Capital Structure of Commercial Banks: A Comparative Analysis of NIBL, NABIL, HBL, EBL and SBI

Mohan Khanal[*,1]

[*, 1] Department of Management, Kathford International College of Engineering and Management (Affiliated to Tribhuvan University), Balkumari, Lalitpur

*Corresponding author: *mohanwithall@gmail.com*

ABSTRACT− Capital structure is the combination of long term sources of funding i.e. preferred stock, common stock and long – term debt. Those are used to finance the firm. Capital structure analysis is the basis for analyzing the usefulness of accumulation from different sources of capital composition of capital is another factor, which affects the profitability. Loan capital dominant enterprises have less chance for prosperity despite of their huge profits.Capital structure decision is an important financial effect of capital on profitability and value of the firm. The present study will try to analyze and examine the capital structure of the commercial banks in Nepal. This article compares the capital structure of NIBL, NABIL, HBL, EBL and SBI five commercial banks which are currently operated as 'A' class banks in Nepal. It evaluates the capital structure and concludes that the total debt ratio of entire five banks is fluctuating. In order to compare the variables financial analysis, leverage analysis and correlation have been used as analytical tools. The conclusion is drawn on the basis of the total proportion of debt and equity capital of the institutions dealing with the problems in terms of capital formation and their overall effects and difficulties in its implementation.

KEYWORDS − Capital Structure, Debt to Equity Ratio, Debt to Total assets ratio, Long Term Debt to Total Capital Ratio, Long term Debt to shareholder's equity ratio.

1. INTRODUCTION

Bank is resource mobilizing institution, which accepts deposit from various sources, and invests such accumulated resources in the fields of agriculture, commerce, trade and industry. Banks offers wide range of financial services like credit, savings, payments services etc. Commercial bank operate currency exchange transactions, accept deposits, provides loan performs dealing relating to commerce except the banks which have been specified for the cooperative, agriculture, industry or other similar specific objectives. The Nepal Rastra bank has enlisted 28 banks as commercial banks in Nepal among them this paper analyses only five of them.

In any organization either banking institution or any other financial institution requires the initial funds for its sound operation. Undoubtedly, business firm or enterprises cannot operate their business without sufficient capital. Enterprises whether they are government owned or privately owned have to make pertinent capital structure decision in

identifying exactly how much capital is needed to run their business smoothly. The fund required are generated usually by two means: equity and debt, equity provides the ownership of the firm to the shareholders. On the other hand, debt is a fund borrowed with fixed charges to be paid periodically to the creditor. The term capital structure refers to the proportion of debt and equity capital or the composition of long – term sources of finance, such as preference capital, debentures, long term debt and equity capital including reserve and surplus (i.e. retained earnings).The term capital structure refers to the mix of different types of funds a company uses to finance its activities. Capital structure varies greatly from one company to another. For example, some companies are financed mainly by shareholders funds whereas others make much greater use of borrowings. Capital structure is the combination of long term sources of funding i.e. preferred stock and common stock. Those are used to finance the firm (Bolten &Robert, 1981:330). Capital structure analysis is the basis for analyzing the usefulness of accumulation from different sources of capital composition of capital is another factor, which affects the profitability. Loan capital dominant enterprises have less chance for prosperity despite of their huge profits (Kuchhal, 1994:575). Capital structure decision is an important financial effect of capital on profitability and value of the firm.

This paper analyzes and examine the of capital structure of the commercial banks in Nepal. This study specially deals with the following issues such as: the proportion of total debt and equity capital in these institutions, the capital structure affects the growth of the bank, the main problems faced by the commercial banks in developing and implementing the capital structure policy, the trend of total debt and equity capital employed by the banks. It finally deals with the problems in terms of capital structure formation and its overall effects: a difficulty in implementing capital structure and the out comes after its implementation.

While analyzing the paper studies the behavior of the capital structure of the selected commercial banks. It includes financial data of five commercial banks from FY 2010/11 to 2014/15, to evaluate, compare and examine their capital structure. The main objectives of this paper are to:

i. Examine the trend of composition of capital structure.

ii. Analyze the relation between capital structure and cost of capital.

iii. Evaluate the aggregate liability bearing capacity of the selected organizations.

iv. Analyze the relationship of capital structure with variables such as earning per share, dividend per share and total assets.

2. REVIEW AND ANALYSIS

In this short article, it is not pertinent include various reviews, so the researcher will include only few of the reviews. The combination of a company's long-term debt, common equity, and preferred equity; the capital structure is the firm's various sources of funds used to finance its overall operations and growth. Debt comes in the form of bond issues or long-term notes payable, whereas equity is classified as common stock, preferred stock, or retained earnings.

Capital structure of the firm is the permanent financing represented by long term debt, preferred stock and shareholder's equity. Thus, a firm's capital structure is only part of its financial structure (Weston & Brigham, 1978:565).

Sound capital structure is required to operate business smoothly and achieve the business goal. Capital structure is concerned with analyzing the capital composition of the company (Weston & Brigham, 1981:480).The financial manager is concerned with determining the best financial mix or capital structure where the optimal financing mix would exist; in which market price per share could be maximized (Pandey, 1995:280).In order to compare the financial mix or capital structure of sample banks financial analysis, leverage analysis and correlation analysis have been made.

2.1 Financial Analysis

Financial statements of respective banks are analyzed by using various financial ratios. This analysis made and draws the meaning for conclusion and meets the target objective. To analyze the financial ratio research has inspired all respective information's from published materials like annual reports and online materials.

The researcher concludes the following financial ratios by the help of table and graphs.

i. Long Term Debt to Total Debt Ratio

Table 1. Long Term Debt to Total Debt Ratio

Fiscal Year	Long Term Debt to Total Debt Ratio				
	NIBL	**NABIL**	**HBL**	**EBL**	**SBI**
2010/11	1.97	0.56	1.18	0.70	0.46
2011/12	1.76	0.52	1.01	0.00	1.09
2012/13	1.21	0.45	1.97	0.77	1.31
2013/14	1.34	0.38	1.63	0.72	1.77
2014/15	1.64	0.28	0.79	1.16	1.86
Average	1.584	0.438	1.316	0.67	1.298

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.

Table 1 depicts, the long term debt to total debt ratio of selected bank. For 'NIBL', this ratio is 1.97, 1.76, 1.21, 1.34 and 1.64 in year 2010/11, 2011/12, 2012/13, 2013/14 and 2014/15 respectively. This represents NIBL is using vary low proportion of long term debt in total debt. Likewise NABIL is also using low proportion of this debt as 0.56in 2010/11. 0.56 in 2011/12, 0.45 in 2012/13, 0.38 in 2013/14 and 0.28 in 2014/15. Similarly, all other sample bank has low proportion of long term debt in total debt. In comparison to NIBL, NABIL, HBL, EBL and SBI's long term debt to total debt ratio NABIL bank has lowest average and NIBL has highest ratio. Other bank has moderate ratio. This conclusion is also shown on the following graph.
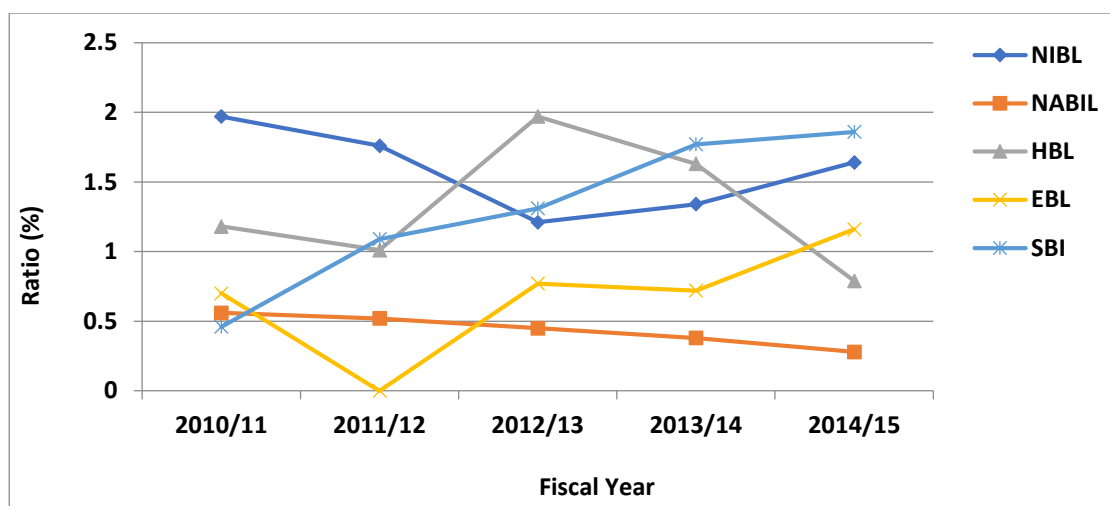
Figure 1. Long Term Debt to Total Debt Ratio

Figure 1 shows thelong term debt to total debt Ratio. X axis represents the fiscal year and Y axis represents long term debt to total debt ratio is shown. The curve shows that how the ratio fluctuates in years to years. It is noted that EBL bank's curve is tangent with X axis because it hasn't used long term debt in year 2011/12. That means long term debt to total debt ratio is nil in that year.

Table 2. Long Term Debt to Capital Employed Ratio

Fiscal Year	Long Term Debt to Capital Employed Ratio				
	NIBL	**NABIL**	**HBL**	**EBL**	**SBI**
2010/11	16.91	6.16	11.12	13.88	6.49
2011/12	14.79	5.22	9.74	00.00	15.80
2012/13	10.23	4.29	17.19	8.85	17.40
2013/14	11.70	3.78	15.31	7.91	18.06
2014/15	13.65	3.07	7.94	13.43	15.05
Average	13.456	4.504	12.26	8.814	14.56

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.

ii. Long Term Debt to Total Capital Ratio

Capital employed is the sum of fund available to common stock holders and long term debt. Capital employed ratio indicates that in total debt, how much the amount of capital employed includes. For NIBL, in year 2010/11 the long term debt to capital employed ratio is 16.91% that indicates the long term debt is equal to 16.91% in capital employed. This ratio is fluctuates in year from 2011 to 2015. In five year average this ratio is 13.456%. HBL has 11.12%, 9.74%, 17.19%, 15.31%, and 7.94% in fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. The average ratio of HBL is 12.26% this shows that long term debt is 12.26% of capital employed of Himalayan Bank Ltd. as other bank NABIL bank has lower ratio of long term debt on capital employed i.e. 6.16%, 5.22%, 4.29%, 3.78% and 3.07% in fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. In an average SBI has higher long term debt to capital employed ratio comparative to other sample banks. This ratio and the trend of long term debt to

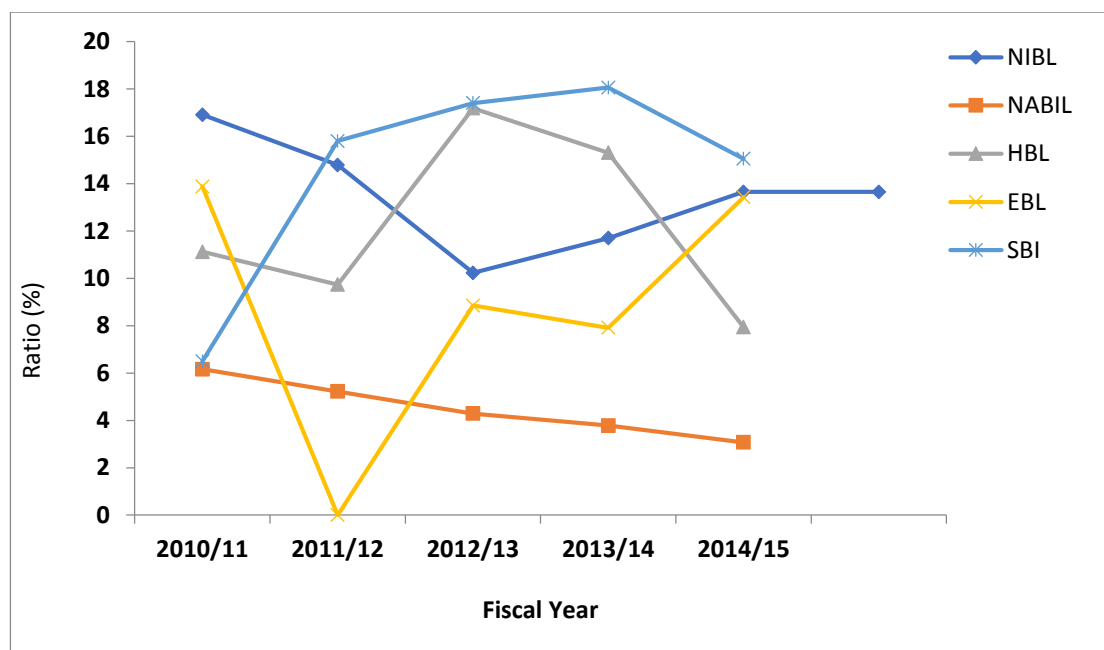capital employed can also be shown on the figure below.

Figure 2. Long Term Debt to Capital Employed Ratio

Figure 2 reveals the relation between long term debt and capital employed of selected banks. X axis represents the percentage of long term debt to total capital or capital employed and Y axis represents the fiscal year. The curve shows the increase and decrease in the ratio of long term debt to capital employed of sample banks in different years. NIBL has its downward sloping curve till fiscal year 2012/13 and which curve starts slightly increase 2012/13 onwards. In case of NABIL, this ratio has decreasing character. But in case of EBL, HBL and SBI it is fluctuating in nature.

iii. Debt to Total Assets Ratio

Table 3. Debt to Total Assets Ratio

Fiscal Year	Debt to Total Assets Ratio				
	NIBL	**NABIL**	**HBL**	**EBL**	**SBI**
2010/11	91.16	92.13	90.38	93.27	93.75
2011/12	90.80	91.39	91.48	92.52	94.49
2012/13	90.40	90.83	91.33	92.66	94.14
2013/14	90.80	91.24	91.73	92.25	92.57
2014/15	90.60	91.82	91.60	93.05	90.48
Average	90.752	91.482	91.304	92.75	93.086

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.

Total debt to total assets ratio indicates that what the proportion of total debt in total assets. It also shows the percentage of debt in total assets. It is not good higher debt to total assets ratio. In table no 4.3, NIBL have 91.16% in year 2010/11. That means this bank use 91.16% of total assets as total debt. It is 90.80%, 90.40%,

90.80%, and 90.60% in fiscal year 2011/12, 2012/13, 2013/14, and 2014/15 respectively. It has near about same ratios in all year. HBL have total debt to total assets ratio is 90.38 in year 2010/11 and 91.48%, 91.33%, 91.73%, and 91.60% in fiscal year 2011/12, 2012/13, 2013/14, and 2014/15 respectively. For SBI this ratio is 93.75% in 2010/11 and 94.49, 94.14, 92.57, and 90.48% in fiscal year 2011/12, 2012/13, 2013/14, and 2014/15 respectively. With comparison of NIBL, HBL, NABIL, EBL and SBI bank have similar ratio of debt to total assets. This is also shown on the figure.
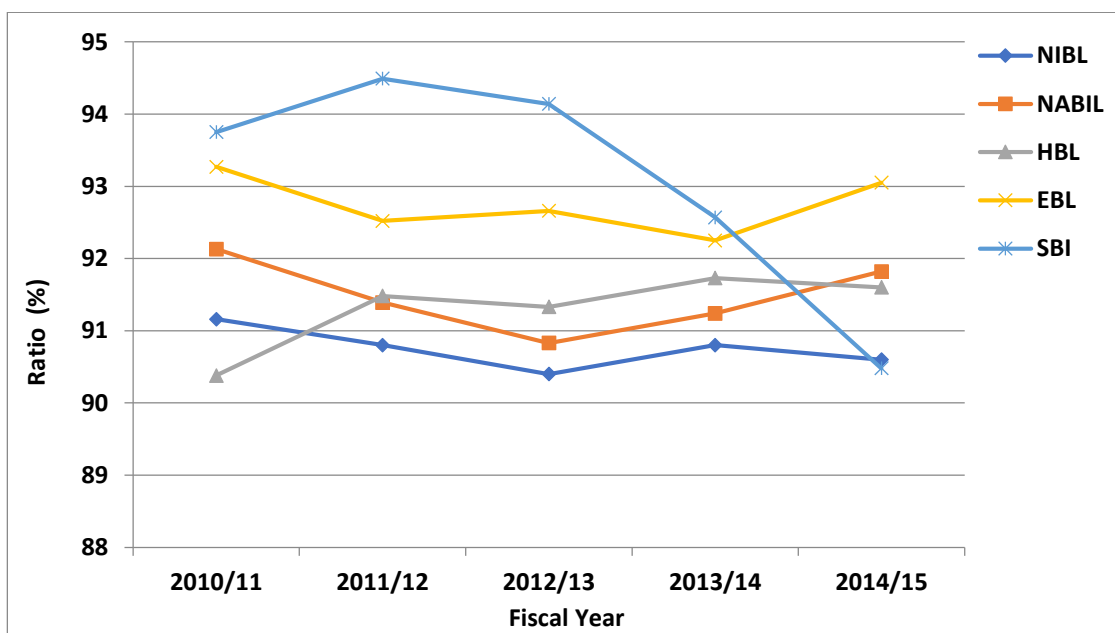

Figure 3. Debt to Total Assets Ratio

Figure 3 shows the relationship between long term debt and total assets. X axis represents fiscal year and Y axis represents the percentage of debt to total assets of the five sample banks. This figure describes the condition of debt to total assets. Looking this figure, the researcher draws the curve of this ratio. We can see that NIBL curve is downward sloping because its debt to total assets ratio is decreasing. In respect to SBI bank ltd. this curve is increasing in 2010/11 to 2011/12 and starts to decline till 2014/15. For all other sample bank this curve is fluctuating.

iv. Long Term Debt to Shareholder's Equity Ratio

Table 4. Long Term Debt to Shareholder's Equity Ratio

Fiscal Year	Long Term Debt to Shareholder's Equity Ratio				
	NIBL	**NABIL**	**HBL**	**EBL**	**SBI**
2010/11	20.35	6.56	12.51	9.64	6.95
2011/12	17.36	5.51	10.79	0.00	18.76
2012/13	11.39	4.48	20.76	9.71	21.06
2013/14	13.25	3.93	18.08	8.59	22.05
2014/15	15.81	3.16	8.62	15.51	17.71
Average	15.632	4.728	14.152	8.69	17.306

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.

Long term debt to shareholder's equity ratio represent how much of long term debt out of shareholder's equity. It indicates that total shareholder's equity and long term debts relationship. Table no. 4.4 shows the relationship of long term debt to shareholder's equity. NIBL has 20.35% ratio of long term debt to shareholder's equity in 2010/11 and this ratio is 17.36, 11.39, 13.25, and 15.81% in fiscal year 2011/12, 2012/13, 2013/14, and 2014/15 respectively. In context of HBL this ratio is 12.51 in fiscal year 2010/11 and 10.79, 20.76, 18.08, and 8.62% in fiscal year 2011/12, 2012/13, 2013/14, and 2014/15 respectively. And in case of EBL bank ltd. this ratio is o% in 2011/12 that means this bank is not using debt in its capital structure but this ratio fluctuates trend from in year 2011, 2013, 2014, and 2015. The ratio is 09.85, 09.58, 07.82, and 06.56% in fiscal year 2011/12, 2012/13, 2013/14, and 2014/15 respectively. On an average NABIL bank has lower of this ratio and SBI bank has higher ratio. This position is clearly seen in the figure.
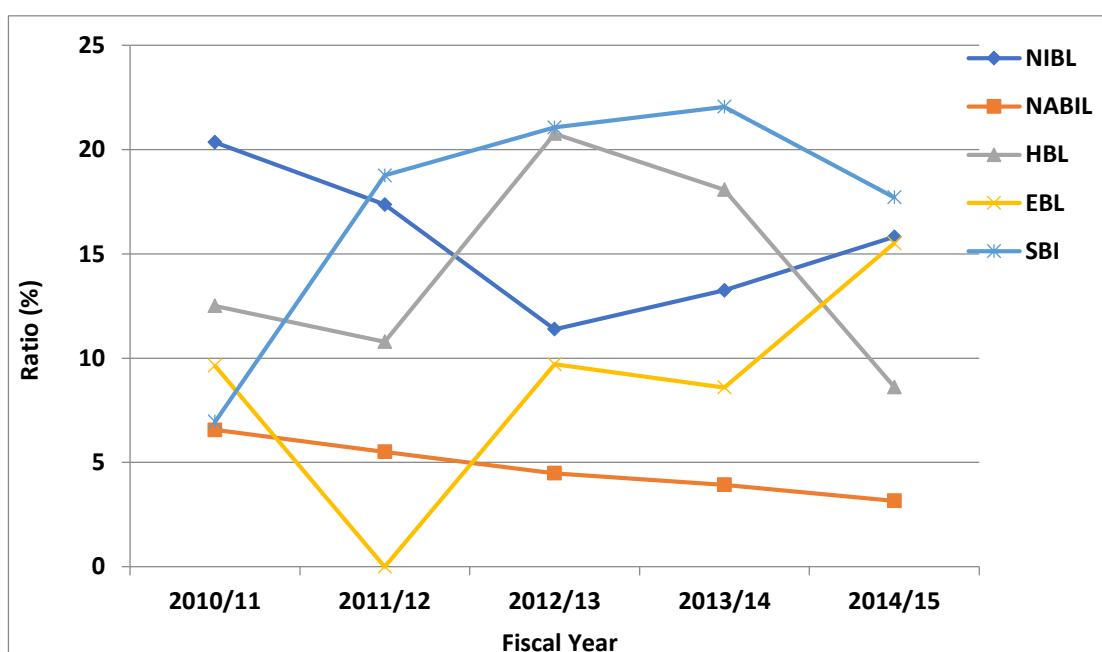

Figure 4. Long Term Debt to Shareholder's Equity Ratio

Figure 4 shows the relationship between long term debt and owner's equity is known as debt to equity ratio. X axis represents the fiscal year and Y axis represents the ratio of long term debt to shareholder's equity. The curve shows that how the long term debts to shareholder's ratio behave. That means this curve show the position of this ratio. NABIL's curve is in decreasing trend. That means NABIL is using long term debt in declining trend. It is clearly seen that SBI, NIBL and HBL has its high proportion of debt in shareholder's equity.

v. Interest Coverage Ratio

Table 5: Interest Coverage Ratio

Fiscal Year	Interest Coverage Ratio				
	NIBL	NABIL	HBL	EBL	SBI
2010/11	1.51	1.72	1.56	1.58	1.34
2011/12	1.43	1.84	1.54	1.60	1.27
2012/13	2.09	2.59	1.71	2.06	1.49
2013/14	2.08	2.87	1.79	2.08	1.65

2014/15	2.10	2.46	1.82	2.17	1.97
Average	1.842	2.296	1.684	1.898	1.544

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.

Table 5 shows NIBL has 1.51, 1.43, 2.09, 2.08 and 2.10 times interest coverage ratio in fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. Similarly NABIL has 1.72, 1.84, 2.59, 2.87 and 2.46 times in fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. For HBL bank ltd. this ratio is 1.56, 1.54, 1.71, 1.79 and 1.82 times in fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. For EBL this ratio is 1.58, 1.60, 2.06, 2.08 and 2.17 in fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. For SBI bank this ratio is 1.34, 1.27, 1.49, 1.65 and 1.97 times in fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. In average interest coverage ratio of NIBL has 1.842, NABIL has 2.296, HBL has 1.684, EBL has 1.898 and SBI has 1.544 times. Comparatively the interest coverage ratio of NABIL bank ltd. is higher than other four sample bank. This can also be seen on the figure.
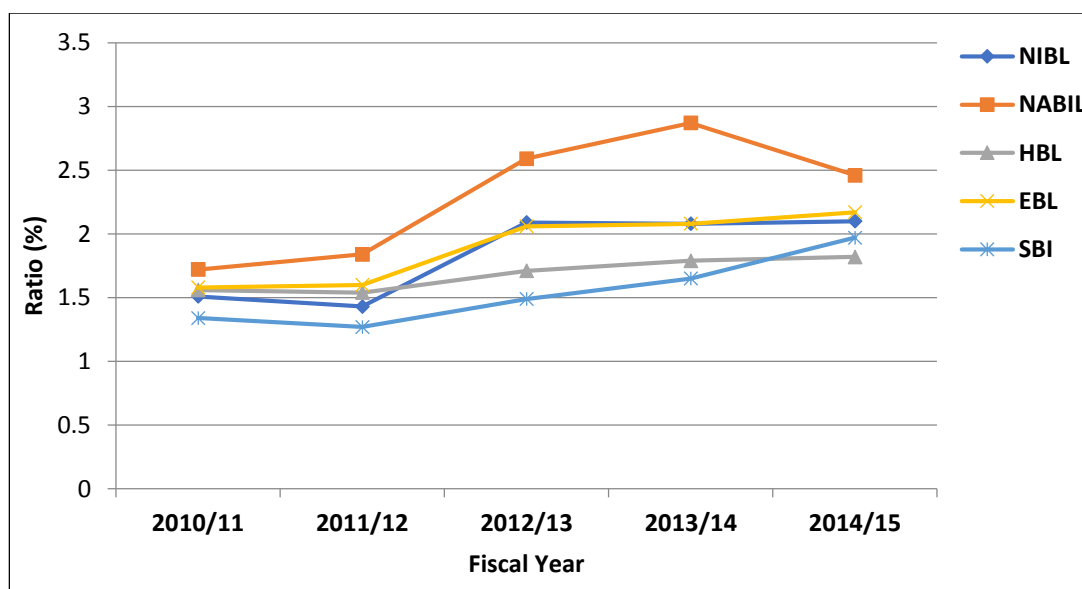

Figure 5. Interest Coverage Ratio

Figure 5 shows the interest coverage ratio graphically. In this figure X axis takes the fiscal year and Y axis takes the interest coverage ratio. Four curves NIBL, HBL, EBL and SBI are likely equal but NABIL have higher ratio curve, so which curve is above than other four.

vi. Return on Shareholder's Equity

Table 6. Return on Shareholder's Equity

Fiscal Year	Return on Shareholder's Equity				
	NIBL	NABIL	HBL	EBL	SBI
2010/11	22.80	29.40	22.35	29.91	16.13
2011/12	17.18	31.03	20.70	26.11	15.02
2012/13	27.28	33.17	17.81	30.47	20.31

2013/14	24.47	30.36	15.77	28.40	20.35
2014/15	20.00	22.07	15.98	22.85	18.87
Average	22.346	29.206	18.522	27.548	18.136

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.

The ratio represents that how much profit generated by shareholder's equity. That means how much percentages earn in respect to shareholder's equity. In table no 4.7 return on shareholder's position is shown. For NIBL return on shareholder's equity is 22.80% that indicates the net profit is 22.80% of shareholder's equity in fiscal year 2010/11. Same as this ratio is 17.18, 27.28, 24.47, and 20% in the fiscal year 2011/12, 2012/13, 2013/14, and 2014/15 respectively. NABIL also earn 29.40, 31.03, 33.17, 30.36 and 22.07% return on shareholder's equity in fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. Comparatively the NABIL bank's return on shareholder's equity is higher than other four sample banks. On an average return on shareholder's equity of NIBL, NABIL, HBL, EBL and SBI have 22.346, 29.206, 18.522, 27.548 and 18.136% respectively. The ratio is shown on the figure no 6.
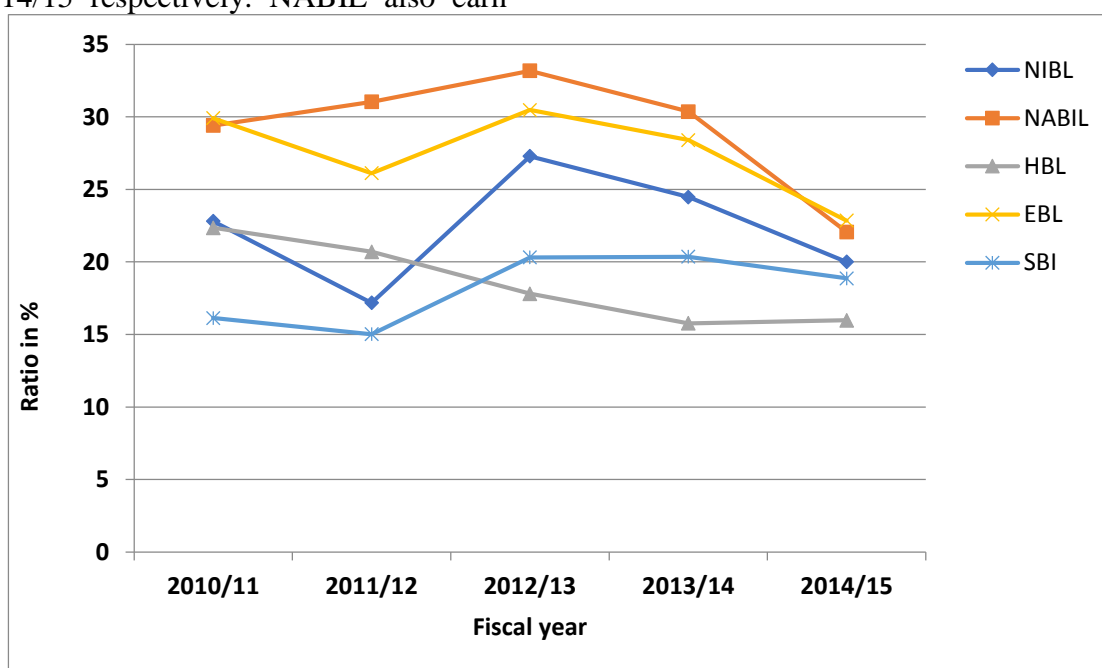

Figure 6. Return on Shareholder's Equity

Figure 6 the relation between the net profit after tax and shareholder's funds. X axis represents the fiscal year and Y axis represents the return on shareholder's ratio. HBL has this curve is in decreasing in nature while other sample banks have fluctuating in nature.

vii. Earnings per Share

Table 7. Earnings per Share

Fiscal Year	Earnings per share				
	NIBL	NABIL	HBL	EBL	SBI
2010/11	39.07	66.22	37.21	66.92	44.29
2011/12	27.60	69.36	34.73	61.92	46.29

2012/13	46.20	72.84	31.48	76.57	55.51
2013/14	40.67	63.43	28.78	72.50	50.83
2014/15	30.92	44.03	24.72	57.40	40.54
Average	36.892	63.176	31.384	67.062	47.492

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.

EPS indicates that how much one common stock share earns out of total profit. The higher EPS is recommended. In the table no 4.8, NIBL have Rs.39.07, 27.60, 46.20, 40.67 and 30.92 in fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. HBL have Rs. 37.21, 34.73, 31.48, 28.78 and 24.72 in fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. With comparison mean data EBL has highest earning per share i.e. 67.062.
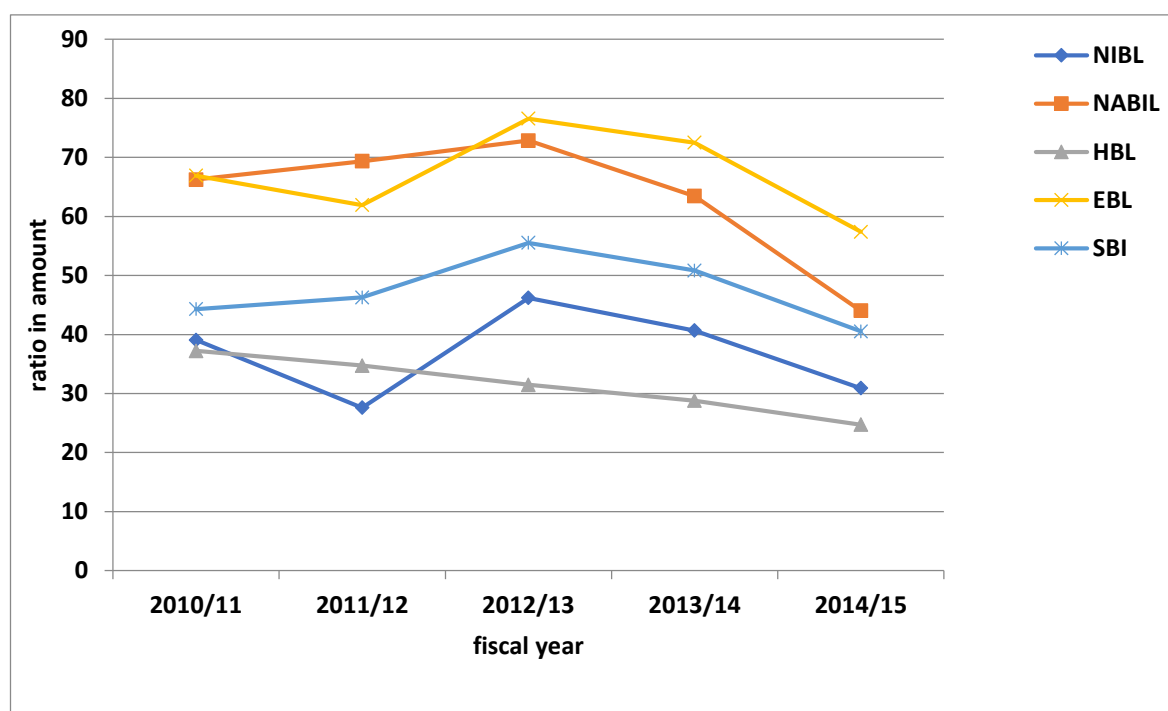

Figure 7. Earnings per Share

Figure 7 shows the earning per share of sample bank graphically. X axis represents fiscal year and Y axis represents the earning per share. The figure represents that which banks have higher and which bank is lower ratio. If the curve is upward this represents ratio is higher and if the curve is downward the ratio is lower. From the figure it is clearly seen that NABIL and EBL bank's ratio is higher than HBL NIBL and SBI.

2.2 Leverage Analysis
i. Financial Leverage

Table 8. Financial Leverage

Fiscal Year	Financial Leverage				
	NIBL	**NABIL**	**HBL**	**EBL**	**SBI**
2010/11	2.96	2.40	2.77	2.74	3.92
2011/12	3.33	2.19	2.84	2.68	4.67
2012/13	1.92	1.63	2.40	1.94	3.04
2013/14	1.93	1.53	2.26	1.93	2.55

| 2014/15 | 1.91 | 1.68 | 2.22 | 1.86 | 2.04 |
| Average | 2.41 | 1.886 | 2.498 | 2.23 | 3.244 |

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.

This ratio shows the relationship between EBT and EBIT and on the other hand it shows the effect on EPS due to change in EBIT. NIBL have 2.96 times financial leverage. That means when EBIT increases by 1% EPS will increases by 2.96 times. Also DFL is 3.33, 1.92, 1.93, and 1.91 times in the fiscal year 2011/12, 2012/13, 2013/14, and 2014/15 respectively. Similarly the NABIL degree of financial leverage is 2.40, 2.19, 1.63, 1.53 and 1.68 in the fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. NABIL average degree of financial leverage is 1.886 times this means if the bank's EBIT increases by 1% EPS will also increases by 1.886 times.

HBL bank has 2.77, 2.84, 2.40, 2.26 and 2.22 times of degree of financial leverage in the fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 20104/15 respectively. Its average financial leverage is 2.489 times. EBL bank has 2.74, 2.68, 1.94, 1.93 and 1.86 in the fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 20104/15 respectively. Similarly, SBI bank has 3.92, 4.67, 3.04, 2.55 and 2.04 in the fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 20104/15 respectively. Comparatively in five years average SBI bank has high degree of financial leverage and NABIL bank has low degree of financial leverage. This fact can be shown on the graph as well.
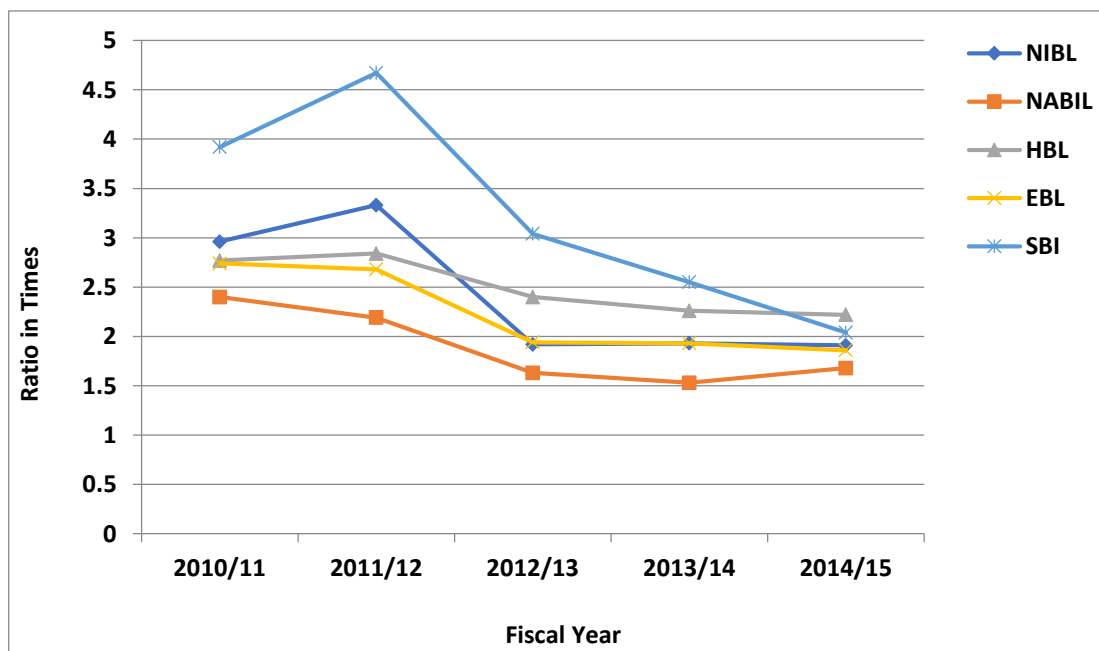

Figure 8. Financial Leverage

Figure 8 shows the position of degree of financial leverage for different selected banks in different years. HBL and SBI have higher DFL. That indicates the bank have higher effect on interest expenses and financial risk. Other five sample banks have lower DFL in comparison to other two sample bank that means these banks have lower financial risk as well as interest risk.

ii. Overall Capitalization Rate

Table 9. Overall Capitalization Rate

Fiscal Year	Overall Capitalization Rate				
	NIBL	**NABIL**	**HBL**	**EBL**	**SBI**
2010/11	2.60	2.65	1.81	2.43	1.02
2011/12	1.72	2.91	1.56	2.20	0.85
2012/13	2.18	2.84	1.49	2.52	1.14
2013/14	2.33	2.06	0.99	1.93	0.99
2014/15	1.83	1.64	0.60	1.50	1.20
Average	2.132	2.42	1.29	2.116	1.04

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.

Table 9 shows that the position of overall capitalization rate for different banks from 2010/11 to 2010/11 and average as well. For NIBL this cost is 2.60, 1.72, 2.18, 2.33 and 1.83% in the fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. Like NIBL, NABIL has overall capitalization rate as 2.65, 2.91, 2.84, 2.06 and 1.64% in the fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. This is higher than NIBL on an average as well. Similarly, HBL has 1.81, 1.56, 1.49, 0.99 and 0.60% overall capitalization in the fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. On an average this ratio is lower in comparison to other sample banks. Similarly, in evaluation SBI bank and EBL has moderate capitalization rate. NABIL bank has higher capitalization rate than other five sample banks. This fact can also be seen in the graph.
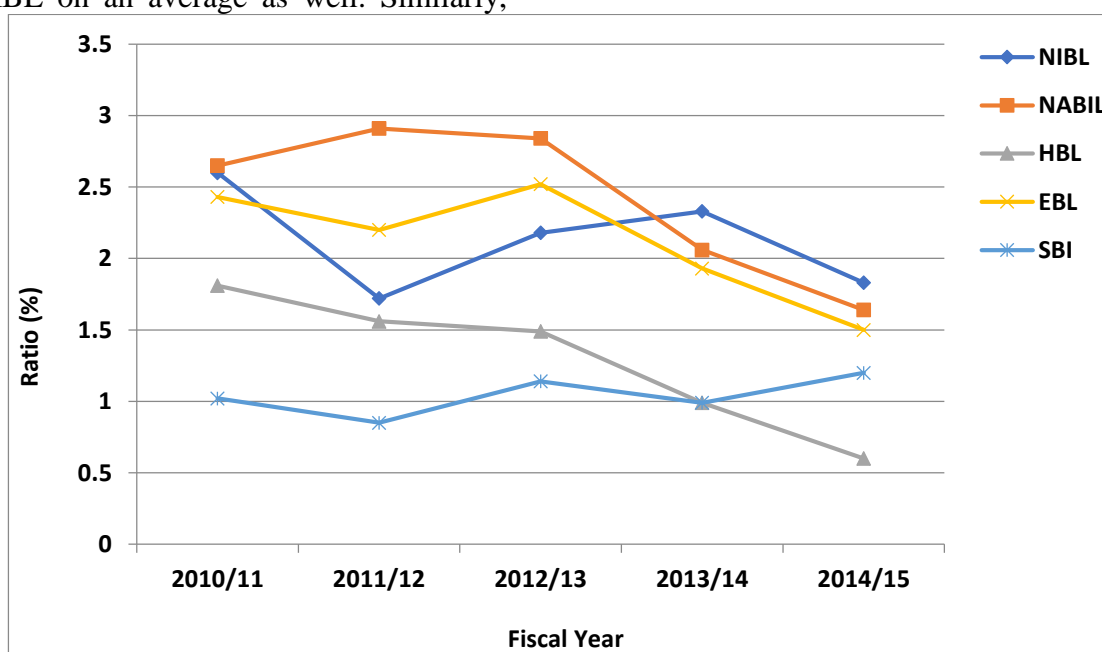

Figure 9. Overall Capitalization Rate

Figure 9 shows the overall capitalization rate of sample banks graphically. X axis represents the fiscal year and Y axis represents the cost of overall capitalization rate. All five sample banks curves are fluctuating in nature. But in each year NABIL's curve is higher that means this banks overall capitalization rate is higher than other four sample banks. Lower cost is acceptable for any organization.

iii. Cost of Equity

Table 10. Cost of Equity

Fiscal Year	Cost of Equity				
	NIBL	**NABIL**	**HBL**	**EBL**	**SBI**
2010/11	7.59	5.29	6.47	6.12	3.91
2011/12	5.40	5.12	5.32	5.99	3.21
2012/13	5.89	4.01	4.50	4.81	3.42
2013/14	4.24	2.50	3.06	2.76	2.36
2014/15	4.39	2.31	3.04	2.71	3.09
Average	5.502	3.846	4.478	4.478	3.198

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.
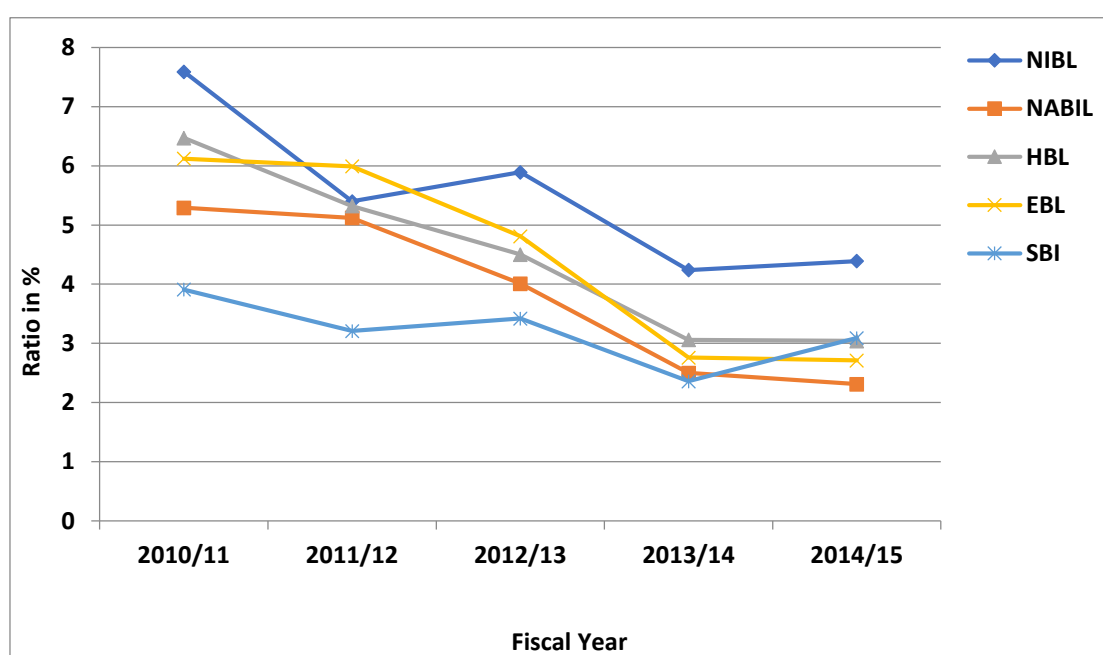

Figure 10. Cost of Equity

Table 10 shows the cost of equity of sample banks and also the five years' average cost of equity. It shows the position of cost of equity of five commercial banks. This cost is measure in percentage basis. The cost of equity of NIBL is 7.59, 5.40, 5.89, 4.24 and 4.39% in the fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. This bank's average cost of equity is 5.502 highest cost of equity among the five banks. For HBL this cost is 6.47, 5.32, 4.50, 3.06 and 3.04% in the fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. This bank's average cost of equity is 4.478 in comparison this is the modest among five banks. Similarly, the cost of equity of NABIL is 5.29, 5.12, 4.01, 2.50 and 2.31% in the fiscal year 2010/11, 2011/12, 2012/13, 2013/14, and 2014/15 respectively. And this bank's average cost of equity is 3.846%. EBL has average 4.478 which is equal to HBL average. SBI bank has lowest cost of equity among five sample banks. This fact can be seen in the graph as well.

Figure 10 shows the cost of equity graphically. X axis represents the fiscal year and Y axis represents the cost of equity in percentage. All the five curves are in decreasing trend till 2014/15 and then these curves took the downward slopping trend this means cost of equity of all banks is decreasing.

i. Correlation, Standard Deviation, and PE between Debt and Equity

Table 11. Correlation, Standard Deviation, and PE between Debt and Equity

Fiscal Year	NIBL		NABIL		HBL		EBL		SBI	
	Debt	**Equity**	**Debt**	**Equity**	**Debt**	**Equity**	**Debt**	**Equity**	**Debt**	**Equity**
2010/11	1050.00	5159.76	300.00	4572.06	500.00	3995.48	300.00	3113.55	200.00	2879.29
2011/12	1050.00	6049.94	300.00	5444.00	500.00	4632.01	-	4177.30	600.00	3197.46
2012/13	800.00	7020.64	300.00	6689.15	1100.00	5299.71	468.85	4827.85	800.00	3798.96
2013/14	1050.00	7925.48	300.00	7640.99	1100.00	6083.41	468.85	5457.15	1000.00	4535.80
2014/15	1550.00	9806.95	300.00	9485.59	600.00	6958.90	1068.85	6890.38	1000.00	5645.92
S.D.	273.86	1791.62	0	1918.90	313.05	1169.36	389.89	1413.39	334.66	1110.85
Correlation	0.688		0		0.351		0.897		0.857	
PE	0.159		0.302		0.264		0.059		0.080	
6PE	0.954		1.812		1.584		0.354		0.48	

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.

Index of correlation for NIBL shows the relationship of 0.688, which gives the meaning that if some up and down trend occurred in equity than only 0.688 percent changes would be reflected by debt and vice versa. Other remaining effect would be caused by other variables. So, movements of equities are directly related with the movement of debts in positive manner. So, if equity of NIBL is increased than it would definitely cause to increase in debt also. Similarly, looking at the index of NABIL found to be zero that means if equity is up and down some occurred movement by equity than debt would not changes. In case of HBL correlation between debt and equity is 0.351 that means if equity of HBL changes by 1 percentage than debt will change by 0.351 percentage. EBL's debt equity correlation is 0.897 that means if equity of HBL changes by 1 percentage than debt will change by 0.897 percentage. And similarly for SBI, correlation is 0.857 that means if equity of HBL changes by 1 percentage than debt will change by 0.857 percentage. There is positive correlation of debt and equity of all five sample banks. The correlation of NIBL, NABIL and HBL debt and equity is not significant because these correlations are less than 6PE. Whereas, EBL and SBI bank's correlation between debt and equity is significant since it has higher correlation than 6PE.

ii. **Correlation, Standard Deviation and Probable Error between Debt and Total Assets**

Table 12. Correlation, Standard Deviation, and PE between Debt and Total Assets

Fiscal Year	NIBL		NABIL		HBL		EBL		SBI	
	Debt	Total Assets	Debt	Total Assets	Debt	Total Assets	Debt	Total Assets	Debt	Total Assets
2010/11	1050	58356.83	300	58099.62	500	46736.20	300.00	46236.21	200.00	46088.2
2011/12	1050	65756.23	300	63193.41	500	54364.43	-	55813.13	600.00	58059.7
2012/13	800	73152.16	300	73241.26	1100	61152.97	468.85	65741.15	800.00	64796.2
2013/14	1050	86173.93	300	87274.55	1100	73589.85	468.85	70445.08	1000.0	61073.3
2014/15	1550	104345.4	300	115985.7	600	82801.55	1068.8	99152.81	1000.0	59277.3
S.D.	273.8	18160.25	0	23209.29	313.05	14526.57	389.89	20014.97	334.66	7054.4
Correlation	0.729		0		0.345		0.964		0.842	
PE	0.141		0.302		0.266		0.021		0.088	
6PE	0.846		1.812		1.596		0.126		0.528	

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta.

The correlation is significant between debt and total assets of all five sample banks. NIBL has a correlation of 0.729 that means if some up and down in NIBL's total assets the debt will changed by 0.729% and other effects made by other variables. Same as NABIL has zero correlation that means if total assets of HBL change the debt position of this bank will not affected. HBL bank has also positive correlation of 0.345 that means if HBL bank assets position changes by some the debt position of this bank also change by 0.345%. Similarly, EBL has a correlation of 0.964 that means if some up and down in EBL's total assets the debt will changed by 0.964% and other effects made by other variables. And SBI bank correlation is 0.842 that means if SBI bank assets position changes by some the debt position of this bank also change by 0.842%. The correlation of NIBL, NABIL and HBL debt and total assets is not significant because these correlations are less than 6PE. Whereas, EBL and SBI bank's correlation between debt and total assets is significant since it has higher correlation than 6PE.

iii. **Correlation, Standard Deviation, and Probable Error Between Profit and Debt to Equity Ratio**

Table 13.Correlation, Standard Deviation, and PE between Profit and debt to Equity Ratio

Fiscal Year	NIBL		NABIL		HBL		EBL		SBI	
	Profit	Debt / equity	Profit	Debt/ equity	profit	Debt/ equity	profit	Debt/ equity	profit	Debt/ equity
201	117	20.	1,3	6.5	89	12.5	931	9.64	464	6.9
201	103	17.	168	5.5	95	10.7	109	-	480	18.
201	191	11.	221	4.4	94	20.7	147	9.71	771	21.
201	193	13.	231	3.9	95	18.0	154	8.59	922	22.
201	196	15.	209	3.1	11	8.62	157	15.51	106	17.
S.D	457	3.5	407	1.3	82.	5.	293	5.57	266	6.0

Correl	-0.788	-0.875	-0.501	0.336	0.558
PE	0.114	0.071	0.226	0.268	0.208
6P	0.686	0.424	1.356	1.606	1.246

Note. Retrieved from "Capital Structure of Commercial Bank: A Comparative Analysis" D. Umakanta

The correlation between profit and debt/equity ratio is negative for the three sample bank. For NIBL this correlation is -0.788 that indicates there is negative relation between those variables. If one is going up another is going down. HBL has also negative correlation of -0.501 that means if one variable goes up another will down. This case is same for the NABIL bank as well. NABIL has negative correlation of -0.875 that means if one variable increases another variable decreases. On the other hand, EBL and SBI bank's correlation is positive. The correlation of the entire five bank's profit and debt/equity ratio is not significant because these correlations are less than 6PE.

3. CONCLUSION

From the above analysis it is found that the amount of total debt or debt capital is increasing trend over the study period for all the selected commercial banks. The study concluded that there is positive correlation between two variables. Similarly, equity capital is also moving in the same direction of raising tendency over the study period. Looking individually all bank's equity capital is in the increasing trend. The long-term debt to total debt of NIBL is found to be higher and NABIL is found to be lower. And HBL, EBL and SBI bank's long-term debt to total debt ratio is average in comparison with other two sample banks. Return on total shareholder's equity of NABIL bank Ltd. Is higher than other five banks. SBI has lower return on total shareholder's equity. And EBL, HBL and NIBL has the average ratio among five banks over the study period.

Long term debt to total debt ratio of entire five banks is fluctuating. In an average NIBL has 1.584% long term debt to total debt ratio, which means that about 98.416% of the total debt is contributed by current liabilities. Similarly, NABIL has the average ratio of 0.438%, HBL has 1.316%, EBL 0.67% and SBI bank has 1.298%. That means most of the debts are raised from current liabilities or short-term debt.

Long term debt to capital employed ratio highlights the portion of fund financed by long term debt in the capital employed by the firm. Entire five banks have different long-term debt to capital employed ratio. Debt to total assets ratio presents the relationship between outsiders' fund and total assets. The debt ratio or debt to total assets ratio of NIBL is 90.752% in an average, which means this bank uses most of the debt and nominal portion of equity is used. Same as NABIL has 91.482%, HBL has 91.304%, EBL has 92.75% and SBI bank has 93.086% debt to total assets ratio.

Interest coverage ratio shows how many times the interest charges are covered by EBIT out of which they will be paid. The conclusion drawn by the study is the average interest coverage ratio of NIBL is 1.842 times, NABIL has 2.296 times, HBL has 1.684 times, EBL has 1.898 times and SBI bank has 1.544 times. This shows that all banks are able to cover the interest but as the higher interest coverage ratio is better, NABIL bank seems to have higher coverage ratio than others.

The average return on shareholder's equity of NIBL has 22.346%, NABIL has 29.206%, HBL has 18.522%, EBL has

27.548% and SBI bank has 18.136%. If the return on shareholder's equity is higher the position of the firm is better. It seems that NABIL bank ltd. has the better return among sample banks.

Net income approach is the dependent hypothesis of capital structure, which states with the increased use of leverage, overall cost of capital declines and the total value of the firm rise. The average value of NABIL is higher than other bank. And SBI has the lower market value. The overall capitalization rate of NIBL is 2.132, NABIL is 2.42, HBL is 1.29, EBL is 2.116 and SBI bank is 1.04. The least ratio of overall cost of capital is preferable.

Net operating is the independent hypothesis of the capital structure decision of the firm. According to this hypothesis, any change in the leverage will not lead to any change in the total value of the firm and market price of the share, as the overall cost of capital is independent of the degree of leverage. From the position of average cost of equity, researcher can conclude that NIBL has higher cost of equity in average i.e. 5.502% and SBI has lower cost of equity in an average i.e. 3.198%. NABIL has 3.846%, HBL has 4.478% and EBL has 4.478%.

When the company employs debt or other fund carrying fixed charges in the capital structure, financial leverage exists. From the calculation, we can conclude that NIBL is using high long term debt and so bearing the highest risk among other banks. But it can also be concluded it is taking corrective actions to decrease its risk since the trend constant. NABIL is using same level of long term debt throughout the study period which is lower as well. Since, it has low level of financial risk. HBL, EBL and SBI has moderate financial risk since, these bank are using moderate level of long term debt in comparison to NIBL and NABIL.

From the analysis, the correlation coefficient are positive and PE are less than the correlation coefficient which conclude that the total debt and shareholder's equity deviate in the same direction and relationship between profit and debt to equity ratio is insignificant because its correlation coefficient is less than 6PE. In the case of long term debt and total assets, the correlation coefficient of all banks is positive.

[1]**ABBREVIATIONS:**
Nepal Investment Bank Limited (NIBL)
Nabil Bank Limited (NABIL)
Himalayan Bank Limited (HBL)
Everest Bank Limited (EBL)
Nepal SBI Bank Limited (SBI)

REFRENCES

1. Bhandari, K. P. (2060). *Research Methodology*. Kathmandu: M.K. Publishers and Distributors.

2. Brigham, E. F., & Houston, J. F. (2010).*Fundamental of Financial Management*. New Delhi: Cengage Learning India Private Limited.

3. Dahal, S. P. (2059).*Research Methodology*. Kathmandu: M. K. Publishers and Distributors.

4. Gautam, R. R., &Thapa, K. (2062).*Capital Structure Management*. Kathmandu: Asmita Books and Stationary..

5. Joshua, A. (2005). The effect of Capital Structure on Profitability.*The Journal of Risk Finance,* 438 – 445.

6. Maharjan, S. (2010). Capital structure and cost of capital in the context of Nepalese joint venture banks. Unpublished thesis, Shankar Dev Campus, Kathmandu.

7. Dhungel, U. (2015). Capital Structure of Commercial Banks of Nepal. Unpublished Master's thesis, Shankar Dev Campus, Kathmandu.

8. Modigliani, F., & Miller M. H. (1958, June).The Cost of Capital, Corporation Finance and the Theory of

Investment.*American Economic Review,* XLVIII, 261 – 297.

9. Pokhrel, R. (2011). A comparative analysis of capital structure of commercial banks.Unpublished Master's thesis, Shankar Dev Campus, Kathmandu.

10. Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2008).*Fundamentals of Corporate Finance.* New Delhi: Tata McGraw – Hill.