/070	24.65	1.76	2.74
Average	30.76	1.85	2.74
SD	9.24	0.08	0.55
CV	30.05	4.44	20.13

Source: Annual Report 2069/070, HBL, Schedule 31

Figure: 4.7

Trend of Profitability Indicator of HBL

The above table and figure shows that the net profit margin of HBL is decreasing than previous year during the study period except the fiscal year 2068/069 the highest ratio is 41.58% and the lowest ratio is 22.13% in the fiscal year 2065/066 & 2067/068 respectively. The ROTA ratio is increasing trend during the study period it is highest in the fiscal year 2068/069 i.e. 1.91% and lowest in the fiscal year 2065/066 i. e. 1.76%. Similarly, the ROLA ratio is also fluctuating trend during the study period the

highest ratio and lowest ratio are 3.26% & 1.82% in the fiscal year 2065/066 & 2067/068 respectively.

An average Net Profit Margin of HBL is 30.76%, standard deviation is 9.24% and coefficient of variation is 30.05%, which shows the moderate variation in the ratios of the respective years. The average return on total assets ratio is 1.85%, standard deviation is 0.08% & coefficient of variation is 4.44%. Similarly, the average return on loan and advance ratio is 2.74%, standard deviation is 0.55 & coefficient of variation is 20.13% it shows the moderate variation in the ratio of respective year.

Table: 4.9

Comparative Statistical Analysis of NPM of Sample Banks

Factor/Banks	NABIL	HBL
Average	26.08	30.76
SD	3.77	9.24
CV	14.44	30.05

Source: Table 7 & 8

Comparing to NABIL & HBL with the average net profit margin ratio of 26.08% & 30.76% the HBL is higher than NABIL. The Standard Deviations of NABIL and HBL are 3.77% & 9.24% respectively, it means HBL has more variability in compare to NABIL. The CV of NPM of NABIL & HBL are 14.44% and 30.05% respectively which indicate that HBL is more variable than NABIL.

Table: 4.10

Comparative Statistical Analysis of ROTA of Sample Banks

Factor/Banks	NABIL	HBL
Average	2.49	1.85
SD	0.19	0.08
CV	7.67	4.44

Source: Table 7& 8

The mean value of return on total assets ratio of NABIL has 2.49% and HBL has 1.85%. It means NABIL bank has maintained higher ratio than HBL. The Standard Deviations of NABIL and HBL are 0.19% & 0.08% respectively, it means NABIL has more variability in compare to HBL. The CV of ROTA of NABIL bank is 7.76% and the CV of HBL is 4.44. Thus, the ROTA ratio of NABIL is more variable than HBL.

Table: 4.11

Comparative Statistical Analysis of ROLA of Sample Banks

Factor/Banks	NABIL	HBL
Average	3.86	2.74
SD	0.27	0.55
CV	6.88	20.13

Table: Appendix 7&8

The average return on loan and advance ratio of NABIL bank has 3.86%, and HBL has maintained 2.74% mean ratio. Thus, the NABIL bank has managed its profit level to its highest against HBL. The Standard Deviations of NABIL and HBL are 0.27% & 0.55% respectively, it means HBL has more variability in compare to NABIL. The CV of NABIL bank is 6.88 and the CV of HBL is 20.13%.

4.4   Correlation Analysis

Correlation is a statistical tool design to measure the degree of association between two or more variables. In other word if the changes in one variable affects the changes in other variable, then the variable are said to be co-related when it is used to measure the relationship between two variables, then it is called simple correlation. The coefficient of correlation measures the degree of relationship between two sets of figures. One of the very convenient and useful way of interpreting the value of coefficient of correlation (r) between the two variables is coefficient of determination, which is denoted by r^2. It explains the total variation in dependent variable is explained by independent variable.

The significant of coefficient of correlation (r) is tested with the help of 't' test. If calculated 't' is less than or equal to tabulated value of 't' it falls in the accepted

region and null hypothesis is accepted or 'r' is not significant of correlation in the population and if calculated 't' is greater than tabulated 't' null hypothesis is rejected or 'r' is significant of correlation in the population.

4.4.1 Relationship between Non-Performing Assets (NPA) & Net Profit after Tax (NPAT)

Coefficient of correlation measures the degree of relationship between two variables, NPA & NPAT. NPA is independent variable (X_1) and NPAT is dependent variable (X_2). The purpose of computing is to find out the relationship between NPA and NPAT is going to same direction or opposite direction

Table 4.12

Correlation between NPA and NPAT of NABIL

Correlation (r)	Coefficient of Determination (r²)	Calculated 't' Value	Tabulated 't' Value	Remarks
0.9734	0.9474	10.33	2.201	Significant

Source: Appendix-I

Above table describes the relationship between NPA and NPAT during the study period. The coefficient of correlation (r) between NPA and NPAT of NABIL is 0.9734. This figure shows the positive association between NPA and NPAT. It means NPA and NPAT both move towards same direction. The coefficient of determination (r^2) is 0.9474 it shows that 94.74% of the variation in the dependent variable (i.e. NPAT) has been explained by the independent variable (i.e. NPA). The calculated 't' value of NABIL is more than the tabulated value i.e. 10.337 > 2.201, therefore it reveals that the relationship between NPA and NPAT is significant.

Table 4.13

Correlation between NPA and NPAT of HBL

Correlation (r)	Coefficient of Determination (r²)	Calculated 't' Value	Tabulated 't' Value	Remarks
0.0411	0.0017	1.32	2.201	insignificant

Source: Appendix-II

The coefficient of correlation (r) between NPA and NPAT of HBL is 0.0411. This figure shows the low degree of positive association between NPA and NPAT. It means NPA and NPAT both move towards same direction. The coefficient of determination (r^2) is 0.0017 it shows that only 0.017% of the variation in the dependent variable (i.e. NPAT) has been explained by the independent variable (i.e. NPA). The calculated 't' value of HBL is less than the tabulated value i.e. 1.32 < 2.201, therefore it reveals that the relationship between NPA and NPAT is insignificant.

4.5 Trend Analysis

Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms. On the basis of tendencies in the dependent variables in the past periods, the future trend is predicted. This analysis takes the historical data as the basis of forecasting. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variable are repeated in the future or the past events affect the future events significantly The future trend is forecasted by using the following formula.

$$Y = a + bx$$

where,

Y = the dependent variable

a = Y intercept

b = the slope or the rate of change of Y per unit change in x

x = the independent variable

Under this topic, trend analysis of loan loss provisions is studied during the period. The objective of this topic is to forecast the NPA for the next two years. The projections are based on the following assumptions.

- The bank will run in the present style.
- Nepal Rastra Bank and the Government of Nepal will not make any amendments in the guidelines for the operation of commercial banks.
- Other all the things also remain constant.

The following table describes the actual and trend values of NPA of sampled banks for seven years.

Table: 4.14

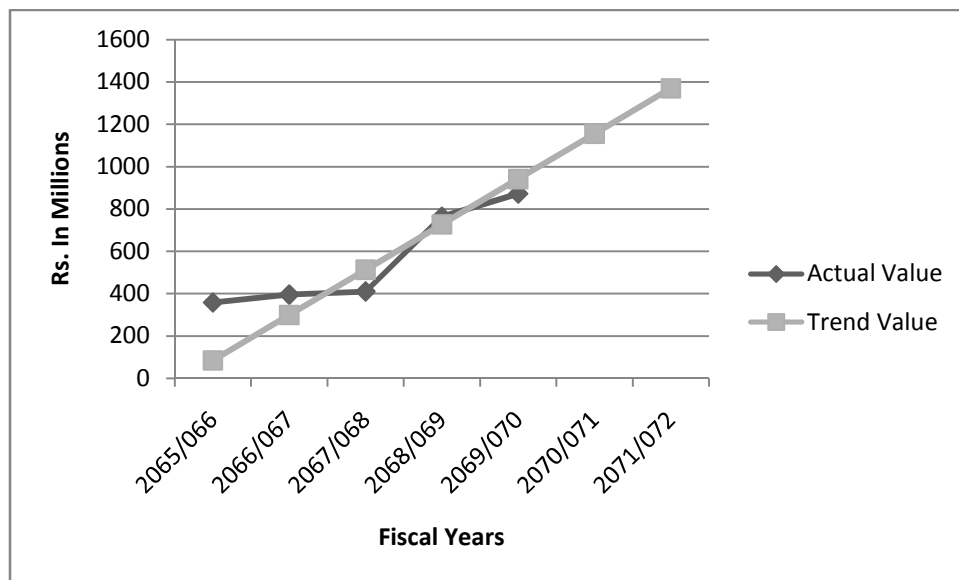**Actual value & Trend Value of NPA of NABIL**

Rs. In million

Fiscal Year	Actual Value	Trend Value
2065/066	357.25	84.09
2066/067	394.41	298.38
2067/068	409.07	512.67
2068/069	762.09	726.92
2069/070	871.39	941.25
2070/071	-	1155.54
2071/072	-	1369.83
Mean (a)	512.67	
Intercept (b)	214.29	
Trend Line (Y)	Y = 512.67 + 214.29X	

Source: Appendix IV

Figure: 4.8

Actual & trend Line of NPA of NABIL

The above table 4.18 and figure 4.11 show the increasing trend of NPA of NABIL. Since, the calculated value of 'b' is positive; it is found that the bank's NPA is increasing with time. It shows that the NPA increasing by Rs. 214.29 million every

56

year. Based on this calculation, it can be forecasted that the bank's NPA will be Rs. 1155.54 million in the year 2069/70 and it will be Rs. 1369.86 million in the year 2071/072.
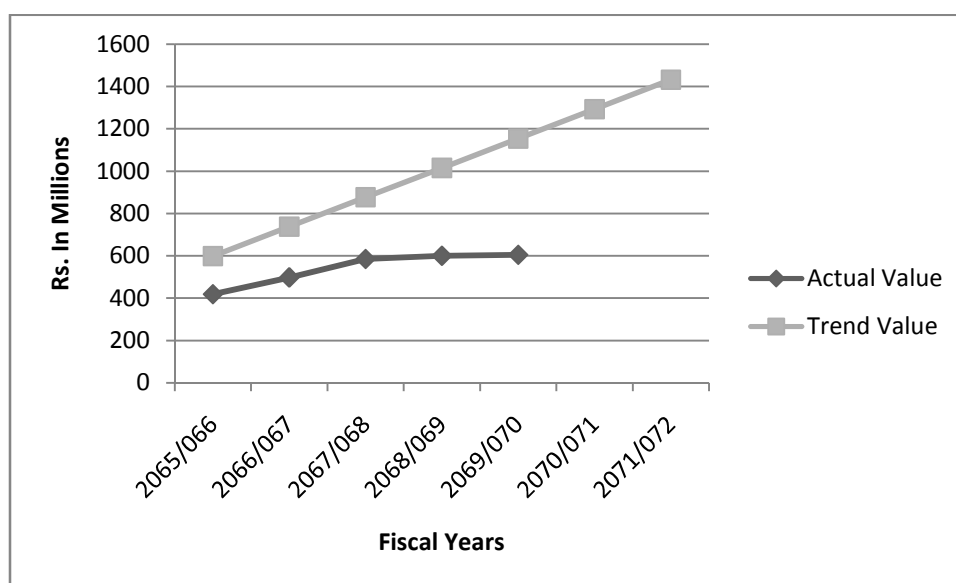
Table: 4.15

Actual value & Trend Value of NPA of HBL

Rs. In million

Fiscal Year	Actual Value	Trend Value
2065/066	418.6	598.26
2066/067	497.35	737.08
2067/068	584.88	875.9
2068/069	600.04	1014.72
2069/070	604.15	1153.54
2070/071	-	1292.36
2071/072	-	1431.18
Mean (a)	875.9	
Intercept (b)	138.82	
Trend Line (Y)	Y = 875.9 + 138.82X	

Source: Appendix V

Figure: 4.9

Actual & trend Line of NPA of HBL

Above table and figure show the increasing trend of NPA of HBL. Since, the calculated value of 'b' is positive; it is found that the bank's NPA is increasing with time. It shows that the NPA increasing by Rs. 138.82 million every year. Based on this calculation, it can be forecast that the bank's NPA will be Rs. 1292.36 million in the year 2069/70 and it will be Rs. 1431.18 million in the year 2071/072 respectively.

4.6   Major Finding

- The percentage of NPA ratio of NABIL is increasing during the study period. The average nonperforming assets ratio of the bank is 1.43%, standard deviation is 0.67% and coefficient of variation is 47.12%.

- The percentage of NPA ratio of HBL is fluctuating during the study period. average NPA ratio of HBL is 3.00%, standard deviation is 1.09% and coefficient of variation is 36.36%.

- Comparing to HBL with the average value of Rs. 749.85 million the NABIL is better with the average value of Rs. 1191.70 million.

- NABIL has more variability in compare to HBL. The CV of NPAT of NABIL, HBL are 29.80% and 24.52% respectively which indicate that NABIL is more variable than HBL.

- Comparing to NABIL & HBL with the average net profit margin ratio of 26.08% & 30.76% the HBL is better with the average value of 40.04%.

- The CV of NPM of NABIL & HBL are 14.44% and 30.05% respectively which indicate that HBL is more variable than NABIL.

- The mean value of return on total assets ratio of NABIL has 2.49%, and HBL has 1.85%. It means NABIL bank has maintained higher ratio than HBL have.

- The Standard Deviations of NABIL and HBL are 0.19% & 0.08% respectively, it means NABIL has more variability in compare to HBL.

- The average return on loan and advance ratio of NABIL bank has 3.86%, and HBL has maintained 2.74% mean ratio. Thus, the NABIL bank has managed its profit level to its highest against HBL.

- The coefficient of correlation (r) between NPA and NPAT of NABIL is 0.9734. This figure shows the positive association between NPA and NPAT. The calculated 't' value of NABIL is more than the tabulated value i.e. 10.337

> 2.201, therefore it reveals that the relationship between NPA and NPAT is significant.

- The coefficient of correlation (r) between NPA and NPAT of HBL is 0.0411. The calculated 't' value of HBL is less than the tabulated value i.e. 1.32 < 2.201, therefore it reveals that the relationship between NPA and NPAT is insignificant.

- The NPA of NABIL is increasing by Rs. 214.29 million every year, it can be forecasted that the bank's NPA will be Rs. 1155.54 million in the year 2069/70 and it will be Rs. 1369.86 million in the year 2071/072.

- The NPA of HBL is increasing by Rs. 138.82 million every year, it can be forecast that the bank's NPA will be Rs. 1292.36 million in the year 2069/70 and it will be Rs. 1431.18 million in the year 2071/072 respectively.

CHAPTER - V
SUMMARY CONCLUSION AND RECOMMENDATION

This Chapter includes the conclusion derived from the analysis of the study. Summary of the study has been mentioned the First section. The Second section has been designed for the finding and conclusion drawn from the study. The recommendation to eliminate the weakness, drawbacks of the common stock investment observed on the basis of finding have been labeled in the Third section.

5.1   Summary

A commercial bank means the bank, which deals with exchanging currency, accepting deposits, giving loans doing other various commercial transactions. Therefore, the major function of commercial bank is to accept deposits and provide loans. There is not so long history of commercial bank in Nepal. Nepal Bank Limited established in 1994 B. S. was the first commercial bank of the Nepal. Now there are thirty-two commercial banks all over the country and they have been expanding their services by establishing branches in every corner of the country.

The assets of commercial bank indicate the manner in which the funds entrusted to the bank are employed. The successful working of the bank depends on ability of the management to distribute the fund among the various kind of investment known as assets outstanding loan advance of the bank. These assets constitute primary source of income to the bank. As being a business unit a bank aims at making huge profit since loan and advances are more profitable than any other assets of the bank, it is willing to lend as much as its fund as possible. However, the bank has to be careful about the repayment of loan and interest giving loan. If the bank is too timid, it may fail to obtain the adequate return on the fund, which is confined to it for use. Similarly, if the bank is too liberal, it may easily impair its profits by bad debts. Therefore, bank should not forget the reality that most of the bank failures in the world are due to shrinkage in the value of the loan and advances. Despites of being loan and advances more profitable than other assets, it creates risk of non-repayment for the bank. Such risk is known as credit risk or default risk. Therefore, like other assets, the loan and

advances are classified into performing and non-performing assets based on overdue aging schedule. If the dues in the form of principal and the interest are not paid, by borrower within a maturity period, that amount of principal and interest is called non performing loan or assets. It means NPA could wreak branch profitability both through loss of interest income and need to write off the principal loan amount. Performing assets have multiple benefits to the company as well as to the society while non-performing assets erode even existing capital of the bank. Escalating level of NPAs has been becoming great problem in banking business in the world. In this context, Nepal cannot be run off from this situation. The level of NPA in Nepalese banking system is very alarming. It is well known fact that the bank and financial institution in Nepal have been facing the problem of swelling nonperforming assets and the issue of becoming more and more unmanageable day by day. It is well known from different financial reports, newspapers and news that the total NPA in Nepalese banking system is about 16 Billion while it is very worse in case of two largest commercial banks RBB and NBL. (Nepal Rastra Bank, Banking and financial statistics, 2010: 06)

Therefore, this study is concerned to find out the level of NPA and its effects on the profitability of the Nepalese commercial bank. This study especially focuses on two commercial banks of Nepal, viz. HBL and NABIL only, out of the 31 commercial banks operating in the banking industry of Nepal. To fulfill the research objectives this study is divided into five main chapters. The first chapter includes general background of the study, statements of the problems, objectives of the study, significances of the study, limitations of the study and organization of the study. The second chapter deals with review of the different literature in regards to the theoretical analysis and review of books, articles and thesis related to the study field. The third chapter includes research design, population and sample, sources of the information used, period of the study, financial indicators and the statistical tools used. Similarly, the fourth chapter includes presentation of the financial variables and statistical tools used while interpreting the data so collected from the different sources and major findings of the study is also include in this chapter and the last chapter briefly represents the summery of the whole study and the conclusions and the

recommendations for the effective and smooth running of the concerned commercial banks under the study.

5.2 Conclusions

NPA affect all sectors (in particular, if parallel issues with defaulting trade credit is also considered). The most serious impact, however, is on the financial institutions, which tend to own large portfolios, indirectly; the customers of these financial intermediaries are also implicated; deposit holders, share holders and so forth. Add to this, NPA is not only affecting the banks and its intermediaries, it is having impact on the development of the nation as well. For a bank, NPA means unsettled loan, for which they have to incur financial losses. The cost for recovering NPA is as well considerable. There are banking failures because of the mounting NPA since it is affecting the profitability and long run survival of the bank.

Non-performing assets of bank affect the profitability of Nepalese commercial bank. The performance of the NABIL is found to be satisfactory as the average level of NPA is gradually low and net profit is gradually increasing over the years covered by this study period, followed by HBL. Theoretically, when the level of non-performing assets is increasing then the profit of the bank is decreasing and vice versa. However, the NPA and profitability of the sample bans have positive correlation it means when NPA increasing the profit of banks also increasing. In case of profitability, the performance of the all sample banks is found to be satisfactory as the level of NPAT is gradually increasing but in case of NPA is increasing in current days. Every commercial bank is trying to exactly meet the NRB's directives regarding nonperforming assets.

5.3 Recommendations

High level of nonperforming assets not only decreases the profitability of the banks but also entire financial as well as operational health of the country. If the NPA were not control immediately, it would be proved as a curse for the banks in near future. Therefore, following are some of the recommendations, which will help to reduce the level of NPA of the Nepalese commercial banks.

- Corporate structure of bank plays key role in the effective loan management. Being loan a risky asset, efforts should be made to have proper control in every steps of loan management. The banks should establish separate department for credit appraisal, documentation, disbursement, inspection and recovery of loan, which have possibility of finding mistakes of one department by the others, so that the effectiveness can be achieved.

- Loan must be given if the banker is satisfied that the borrower can repay money from the cash flow generated from operating activities. However, the banks want to ensure that their loan is repaid even in case of failure of business. To prevent banks from such happenings, the bank take collateral is disposed for the recovery of loan. Therefore the bank should take proper valuation of collateral so that the bank at least will be able to recover its principal and interest amount in case of failure of the borrower to repay the loan.

- Lack of proper financial analysis of the borrower by the banks, is one of the major cause behind increasing NPA of Nepalese commercial banks. Therefore, proper financial analysis should be performed before giving loan to the borrower.

- Those banks, which have high level of NPA, should take necessary action towards recovering their bad loan as possible. In case of doubtful to repay the loan by the borrower, the bank should dispose of the collateral taken from them and recover the principal and the interest amount thereof.

- Diversification of the loan should be managed by the individual banks. In the context of Nepal, it is provided to the borrower so often go to the bank not in the new sector. Default by older borrower can be found, which should be avoided.

- Control mechanism of the bank should be managed properly. Black listed customers should not be given the new loan, as it would lead to the same situation to the bank.

- Political influences in the loan disbursement should be avoided as it may lead to worse condition to the bank as it may increase the non-performing loan of the bank.

- Every commercial bank should maintain loan loss provision as per NRBs directives regarding nonperforming assets.

- Further studies can be conducted by using others organization as sample, by using other sophisticated tools and techniques, by using other aspects as well.

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Calculation for Mean Value & Correlation Between

NPA & NPAT of NABIL

Year	LA (X_1)	NPA (X_2)	$x_1=X_1-\bar{x}_1$	$x_2=X_2-\bar{x}_2$	$x_1 \cdot x_2$	x_1^2	x_2^2
2065/066	746.47	161.08	-445.23	-351.59	156537.53	198229.75	123614.12
2066/067	1031.05	224.82	-160.65	-287.85	46242.78	25808.42	82856.47
2067/068	1140.52	487.54	-51.18	-25.13	1286.05	2619.39	631.42
2068/069	1344.18	689.85	152.48	177.18	27016.71	23250.15	31393.46
2069/070	1696.28	1000.05	504.58	487.38	245923.21	254600.98	237541.21
$N_1 = 5$ $N_2 = 5$	$\sum X_1$ =5958.50	$\sum X_2 =$ 2563.34	-	-	$\sum x_1.x_2 =$ 477006.28	$\sum x_1^2=$ 504508.69	$\sum x_2^2=$ 476036.68

For NPA,

$$\text{Mean } (\overline{X}) = \frac{\sum X_1}{N_1} \qquad = \frac{5958.50}{5} \quad = 1191.70$$

For NPAT,

$$\text{Mean } (\overline{X}) = \frac{\sum X_2}{N_2} \qquad = \frac{2563.34}{5} \quad = 2563.34$$

Correlation between NPA & NPAT,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \ \sum x_2^2}}$$

$$= \frac{477006.28}{\sqrt{504508.69 \times 476036.68}} \quad = 0.9734$$

$$r^2 = 0.9734^2 = 0.9474 \text{ or, } 94.74\%$$

T-value,

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

$$= \frac{0.9734}{\sqrt{1-0.9734^2}} \times \sqrt{5-2} \quad = 10.3374$$

Appendix II

Calculation for Mean Value & Correlation Between

NPA & NPAT of HBL

Year	LA (X_1)	NPA (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 \cdot x_2$	x_1^2	x_2^2
2065/066	635.89	477.23	-113.96	-398.67	45434.26	12987.79	158939.36
2066/067	752.83	551.31	2.98	-324.59	-965.99	8.86	105359.97
2067/068	508.79	1208.11	-241.06	332.21	-80083.39	58111.85	110362.16
2068/069	893.12	1391.7	143.27	515.80	73896.32	20525.15	266047.58
2069/070	958.64	751.16	208.79	-124.74	-26044.38	43591.59	15560.57
$N_1 = 5$ $N_2 = 5$	$\sum X_1$ =3749.27	$\sum X_2 =$ 4379.51	-	-	$\sum x_1.x_2 =$ 12236.81	$\sum x_1^2 =$ 135225.24	$\sum x_2^2 =$ 656269.63

For NPA,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} \qquad = \frac{3749.27}{5} \quad = 749.85$$

For NPAT,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} \qquad = \frac{4379.51}{5} \quad = 875.90$$

Correlation between NPA & NPAT,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \ \sum x_2^2}}$$

$$= \frac{12236.81}{\sqrt{135225.24 \times 656269.63}} \quad = 0.0411$$

$$r^2 = 0.0411^2 = 0.0017 \text{ or, } 0.017\%$$

T-value,

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

$$= \frac{0.7604}{\sqrt{1-0.0411^2}} \times \sqrt{5-2} \quad = 1.32$$

Appendix III

Calculation of Trend Value of LLP of EBL, NABIL & SCBNL

Fiscal Year	t	X=t-3	x^2	NABIL		HBL	
				Y_1	XY_1	Y_3	XY_3
2065/066	1	-2	4	161.08	-322.16	477.23	-954.46
2066/067	2	-1	1	224.82	-224.82	551.31	-551.31
2067/068	3	0	0	487.54	0	1208.11	0
2068/069	4	1	1	689.85	689.85	1391.7	1391.7
2069/070	5	2	4	1000.05	2000.1	751.16	1502.32
Total	N=5		10	2563.34	2142.97	4379.51	1388.25

Calculation of intercept of 'y' when t = 0

$$a_1 = \frac{Y_1}{N_1} = \frac{2563.34}{5} = 512.67$$

$$a_2 = \frac{Y_2}{N_2} = \frac{1447.98}{5} = 289.60$$

$$a_3 = \frac{Y_3}{N_3} = \frac{4379.51}{5} = 875.9$$

Calculation of Slope of Trend Line

$$b_1 = \frac{XY_1}{x^2} = \frac{2142.97}{10} = 214.29$$

$$b_2 = \frac{XY_2}{x^2} = \frac{540.06}{10} = 54.01$$

$$b_3 = \frac{XY_3}{N_3} = \frac{1388.25}{10} = 138.82$$

Therefore the trend line equations are:

$$Y_1 = a_1 + b_1 x$$

$$Y_2 = a_2 + b_2 x$$

$$Y_3 = a_3 + b_3$$

Appendix IV

Forecasted Value

Rs. In million

Year	X	NABIL	
		Actual Value	**Trend Value**
2065/066	-2	357.25	$512.67 + 214.29 \times (-2) = 84.09$
2066/067	-1	394.41	$512.67 + 214.29 \times (-1) = 298.38$
2067/068	0	409.07	$512.67 + 214.29 \times 0 = 512.67$
2068/069	1	762.09	$512.67 + 214.29 \times 1 = 726.92$
2069/070	2	871.39	$512.67 + 214.29 \times 2 = 941.25$
2070/071	3	-	$512.67 + 214.29 \times 3 = 1155.54$
2071/072	4	-	$512.67 + 214.29 \times 4 = 1369.83$
Mean (a)		512.67	
Intercept (b)		214.29	
Y = a + bX		Y = 512.67 + 214.29X	

Appendix V

Forecasted Value

Rs. In million

Year	X	HBL	
		Actual Value	**Trend Value**
2065/066	-2	418.6	$875.9 + 138.82 \times (-2) = 598.26$
2066/067	-1	497.35	$875.9 + 138.82 \times (-1) = 737.08$
2067/068	0	584.88	$875.9 + 138.82 \times 0 = 875.9$
2068/069	1	600.04	$875.9 + 138.82 \times 1 = 1014.72$
2069/070	2	604.15	$875.9 + 138.82 \times 2 = 1153.54$
2070/071	3	-	$875.9 + 138.82 \times 3 = 1292.36$
2071/072	4	-	$875.9 + 138.82 \times 4 = 1431.18$
Mean (a)		875.9	
Intercept (b)		138.82	
Y = a + bX		Y = 875.9 + 138.82X	