CAPITAL STRUCTURE AND PROFITABILITY OF MANUFACTURING AND HYDRO COMPANIES IN NEPAL

A Dissertation proposal submitted to the office of the Dean, Faculty of management in partial fulfilment of the requirements for the Master's Degree

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1. Background of the study

Capital structure is the composition of long term funds. Major components of capital structure are debt capital and equity capital. It is a part of financing decision of a firm. The capital structure plays an important role in the success of business entity. Capital Structure decision is crucial for any business organization as it plays important role in maximizing firm value and performance of a firm. Capital structure decision has also impact on the firm's ability to deal with competitive advantage. Every firm have their own capital structure design because they differ in financing decision and taking capital structure decision is tough work too as sometimes using higher level of debt is beneficial and sometimes higher equity is beneficial. Hence it should be design in a proper manner so that the cost is minimized and value of the firm is maximized.

Capital structure is one of the most complex areas of financial decision making due to its interrelationship with other financial decisions variables. Profitability is the main component in the financial decision. Because the whole aspects of capital investment decision, capital structure decision is the vital one, since the profitability of an enterprise is directly affected by such decision. Hence, proper care and attention need to be given while making the capital structure decision.

Investing and funding are two main decision areas in the company. The process in which the firm is funded by a mixture of debt and equity is called capital structure decision. When firm take the funding decision, the directors are interested in choosing the best capital structure for their company's i.e. optimal capital structure. Leverage decisions are also one of the important decisions and it is undertaken by the company administrative. Capitalization, leverage ratio, capital structure and financial structure all of them have the identical concept and are related with which kind of sources and amount of money that the firm has hired to construct them and buy assets (Barges, 2009).

The capital structure is defined as the mix of debt and equity that the firm uses in its operation. The capital structure of a firm is a mixture of different securities. Capital structure is the way in which a firm finances its operations which can either, be through debt or equity capital or a combination of both (Brigham and Gapenski, 2004). The term capital denotes the proportion of debt and equity in a company's balance sheet. It is usually difficult for business firms to identify the right

combination of debt and equity. A firm can choose among many alternative capital structures. It can choose to either issue a large amount of debt or very little debt. It can arrange lease financing, use warrants, issue convertible bonds, sign forward contracts or trade bond swaps. It can issue many distinct securities in countless combinations; however, it attempts to find the particular combination that maximizes its overall market value (Brigham and Gapenski, 2004).

Optimum Capital Structure is that structure where overall cost of capital is minimum and value of the firm is maximum. It is the best debt to equity ratio that maximizes the firm's value. It offers a balance between the ideal debt to equity range and minimize the firms cost of capital. This structure seeks to lower the cost of capital so that firm is less dependent on creditors and more able to finance its core operation. Weighted average cost of capital has to be calculated to determine the level of risk that makes the expected return on capital greater than the cost of capital (Bhattarai, 2017).

The term capital structure refers to the proportion of debt and equity capital, which has an important place in the theory of financial management. The financing decision of a firm relates to the choice of proportion of debt and equity to finance the investment requirement, of which a proper balance is necessary to ensure a trade-off between risk and return to the shareholders. An optimal capital structure, which consists of reasonable proportion of debt & equity, can help to maximize the value of the firm and ultimately maximizing the shareholders wealth (Wippern, 1996).

Hydropower projects in Nepal have been deemed to be expensive primarily because of the fact that cost of access roads and power evacuation transmission lines are added on to the hydropower projects cost. As we all know, most of the better hydropower projects sites are in remote mountainous locations requiring construction of access roads prior to projects construction. This along with the high voltage power evacuation system renders power from these projects comparatively expensive. This can lead to hydropower projects losing their competitive advantage with respect to other sources in the energy market.

At Nepal stock exchange, there are nineteen manufacturing and forty hydro companies are listed. All the companies are not regularly traded in market.

2. Problem statement

To minimize risk for a given level of return and to maximize return for a given level of risk, company have to manage their optimum capital structure. Capital structure concept is not taken seriously by the Nepalese Companies. Therefore, optimal capital structure does not exist at all. Among the listed companies in the stock exchange very few are using the debt capital and contrary to this some of the companies are ruined by the excess burden of the cost of debt capital. Generally every company has its own policy in determining capital structure for operating business activities. Some of the business use only equity capital, some use only debt capital and some combine both equity and debt capital. Therefore determination of capital structure largely depends upon the company policy and cost of capital. Most of the companies make low cost capital structures. Unfortunately, there is no model for determining capital structure in the Nepalese business organization. In the initial period of any company, they want to use only equity capital and do not want to include debt in their capital due to high interest charges.

Nepalese manufacturing company are not performing well. Many large company have been closed and some are about to close. Almost companies are able to earn profit but the margin of profit is very low. This sector has uneven growth over the years due to the longstanding weakness in the adoption of new technology, poor infrastructure, and shortage of power, stalled political process, difficult trading condition, covid, global competition and global economic downturn. Moreover manufacturing establishment in Nepal is primarily labour intensive and local raw material based (Lamichhane, 2019).

Many studies have been carried out in this topic in developed countries where economic conditions are stable. But in case of developing economy like Nepal where business environment is not stable there is frequent change in government policy, inflation rate is high, currency exchange rate is high, where company has to taxes on its revenue, the theory of MM approach may not hold true. So this study is carried out to find out whether the capital structure of the company affects the performance of the company.

Therefore, in order to achieve the above stated objective the research is sought to answer the following question;

i. What is the current status of capital structure of listed related manufacturing companies in Nepal?
ii. What is the profitability of manufacturing and hydro companies in Nepal?
iii. What is the relationship between capital structure and profitability?

3. Objectives of the study

The main objective of this study is to assess the impact of capital structure on the profitability of the manufacturing industries in Nepal. Furthermore the study aims to achieve the following specific objectives:

i. To analyse the current status of capital structure of listed related manufacturing and hydro companies in Nepal.
ii. To analyse the profitability of manufacturing and hydro companies in Nepal.
iii. To examine the relationship between capital structures and the firms' profitability.

4. Research framework

Independent variables Dependent variables

Source: Kajananthan and Nimalthasan (2013)

5. Rationale of the study

The manufacturing and hydro sector of Nepal is expanding day by day. In Nepal, there are very little amount of researches and studies to go through regarding capital structure and its influence on firm's performance in case of manufacturing and hydro companies. It is important for the financial managers to make decisions regarding the investment or application or recruitment of the capital fund of or for the company as it determines the capital structure of the company. Capital structure is one of the

important aspects of the company since it affects the company's profitability and determines the survival of the company in a long run.

By analysing the capital structure of a company, it helps to find out strength & weakness of the company and helps to drive the firm into right track. These are different stakeholders in the company having their own interest and desires, where the main responsibility of a firm is to keep them satisfactory. It is possible only through the sound capital structure in the company. The importance of this study is to find out the factors related to capital structure management and helps to financial manager as a guideline. This study also importance for those who are interested on Investment as well as owners, creditors and shareholders to make their good attitude.

6. Limitation of the study

The study is carried out using few number of manufacturing companies listed in Nepal stock exchange because a complete coverage of all manufacturing firms is not possible due to time and financial constraint.

i. The sample has taken only from listed manufacturing and hydro companies in Nepal.
ii. There are total fifty nine manufacturing and hydro companies listed on NEPSE out of which five manufacturing and five hydro companies are selected.
iii. The study covers only the latest five fiscal years from 2072 to 2076.
iv. This study concentrates on relationship between capital structure and profitability of five manufacturing and five hydro power companies.
v. This study is based on secondary data. Thus the result of the analysis depends on accuracy of available information.

7. Literature review

In this chapter, review of various literatures has been done to clarify the concept of the topic as well as to examine the previous studies made by various researchers in the field of capital structure.

This chapter is divided into two sections where on section covered definition of key concept and clarification of theories related with the study topic called theoretical literature review while the other section covered the idea of other researcher presented

in their research report, journal and books related to this study called empirical literature review.

Kajananthan and Nimalthasan (2013), this paper examine the relation between capital structure and firm performance. The main objective of this study is to examine the relationship between “capital structure and firm performance” with the sample of 25 manufacturing companies using the date representing the period of 2008-2012. Gross profit, net profit, return on equity and return on assets, were used as the measures of firm performance whereas debt equity ratio, debt assets ratio were used as the measure of capital structure. The statistical tests were used includes: descriptive statistics, correlation, and regression analysis. The result shows that gross profit, net profit, return on equity, return on assets are not significantly correlated with debt equity ratio and gross profit margin and return on equity are significantly correlated with debt equity ratio and gross profit margin and return on equity are significantly correlated with debt assets ratio as the measure of capital structure and capital structure has significant impact on gross profit and return on equity. The study only use a data from 2008-2012 annual reports. However, the findings have highlighted the effect of the firm performance and capital structure. The study contributes to literature in Sir Lanka. Furthermore, the finding of the paper can be considered as helpful for managers and users that are anxious to develop financial description quality and practise of capital structure.

Raman, Sharker & Uddinj (2019), this research explores the impact of capital structure on the profitability of publicly traded manufacturing firms in Bangladesh. In this paper, we applied the fixed effect regression to find out the correlation among independent variables (debt ratio, equity ratio and debt to equity ratio) and dependent variables (return on asset, return on equity and earnings per share). A sample of 50 observations of selected 10 manufacturing companies listed in Dhaka Stock Exchange has been analysed over the period of 2013 to 2017. This research reveals that the debt ratio and equity ratio have a significant positive impact but debt to equity ratio has a significant negative impact on ROA. This paper also exposes that, equity ratio has a significant positive impact but debt to equity ratio has a significant negative impact on ROE. Finally, debt and equity ratio has a significant negative impact on EPS.

Findings of this research will help the listed manufacturing companies to maintain an optimum capital structure which will lead to the maximization of stockholders wealth.

Kalyani & Mathur (2017), Relationship between capital structure and profitability is an important matter of discussion as regular improvement in profitability is important for growth and survival of firm. An attempt has been made in this paper to find out impact of capital structure on overall profitability of a firm. The Corporate financial performance, which is represented by dependent variables ROA (Return on Assets) and Net Profit Ratio, is taken into consideration and the effect of independent variables which are Sales of a firm, Total Assets of a firm, Debt Service Capacity, Dividend Pay-Outs, Degree of Financial Leverage, Degree of Operating Leverage of the firms belonging to the Oil and Natural Gas Industry of India were chosen for study. A sample of seven firms listed in NSE and BSE were selected and the financial data of these companies during the period 2005 and 2015 is used for this study. The Judgement Sampling which is non-random sampling technique is chosen for sample selection in this study. The correlations and regression analyses were used to estimate the functions relating to profitability measured by Return on Assets and Net Profit Ratio with measures of capital structure. The study witness that Log sales, degree of operating leverage and growth of asset are significant variables in determining the profitability when dependent variables are ROA and log assets, degree of financial leverage, Log sales, degree of operating leverage and growth of asset have significant relationship with net profit ratio of the select firms from Oil and Natural Gas Industry of India.

Adesina et.al (2015), studied found that capital structure has been found to have impact on firm's performance. Bank consolidation in Nigeria has increased bank equity capital against debt. This study aims to determine the impact of post consolidation capital structure on the financial performance of Nigerian quoted banks. The study used profit before tax as a dependent variable and two capital structure variable i.e. equity and debt as independent variables. The sample for the study consists of ten Nigerian banks quoted on the Nigerian stock exchange. The required data and information for the study were gathered from the published annual reports. Ordinary least square regression analysis of secondary data shows that capital structure has a significant positive relationship with the financial performance of 33

Nigerian banks. The researcher suggests that the management of quoted banks in Nigeria consistently use debt and equity capital in financing to improve earnings.

8. Research gap

Many researchers who tested the impact of capital structure on firms' profitability came up with contradictory results. Some discovered positive impact while some discovered negative impact and some revealed there is no any impact of capital structure on firm's performance. Because of this controversial result, researcher gets the chance to do further studies on this topic by testing the relationship between capital structure and firms profitability.

9. Research methodology

Research methodology is a path from which we can solve research dilemma systematically to accomplish the basic objective of the study. In this chapter, it will contains a brief explanation of research design, population and sample, sources of data, data collection and data analysis tools used for analysing data.

9.1. Research design

Research design is a plan, structure and strategy of investigations conceived so as to obtain answer to research questions and to control variance. This study will be based on descriptive and analytical research design.

9.2. Population and sample

All the listed manufacturing and hydro power companies listed in NEPSE are taken as the population of the study. There are only five listed manufacturing company are taken out from nineteen listed manufacturing companies and there are only five listed hydro companies are taken out of forty listed hydro power companies, For selecting the samples, judgmental sampling method is used here among different methods, the population size is fifty-nine and the sample size is ten. The sample organizations are as follows:

Manufacturing sector	Hydro power sector
Unilever Nepal limited(UNL)	Chilime hydropower company Ltd. (CHCL)
Bottlers Nepal limited(Terai)(BNTL)	Arun Vally hydropower company Ltd.(AVHCL)
Bottlers Nepal limited(Balaju)(BNL)	Sanima Mai hydropower company Ltd.(SMHCL)
Shivam cement limited(SHIVAM)	Api power company Ltd.(API)
Himalayan Distillery limited(HDL)	Butwal power company Ltd.(BPCL)

9.3. Nature and source of data

As the research will be mainly based on secondary source of data. The major sources of secondary data are, Nepal Stock Exchange (NEPSE), Security Board of Nepal and website of the company.

9.4. Data collection procedure and instrument

The sources of data will be used in this study are basically secondary in nature. It constitutes mostly the annual reports which compress balance sheet and profit and loss account statement. Information has also been supplemented from various publications of Nepal stock Exchange Ltd, Security Board of Nepal.

9.5. Data processing procedure and data analysis method

In this study the following tools are going to be used.

Financial tools:

i. Debt to equity ratio
ii. Debt to assets ratio
iii. Return on assets
iv. Return on equity
v. Net profit margin

Statistical tools:

i. Mean
ii. Standard deviation
iii. Correlation analysis
iv. Regression analysis

10. Chapter plan

This research is organized into five chapters. They are:

Chapter I: Introduction

This chapter deals with the general background of the study, problem statement, objectives of the study, rationale of the study, conceptual framework, limitation of the study and chapter plan.

Chapter II: Review of literature

This chapter includes the review of books, journal, articles, reports, theses, researches and other relevant materials related to this topic.

Chapter III: Research methodology

It includes research design, sources of data, population and sample, data collection procedure and instrument, data processing procedure and data analysis method.

Chapter IV: Results and discussion

This chapter analyses and evaluates secondary data of listed manufacturing and hydro companies with the help of different tools and techniques. It also includes findings and discussion.

Chapter V: Summary and conclusion

This chapter deals with summary, conclusion and implication of the study. References and appendix have also been incorporated at the end of the study.

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CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled "**Capital structure and profitability of manufacturing and hydro companies in Nepal**"**.** The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor has it been proposed and presented as part of requirements for any other academic purposes.

The assistance and cooperation that have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

...……..……..

Pushpa Raj Bhatta

December 2021

REPORT OF RESEARCH COMMITTEE

Mr. Pushpa Raj Bhatta has defended research proposal entitled "**Capital structure and profitability of Manufacturing and hydro Companies in Nepal**" successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestion and guidance of supervisor Lecture Dr. Bharat Singh Thapa and submit the thesis for evaluation and viva voice examination.

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Dissertation viva voice Date:
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APPROVAL-SHEET

We have examined the dissertation entitled **CAPITAL STRUCTURE AND PROFITABILITY OF MANUFACTURING AND HYDRO COMPANIES IN NEPAL** presented by **Pushpa Raj Bhatta** for the degree of **Master of Business Studies** (MBS) and conducted the viva voice examination of the candidate. We hereby certify that the dissertation is acceptable for the award for degree.

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ABBREVIATIONS

API	:	Api Power Company Limited
AVHPC	:	Arun Vally Hydropower Company Limited
BNL	:	Bottlers Nepal limited (Balaju)
BNTL	:	Bottlers Nepal limited (Terai)
BPCL	:	Butwal Power Company Limited
CHCL	:	Chilime Hydropower Company Limited
CV	:	Coefficient of Variation
DFL	:	Degree of Financial Leverage
DOL	:	Degree of Operating Leverage
EBIT	:	Earnings before Interest and Tax
EBT	:	Earning Before Tax
GPM	:	Gross Profit Margin
HDL	:	Himalayan Distillery Limited
MMA	:	Modigliani and Miller Approach
NEPSE	:	Nepal Stock Exchange
NPM	:	Net profit margin
ROA	:	Return on Assets
ROE	:	Return on Equity
SEBON	:	Security Board of Nepal
SHIVAM	:	Shivam Cement Limited
SMHCL	:	Sanima Mai Hydropower Company Limited
STATA	:	South Texas Art Therapy Association
UNL	:	Unilever Nepal Limited
VIF	:	Variance Inflation Factor
WACC	:	Weighted Average Cost of Capital

ABSTRACTS

The study entitled capital structure and profitability of manufacturing and hydropower companies in Nepal. The purpose of this research is to study the relationship between capital structure and profitability of listed manufacturing and hydropower companies in Nepal. In a way, the present study is initiated “Capital structure and profitability” with the sample of listed five manufacturing and five hydropower companies using the data representing the period of 2072 to 2076. Net profit margin, return on assets and return on equity were used as the measure of firms’ performance whereas total debt to total assets and total debt to total equity ratio were used as the measure of capital structure. Judgmental sampling method were used. The statistical test were used includes: descriptive statistics, correlation and regression analysis. The result shows that the manufacturing companies UNL, SHIVAM an HDL have good capital structure position and profitability and for hydropower companies AVHCL, and BPCL have good capital structure and profitability. Capital structure and profitability have negative and insignificant relationship. The findings of the paper can be considered as helpful for manager and users that are worried to develop financial description, quality and practices of capital structure.

Keywords: Capital Structure, Net profit margin, Return on assets, Return on equity.

APPENDIX

Shivam cement ltd.

(Rs.) In millions

Year	Total sales	Net profit	Total assets	Shareholder equity	Total debt
2076	90090	11770	122163	94429	27733
2075	113451	16699	129688	89545	40142
2074	102650	13939	127769	64663	631060
2073	7363	8113	83348	39497	43850
2072	5768	7778	6158	2973	16683

Source: Annual Report 2072-2076

Unilever Nepal ltd.

(Rs) In millions

Year	Total sales	Net profit	Total assets	Shareholder equity	Total debt
2076	5547	358	3723	1973	1750
2075	5754	1065	3857	2324	1532
2074	4868	999	3203	1903	1299
2073	4442	965	3321	2074	1247
2072	3946	1121	3046	2048	9974

Source: Annual Report 2072-2076

Bottlers Nepal Ltd. (Balaju)

(Rs) In millions

Year	Total sales	Net profit	Total assets	Shareholder equity	Total debt
2076	6865	-62	11152	3881	7271
2075	9506	739	10516	4024	6492
2074	9083	1040	6960	3437	3523
2073	7696	703	6835	2393	4442
2072	6398	434	5793	1782	4011

Source: Annual Report 2072-2076

Bottlers Nepal Ltd. (Terai)

(Rs) In millions

Years	Total sales	Net profit	Total assets	Shareholder equity	Total debt
2076	4693	5	8323	2266	6057
2075	5581	453	7746	2341	5405
2074	5658	741	4249	1987	2262
2073	4574	482	4203	1266	2937
2072	3525	276	3749	860	2889

Source: Annual Report 2072-2076

Himalayan Distillery Ltd.

(Rs)In millions

Year	Total sales	Net profit	Total assets	Shareholder equity	Total debt
2076	2404	467	1959	1252	707
2075	3129	537	1394	988	406
2074	2424	293	1201	796	405
2073	1347	49	1018	581	437
2072	1655	248	959	626	333

Source: Annual Report 2072-2076

Chilime hydropower company Ltd.

(Rs) In millions

Year	Total sales	Net profit	Total assets	Shareholder equity	Total debt
2076	1141	594	34454	9805	24649
2075	1170	788	28022	9194	18828
2074	1138	882	22801	8719	14082
2073	1196	8360	16677	8118	8559
2072	1163	942	12884	7571	5313

Source: Annual Report 2072-2076

Arun Vally hydropower company Ltd.

(Rs) In millions

Year	Total sales	Net profit	Total assets	Shareholder equity	Total debt
2076	69	69	1209	1077	131
2075	54	53	1101	1010	91
2074	52	20	1029	957	716
2073	51	90	965	941	242
2072	50	88	924	922	2

Source: Annual Report 2072-2076

Sanima Mai hydropower company Ltd.

(Rs) In millions

Year	Total sales	Net profit	Total assets	Shareholder equity	Total debt
2076	861	366	5487	3209	2278
2075	725	231	5375	2854	2521
2074	789	277	5512	2730	2782
2073	795	279	4871	1648	3223
2072	402	-29	4339	1064	3275

Source: Annual Report 2072-2076

Api hydropower company Ltd.

(Rs) In millions

Year	Total sales	Net profit	Total assets	Shareholder equity	Total debt
2076	324	108	3556	1373	2138
2075	178	71	3412	1264	2148
2074	127	57	3247	1195	2052
2073	138	75	2447	1140	1307
2072	105	81	1879	1067	812

Source: Annual Report 2072-2076

Butwal power company Ltd.

(Rs) In millions

Year	Total sales	Net profit	Total assets	Shareholder equity	Total debt
2076	686	731	7866	7029	837
2075	683	760	7949	6901	1047
2074	666	702	7685	6510	1175
2073	662	668	5369	4392	977
2072	595	619	5214	3377	1236

Source: Annual Report 2072-2076

CAPITAL STRUCTURE AND PROFITABILITY OF MANUFACTURING AND HYDRO COMPANIES IN NEPAL

A Dissertation submitted to the office of the Dean, Faculty of management in partial fulfilment of the requirements for the Master's Degree

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CHAPTER 1

INTRODUCTION

1.1 Background of the study

Capital structure is the composition of long term funds. Major components of capital structure are debt capital and equity capital. It is a part of financing decision of a firm. The capital structure plays an important role in the success of business entity. Capital Structure decision is crucial for any business organization as it plays important role in maximizing firm value and performance of a firm. Capital structure decision has also impact on the firm's ability to deal with competitive advantage. Every firm have their own capital structure design because they differ in financing decision and taking capital structure decision is tough work too as sometimes using higher level of debt is beneficial and sometimes higher equity is beneficial. Hence it should be design in a proper manner so that the cost is minimized and value of the firm is maximized.

The theory of the capital structure is an important reference theory in enterprise's financing policy. The capital structure referred to enterprise includes mixture of debt and equity financing. Whether or not an optimal capital structure exists is one of the most important and complex issues in cooperate finance.

Capital structure is one of the most complex areas of financial decision making due to its interrelationship with other financial decisions variables. Profitability is the main component in the financial decision. Because the whole aspects of capital investment decision, capital structure decision is the vital one, since the profitability of an enterprise is directly affected by such decision. Hence, proper care and attention need to be given while making the capital structure decision.

Investing and funding are two main decision areas in the company. The process in which the firm is funded by a mixture of debt and equity is called capital structure decision. When firm take the funding decision, the directors are interested in choosing the best capital structure for their company's i.e. optimal capital structure. Leverage decisions are also one of the important decisions and it is undertaken by the company administrative. Capitalization, leverage ratio, capital structure and financial structure all of them have the identical concept and are related with which kind of sources and

amount of money that the firm has hired to construct them and buy assets (Barges, 2009).

The capital structure is defined as the mix of debt and equity that the firm uses in its operation. The capital structure of a firm is a mixture of different securities. Capital structure is the way in which a firm finances its operations which can either, be through debt or equity capital or a combination of both (Brigham and Gapenski, 2004). The term capital denotes the proportion of debt and equity in a company's balance sheet. It is usually difficult for business firms to identify the right combination of debt and equity. A firm can choose among many alternative capital structures. It can choose to either issue a large amount of debt or very little debt. It can arrange lease financing, use warrants, issue convertible bonds, sign forward contracts or trade bond swaps. It can issue many distinct securities in countless combinations; however, it attempts to find the particular combination that maximizes its overall market value (Brigham and Gapenski, 2004).

Optimum Capital Structure is that structure where overall cost of capital is minimum and value of the firm is maximum. It is the best debt to equity ratio that maximizes the firm's value. It offers a balance between the ideal debt to equity range and minimize the firms cost of capital. This structure seeks to lower the cost of capital so that firm is less dependent on creditors and more able to finance its core operation. Weighted average cost of capital has to be calculated to determine the level of risk that makes the expected return on capital greater than the cost of capital (Bhattarai, 2017).

The term capital structure refers to the proportion of debt and equity capital, which has an important place in the theory of financial management. The financing decision of a firm relates to the choice of proportion of debt and equity to finance the investment requirement, of which a proper balance is necessary to ensure a trade-off between risk and return to the shareholders. An optimal capital structure, which consists of reasonable proportion of debt & equity, can help to maximize the value of the firm and ultimately maximizing the shareholders wealth (Wippern, 1996).

Some financial analyst argue that capital structure can increase the value of firm if more and more leverage is added, where some believe that the value of the firm can be maximize by adopting an optimal capital structure. The relationship and impact of

capital structure decision with the firm's performance and profitability were suggested in many theories, among them, MM theory (1958) and (1963), Agency cost theory (1976), and Trade off theory (1977) and Pecking order theory (1984) are famous.

Establishment and operation of industries need finance. The success and failure of Business depends manly upon the ability of management to make right financial decisions. Capital structure decision is one of the most complex area of financial decision making due to its interrelationship with other financial decision variable. In order to achieve the firm's goal of owner's wealth maximization. The financial manager must be able to assess the firm's capital structure and understand its relationship of risk, return and value. For the optimal capital structure, the analysis of risk and return on various leverage positions is essential. The risk of bankruptcy depends to an important extent on the operating risk or business risk and return on equity depends on operating efficiency. Thus, the optimal debt/equity mix depends on the nature of the business and therefore on the nature of investment that the company makes. But the capital structure decision in addition these variables is influenced by several other variables viz. nature of the company capital market situation, interest of the management and investors to control, liquidity position and operating efficiency of the company, company act and regulation etc. if a judicious decision of capital structure is made taking consideration various factor it will be a thing to maximize the value of the company. Obviously, there are various source of capital which differs in nature and cost associated with them. The successes of any business also largely depend upon the capital structure. It is simply the relationship between various long term forms of the financing such as debenture preference share capital and equity share capital. Financing the firm's asset is a very crucial problem in every business and as a general rule there should be a proper mix of debt and equity capital in financing the firm's assets. Though the capital structure cannot affect the total earning of the firms, it generally affects the earning available to equity share holders. In managing the value of shareholder wealth. A balanced capital structure is the prerequisite for successful business organization but it is lacking in almost all companies in Nepal. The capital structure of Nepalese company is of diverse nature, as no company seems to have followed a particular capital structure policy. Some of the companies' are using only equity capital and some are using both debt and equity irrespective of maximization of the firm.

Profitability is the final result of numerous policies and decisions of the company's management (Brigham and Houston, 2006). Profitability according to Halim (2007) is a measure of the extent to which the management effectiveness in managing the assets and capital owned by the company to generate profits from the activities done by the company on certain accounting period. The companies having profitability or high rate of return on investment use relatively smaller debt. Higher returns enable the company to finance the majority of their funding needs using internally generated funds.

Government of Nepal has undertaken a number of policy initiatives and regulatory measures to strengthen the manufacturing sector for decades.

Hydropower projects in Nepal have been deemed to be expensive primarily because of the fact that cost of access roads and power evacuation transmission lines are added on to the hydropower projects cost. As we all know, most of the better hydropower projects sites are in remote mountainous locations requiring construction of access roads prior to projects construction. This along with the high voltage power evacuation system renders power from these projects comparatively expensive. This can lead to hydropower projects losing their competitive advantage with respect to other sources in the energy market.

1.2 Problem statement

To minimize risk for a given level of return and to maximize return for a given level of risk, company have to manage their optimum capital structure. Capital structure concept is not taken seriously by the Nepalese Companies. Therefore, optimal capital structure does not exist at all. Among the listed companies in the stock exchange very few are using the debt capital and contrary to this some of the companies are ruined by the excess burden of the cost of debt capital. Generally every company has its own policy in determining capital structure for operating business activities. Some of the business use only equity capital, some use only debt capital and some combine both equity and debt capital. Therefore determination of capital structure largely depends upon the company policy and cost of capital. Most of the companies make low cost capital structures. Unfortunately, there is no model for determining capital structure in the Nepalese business organization. In the initial period of any company, they want to use only equity capital and do not want to include debt in their capital due to high interest charges.

There are many factors affecting corporate value, including company's capital structure. Capital structure is equity and debt financing in a company that is generally calculated based on the relative size from various sources of funding. The stability of company finance and the risk of failure to settle debts depends on the financing source, the type and number of assets possessed by the company. The setting of good Capital Structure in the company can be used as a reference for the company's financial stability and avoid the risk of default (Subramanyam and Wild, 2010).

A firm's capital structure is only a part of financial structure. One of the issues in firm's corporate financing decisions is the decisions about what portion of debt should be used to finance the assets. The capital structure design seeks the answers of quarries such as division of total fund sources into short-term and long-term components. The major influence on the maturity structure of financing plan is the nature of the assets owned by the firm. (Dhodary, 2019).

Company's policy regarding the mixed proportion of debt and equity is what is called as the capital structure. Usage of corporate capital from either debt or equity has their respective advantages and disadvantages. So to determine a good composition needs to be analysed properly. Debt from banks is one of the easiest ways to obtain capital for a company, while the most difficult for company to obtains issuing new equity (Aulia and Gandakusuma, 2019).

Nepal has enormous hydropower potential. The prospects of becoming a prosperous country can be realized provided this energy source could be tapped prudently and efficiently at the earliest. As a leader of the countries power sector, NEA has the prime responsibility of taking necessary steps towards achieving this goal. Finance and skilled manpower are the most important functional areas of a business. It is concerned with generation, transmission, distribution and other function of any business including independent power products (Neupane, 2011).

Nepalese manufacturing company are not performing well. Many large company have been closed and some are about to close. Almost companies are able to earn profit but the margin of profit is very low. This sector has uneven growth over the years due to the longstanding weakness in the adoption of new technology, poor infrastructure, and shortage of power, stalled political process, difficult trading condition, covid, global

competition and global economic downturn. Moreover manufacturing establishment in Nepal is primarily labour intensive and local raw material based (Lamichhane, 2019).

Many studies have been carried out in this topic in developed countries where economic conditions are stable. But in case of developing economy like Nepal where business environment is not stable there is frequent change in government policy, inflation rate is high, currency exchange rate is high, where company has to taxes on its revenue, the theory of MM approach may not hold true. So this study is carried out to find out whether the capital structure of the company affects the performance of the company. Therefore, in order to achieve the above stated objective the research is sought to answer the following question;

i. What is the current status of capital structure of listed related manufacturing and hydro companies in Nepal?
ii. What is the profitability of manufacturing and hydro companies in Nepal?
iii. What is the relationship between capital structure and profitability?

1.3 Objectives of the study

The main objective of this study is to examine the capital structure and profitability of manufacturing and hydro companies in Nepal. Furthermore the study aims to achieve the following specific objectives:

i. To analyse the current status of capital structure of listed related manufacturing and hydro companies in Nepal.
ii. To analyse the profitability of manufacturing and hydro companies in Nepal.
iii. To examine the relationship between capital structures and profitability.

Hypotheses

H0: There is a significant relationship between capital structure and profitability.
H1: There is an insignificant relationship between capital structure and profitability.

1.4 Rationale of the study

The manufacturing and hydro sector of Nepal is expanding day by day. In Nepal, there are very little amount of researches and studies to go through regarding capital structure and firm's performance in case of manufacturing and hydro companies. It is important for the financial managers to make decisions regarding the investment or application or recruitment of the capital fund of or for the company as it determines the capital

structure of the company. Capital structure is one of the important aspects of the company since it affects the company's profitability and determines the survival of the company in a long run.

The study would be beneficial to the other companies in the population. Further, the concerned scholars, academicians, investors, professionals may also be benefited from this study. This study will also help to inform the decision makers about the importance of capital structure management for their further success.

By analysing the capital structure of a company, it helps to find out strength & weakness of the company and helps to drive the firm into right track. These are different stakeholders in the company having their own interest and desires, where the main responsibility of a firm is to keep them satisfactory. It is possible only through the sound capital structure in the company. The importance of this study is to find out the factors related to capital structure management and helps to financial manager as a guideline. This study also importance for those who are interested on Investment as well as owners, creditors and shareholders to make their good attitude.

1.5 Limitations of the study

The study is carried out using few number of manufacturing and hydro companies listed in Nepal stock exchange because a complete coverage of all manufacturing and hydro firms is not possible due to time and financial constraint.

i. The sample has taken only from listed manufacturing and hydro companies in Nepal.
ii. There are total fifty nine manufacturing and hydro companies listed on NEPSE out of which only five manufacturing and five hydro companies are selected.
iii. The study covers only the latest five fiscal years from 2072 to 2076.
iv. This study concentrates on relationship between capital structure and profitability of five manufacturing and five hydro power companies.
v. This study is based on secondary data. Thus the result of the analysis depends on accuracy of available information.

1.6 Chapter plan

This research is organized into five chapters. They are:

Chapter I: Introduction

This chapter deals with the general background of the study, problem statement, objectives of the study, rationale of the study, limitation of the study and chapter plan.

Chapter II: Review of literature

This chapter includes the review of books, journal, articles, reports, theses, researches and other relevant materials related to this topic.

Chapter III: Research methodology

This chapter contains research design, sources of data, population and sample, data collection procedure and instrument, data processing procedure and data analysis method, and research framework.

Chapter IV: Results and discussion

This chapter analyses and evaluates secondary data of listed manufacturing and hydro company with the help of different tools and techniques. It also includes findings and discussion.

Chapter V: Summary and conclusion

This chapter deals with summary, conclusion and implication of the study. References and appendix have also been incorporated at the end of the study.

CHAPTER 2

LITERATURE REVIEW

2.1. Theoretical review

The capital structure of financial leverage decision should be examined from the point of its impact on the value of the firm. However there are two conflicting theories to show the relationship between the capital structure and value of the firm. Traditionalist believes that capital structure decision affects the value of the firm whereas, Modigliani and Miller say capital structure does not affect the value of the firm. In a broad sense, there are generally two theories relevancy theory and irrelevancy theory. Relevancy theory states that the combination of debt and equity decision affects the value of the firm; it means that the value of firm differs as per the change in combination of debt and equity. However irrelevancy theory states that combination of debt and equity decision doesn't affect the value of the firm.

2.1.1 Net income approach

It is also called relevancy theory of capital structure because the capital structure decision is relevant to the valuation of the firm. This theory suggests that change in leverage ratio affects the overall cost of capital and market value of the firm. There is no change in the attitude of the both stockholders and debt holders regarding their required rate of return in response to a change in debt equity ratio of the firm.

According to this theory cost of debt is greater than cost of equity and cost of debt and cost of equity are fixed so when the percentage of debt increases, cost of equity decreases and value of the firm also increases.

The cost of debt capital and cost of equity capital remain unchanged when leverage ratio varies. Due to the limited degree of risk the debt holder's required rate of return is relatively cheaper than that of equity. In addition at constant cost of equity and cost of debt, the overall cost of capital declines with the increased proportion of debt in the capital structure or increment of debt results, lower overall cost of capital and higher value of the firm.

The net income approach is based on following assumption:

1. Cost of debt is less than cost of equity ($k_d < k_e$).

2. The use of debt does not change the risk perception of investors.

3. There is no change in cost of debt and cost of equity.

According to this assumption, the increases in debt ratio magnify the earning per share. In the given capitalization rate, the increase in EPS makes an increase in market price of stock.

MPS=EPS/Ke

Where,

MPS = Market price of stock

EPS = Earnings per share

Ke = Cost of equity.

In other words, the increase in debt ratio cause decline in overall cost of capital and decrease on overall cost of capital enhances the market value of the firms or company i.e.

V= NOI/Ko = EBIT/Ko

Where,

V = Market value of the firm

NOI = Net operating income

Ko = Overall cost of capital

Thus, a firm can maximize its market price of stock or value by achieving the optimal capital structure through judicious mix of debt and equity.

2.1.2 Net operating income approach

It is also called irrelevancy theory of capital structure because capital structure decision is irrelevant to the valuation of the firm. It implies that the total value of the firm is unaffected by its capital structure. Any change in leverage ratio will not lead to any change in overall cost of capital as well as value of the firm.

According to this approach cost of debt is greater than cost of equity and cost of debt is fixed but cost of equity is not fixed so the value of the firm and overall cost of capital remains constant. This approach suggest that a change in capital structure cannot change in value of the firm this is due to the fact that if the amount of debt is increases in total capital the shareholder would be subject to more risk and as a result the equity shareholder will demand more return for a higher risk undertaken by them. This will

result in the higher cost of equity. The advantage of lower cost of debt will be counter balance by the higher cost of equity due to such balancing effect overall cost of capital would remain same and value of the firm will remain same. Net operating income has following assumptions (Jensen, 2002):

1. Cost of debt is assumed constant.
2. The change in the proportion of leverage affects the required rate of return on equity as financial risk changes.
3. Cost of equity changes linearly with the change in leverage
4. Overall cost of capital remains constant.

This approach suggest that both the earning per share and equity capitalization rate increases on same proportion with the increasing debt ratio, so the market price of stock remain unchanged on any leverage. The total market value of the company also remains unchanged, since as previously said that the net operating as well as overall cost of capital does not vary with the leverage. The market value of the company is obtained as below:

$V = NOI/Ko$

Where,

V = Value of the firm
NOI = Net operating income
Ko = Overall capitalization rate.

At the extreme degree of financial leverage, hidden costs become very high and hence the firms 'cost of capital and its market value is not influenced by the use of additional cheaper debt fund (Chakraborty, 1977).

Thus this approach suggests that there is no optimal capital structure.

2.1.3 Traditional approach

Ezra Solomon developed the traditional approach. It is also known as intermediate approach between Net income approach and Net operating approach. It assumes that there exists optimal capital structure and that a firm can increase its total value through the optimum use of leverage (Van Horn, 1999).

This is the combination of net income approach and net operating income approach. This approach suggests that if a proportion of debt is increased the total capital certain

level overall cost of capital tends to decrease. If the proportion of debt in increased beyond the stated level and up to the next level the overall cost of capital would remain constant. If the proportion is increased for other the overall cost of capital tends to increase because of very high cost of debt.

According to this approach a firm can initially lower its cost of capital and increase its total value by using debt, though the investors raise the required rate of return on equity, the increase in the cost of capital does not offset entirely the benefit of using cheaper debt fund. As more leverage occurs, investors increasingly penalized the firms required equity return until eventually this effect more than offsets the use of cheaper debt funds (Aryal, 2017).

The assumptions of this approach are as follows:

i. Equity holders adjust their required rate of return proportionately for every unit of debt inclusion.
ii. Debt holders do not really care for the level of debt inclusion and do not demand any premium for the leverage risk at least in the beginning.
iii. The expected outcome of the behaviour of equity holders is the benefit of cheaper debt financing causes the cost of equity and debt increases.

According to this approach, the manner in which the overall cost of capital reacts to change in capital structure can be divided into three stages (Friendman, 1959).

Stages I

The first stage of traditional approach begins with the introduction of debt in the total capital. Initially the cost of equity remains constant or rises slightly with the use of debt fund and it does not increase fast enough to offset the advantage of low cost debt. During this stage, the cost of debt remains constant or raises negligibly since the market views the use of debt as a reasonable policy. As a result the value of the firm will increase and overall cost of capitalization will fall with the increase in leverage (Pandey, 2001).

Stage II

Once the firm reached certain degree leverage, further application of debt have a negligible effect on the value of the firm or the overall cost of capital. It is because increase in the cost of equity offset the advantage of low cost debt. Within the range of

such debt level the value of firm will be maximum or the cost of capital will be minimum (Pandey, 2001).

Stage III

Beyond the acceptable limit of leverage, the value of the firm decreases with the leverage or the overall cost of capital increases with the leverage. This happens because the cost of equity increases by more than enough to offset the advantage of low cost debt (Pandey, 2001). The overall effect of these three stages suggests that the cost of capital and value of the firm are the functions of leverage and there exist optimal capital structure.

2.1.4 Modigliani and Miller approach

This approach is most widely accepted capital structure theory. In 1958, Franco Modigliani and Merton Miller established two propositions for the relation between a firm's capital structure, its market value and cost of capital. This approach is based on MM model without and with taxes.

1. Under MM approach without taxes

This theory is called capital structure irrelevancy theory, which means that in capital market without taxes, value of firm has not any effect on its capital structure. The argument is that the value of the firm depends on firms' earning and risk of its assets and not its capital structure which means value of levered firm is equal to vale of unlevered firm.

This approach supports the relationship between leverage and cost of capital that is explained by NOI approach. It advocates that the values of the firm are not affected by capital structure and average costs of capital are also not affected by capital structure. It assumes that there are no transaction cost and no corporate tax. Under this approach value of firm will remain same no matter how is the proportion of debt and equity.

According to this approach value of levered firm is equal to the value of the unlevered firm. If the value of levered firm is higher than the value of unlevered firm or vice versa it will be compensate by arbitrage process i.e. it will reach in balance through the arbitrage process.

The MM cost of capital hypothesis can be best expressed in terms of their proposition I and II. However the following assumption regarding the behaviour of the investors and capital market, the action of the firm and tax environment are crucial for the validity of MM hypothesis.

i. Securities are traded in perfect capital market.
ii. Firms can be grouped in the homogenous risk class.
iii. Dividend pay-out ratio is 100 percent.
iv. Corporate income tax doesn't exist.
v. Investors have homogenous expectation about expected future corporate earnings also the riskiness of their earnings.
vi. The variance of return may differ from investor to investor.

Proposition: I

The MM proposition- 1 states that the market value of a firm is independent of its capital structure. It is because the value of the firm is determined by capitalizing the net operating income at a rate appropriate for the firms risk class. It is identical to the NOI approach. The value of firm is obtained by:

$V = NOI/Ko$

Where,

V = Value of the firm

NOI = Net operating Income

Ko = Risk Adjusted Capitalization rate

Proposition: II

The proposition II states that the cost of equity rises proportionately with the increase in the financial leverage in order to compensate in the form of premium for bearing additional risk arising from the increased leverage. In other words, for any firm either levered or unlevered in a given risk class the cost of equity is equal to the constant average cost of capital plus a premium of financial risk which is equal to debt equity ratio times the spread between constant average cost of capital and interest rate. It can be expressed as follows:

$Ke = Ko + (Ko – Kd)\ D/E$

Where,

Ke = Cost of equity

K0 = Average cost of capital

Kd = Cost of debt or interest rate

D/E = Debt equity ratio.

2. Under MM approach with taxes

This theory stated that as company's debt ratio increases and pushes the cost of equity capital up but because of the corporate taxes subsidies of the cost of debt then the overall cost of capital falls. This model expand the first idea by including the risk of a firm to become bankruptcy after raising huge amount of fund using debt, they insisted that using more debt increase the threat of bankruptcy for a company. Cost of equity of a company goes up because of a higher risk of using debt that the company has and shareholders perception about the future of the company on which they have invested. It can also be shown in proposition I and II.

Proposition I

As per proposition – I, the value of a firm is determined by capitalizing the net operating income before tax at a rate that is appropriate to its risk class. Where tax is considered, interest payment on debt makes a tax saving since interest is deducted from net income for the tax calculation. Thus the value of levered firm will be more by the present value of the debt tax shield than that of unlevered firm. In other word value of levered firm is equal to the value of the unlevered firm plus present value of debt tax shield. This can be shown in following equation:

$VL = Vu + T*B$

Where,

VL = Value of levered firm

Vu = Value of unlevered firm

T = Tax

B = Amount of Debt

Proposition II

It states that the cost of equity of levered firm rises with leverage ratio to compensate for the additional leverage risk while the cost of debt remain constant because the debt is assumed to be risk less (Pradhan, 1992). Accordingly the cost of equity is calculated as follows:

$Kel = Keu + (Keu – Kd) (1- T) D/ E$

Where,

Kel = Cost of equity of levered firm

Keu = Cost of equity of unlevered firm

Kd = Cost of debt

T = Tax rate

D/E = Debt Equity ratio

It indicates that cost of equity increase with D/E ratio. On the other hand the tax deductibility of interest on debt lowers the cost of debt but still remains constant irrespective of debt – equity ratio. This reduction in the cost of debt as a result of tax saving outweighs the increased cost of equity, forcing the average cost of capital to decline with every unit of additional debt financing. As a result the weighted average cost of capital of the firm does not remain unchanged when there is a change in D/E ratio. This can be seen in following equation.

Kol = Kel (Es / V) + KD (1-T) D/E

Where,

KO = Overall cost of capital of levered firm

Kel = Cost of equity of levered firm

E = Equity amount

V = Total Value

T = tax rate

D/E = Debt equity ratio

Thus, it can be concluded that MM Theory with taxes is identical. To net income approach, this says that the value of the firm increases with every additional unit of debt financing.

2.1.5 Trade off theory

In the trade-off theory firms weigh the costs of borrowing against the benefits of debt financing .The cost of borrowing includes interest payments and bankruptcy cost. The benefit of debt financing includes the tax deductibility of interest payments and the firm is equal to the value of unlevered firm plus the value of side effects, which include the tax shield and the expected costs due to financial distress (Brigham & Ehrhardt, 2005).

When a firm has zero or low levels of debt financing, the possibility of bankruptcy is low and immaterial. It is argued that the extensive use of debt increases the chances of bankruptcy of which creditors demand extra risk premium. He suggested that firms should not use debt beyond the point where the cost of debt becomes larger than tax advantage. As debt financing increases, the expected bankruptcy related costs increases and reduces the tax benefits of the debt.

This theory states that there is an advantage for corporation to be finance with debt because of the balance between the tax benefit gained by corporation and cost of bankruptcy due to the risk of taking on more debt. The tax benefit occurs due to the interested deducted from before interest and tax earnings, which brings about tax advantage because taxable income become less and hence corporate tax payment for the company. The major benefit of debt financing is that it provides a tax shelter; nevertheless the main disadvantage related with debt financing is the risk of bankruptcy (Brigham & Ehrhardt, 2005).

According to the trade-off theory the optimal capital structure is the point where the marginal tax shelter is equal to marginal bankruptcy related costs. Therefore firm would prefer debt over equity up to the point where the probability of financial distress and bankruptcy costs starts to be important.

It was suggested that this theory could be applicable for larger firms which are more likely able to generate high profits but for the small firms they are less likely to have choose debt financing for the tax shield advantage (Van Horne, 2000).

On the other hand, firm with a stable revenue stream and sound asset base facing a lower risk of bankruptcy. This company can apply a moderately higher level of leverage in their capital structure.

2.2. Empirical review

2.2.1 Article and journals

Several empirical studies around the world have been conducted to measure the relationship between capital structure and company profitability In most cases researcher come up with mixed results, some revealed a positive relationship between the variable other revealed the negative relationship while some other shows the contradictory results between study variables. These type of result shows that the topic

is still debatable hence it's high time to measure such relationship in Nepalese Manufacturing Company listed in Nepal stock exchange.

Gill (2011), studied regarding the effect of capital structure on profitability by examining the effect of capital structure on profitability of the American service and manufacturing firms. A sample of 272 American firms listed on New York Stock Exchange for a period of 3 years from 2005 – 2007 was selected. Correlation and regression analysis were used to estimate the functions relation to profitability and capital structure. The findings of this paper show also a positive relationship between short-term debt to total assets and profitability, long-term debt to total assets and profitability, and between total debt to total assets and profitability in the manufacturing industry.

Kaumbuthu (2011), carried out a study to determine the relationship between capital structure and return on equity for industrial and allied sectors in the Nairobi Securities Exchange during the period 2004 to 2008. Capital structure was proxy by debt equity ratio while performance focused on return on equity. The study applied regression analysis and found a negative relationship between debt equity ratio and ROE.

Odita (2012), used regression and Pearson correlation to analyze the impact of capital structure on firm performance in Nigeria. He used performance measure of return on assets and return on equity while capital structure measures were debt ratios and controlling variables of assets turnover, firm, size, age, asset tangibility and firm growth opportunity. His study results indicated a negative relationship and significant relationship between performance measure of return on assets and equity against debt ratio.

Shubita (2012), measured the relationship between capital structure and profitability of Jordan companies. The researcher used correlation and multiple regressions between variables to reach the intended results. The researcher used ROE as performance variable against capital structure variable of short term debt to assets as independent variable. The study results showed a negative relationship between debt finance and profitability. Their findings implied that an increase in debt position is associated with a decrease in profitability of companies thus the higher the debt the lower the

profitability of the firm. The researcher used only one performance measure of ROE to come up with conclusion.

Salim and Yadav (2012), examined the influence of capital structure on company financial performance for the two hundred and thirty seven Malaysian listed companies over the period of 1995-2011 using panel data analysis. The researchers used four performance metrics namely, earning per share, return on equity, Tobin's Q and return on asset as dependent variables and three measures for capital structure as independent variables namely, short term debt divided by total assets, long term debt divided by total assets and total debt ratios, while Size and growth used as control variables. The findings indicate that company performance ROA, ROE and EPS, adversely influence on long term debt ratio (LTD), short term debt ratio (STD) and total debt ratio (TD), while growth positively effects on financial performance for all 30 the sectors. In addition, Tobin's Q has a positive and significant impact on short term debt (STD) and long term debt (LTD).

Zuraidah (2012), in Malaysia measured the relationship between the capital structure indicators of short term debt, long term debt and total debt against performance indicators of return on assets and return on equity. Researcher used panel data of fifty eight firms from 2005 to 2010. The results of the study indicated that only short term debt and total debt had a significant relationship with return on assets and other capital structure variables had a significant relationship with return on equity.

Velnampy and Niresh (2012), also tested the relationship between capital structure and profitability of ten listed Sri Lankan banks over the past 8 year period from 2002 to 2009.The data has been analysed by using descriptive statistics and correlation analysis to find out the association between the variables. Results of the analysis show that there is a negative association between capital structure and profitability except the association between debt to equity and return on equity. Further the results suggest that 89% of total assets in the banking sector of Sri Lanka are represented by debt, confirming the fact that banks are highly geared institutions. The outcomes of the study may guide banks, loan creditors and policy planners to formulate better policy decisions as far as the capital structure is concerned.

Nirajini and Priya (2013), conduct the research on Capital structure and financial performance during 2006 to 2010 (05 years) financial year of listed trading companies in Sri Lanka. For the purpose of this study, the data was extracted from the annual reports of sample companies. Correlation and multiple regression analysis are used for analysis. The results revealed there is positive relationship between capital structure and financial performance.

Leon (2013), was about the impact of capital structure on financial performance of the listed manufacturing firms in Sri Lanka. He used a panel data of thirty listed manufacturing companies from 2008 up to 2012 to measure the relationship between the variables. The data were analysed and hypotheses were tested using correlation and regression analysis. The finding of his study revealed that there is a significant negative relationship between leverage and return on equity at the same time the relationship between leverage and return on assets showed no relationship.

Nasreem (2013), also tested the relationship between firm's capital structure and financial performance in Pakistan using a sample of eighty three companies listed in Karachi Stock Exchange. Researcher used debt to equity ratio as a measure of capital structure while other ratio like EPS, Price earnings ratio, operating profit margin, ROA and ROE were used as process for firm performance. After analysing data using regression model, researcher found that financial performance of a company was significantly affected by their capital structure and their relationship was negative in nature. Also capital structure showed a negative relationship with company market value.

Toraman (2013), examined manufacturing companies in Turkey and discovered the negative relationship between short term debt to total assets, long term debt to total assets and return on assets. He also discovered no significant relationship between total debt to equity ratio and return on assets. Researcher used regression model to measure the relationship between capital structure and company profitability using a sample of twenty eight manufacturing industries.

Alom (2013), analysed the effect of debt and equity funding (capital structure) on the financial performance in Malaysia by employing multiple regression analysis. The researchers used a sample of one hundred and thirty over the period 2001-2010. The

findings show an adverse and statistical significant relationship between capital structure and companies performance.

Jaffna (2013), analysed the impact of capital structure on financial performance of the listed trading companies in Sri Lanka. He used companies data listed in Sri Lanka stock exchange during 2006 to 2010 and came up with following results. He used correlation analysis and revealed that debt assets ratio and debt equity ratio and correlated with gross profit margin, net profit margin, return on assets and return on equity at significance level of 0:05 and 0.1. Finally their results concluded a positive relationship between capital structure and financial performance.

Lavorskyi (2013), in Ukraine conducted a study on the impact of firm performance in Ukraine. Researcher used regression to measure the relationship between capital structure variable of leverage ratio against performance variable of return on assets, total factor productivity and EBIT margin. After analysing the relationship researcher fund that firm leverage was negatively affecting firm performance.

Kajananthan and Nimalthasan (2013), did a study the relation between capital structure and firm performance. The main objective of this study is to examine the relationship between “capital structure and firm performance” with the sample of 25 manufacturing companies using the date representing the period of 2008-2012. The statistical tests were used includes: descriptive statistics, correlation, and regression analysis. The result shows that gross profit, net profit, return on equity, return on assets are not significantly correlated with debt equity ratio and gross profit margin and return on equity are significantly correlated with debt equity ratio and gross profit margin and return on equity are significantly correlated with debt assets ratio as the measure of capital structure and capital structure has significant impact on gross profit and return on equity. However, the findings have highlighted the effect of the firm performance and capital structure.

Tailab (2014), in America used a sample of thirty energy American firms for a period of nine years from 2005 to 2013 to test the effect of capital structure on profitability of energy. American firms found the negative relationship between debt ratios and performance variable on return on equity and return on assets. Researcher used multiple regression method to analyze his study data where 10% of ROE and 34% were

predicted by independent variables of short term debt, long term debt, and total debt to equity ratio.

Kayode et. al (2014), in Nigeria conducted a study in the effect of capital structure on firm performance in Nigeria using the panel data of ten companies from 2003 to 2012. Researcher used descriptive and regression technique to test the relationship between performance variable of return on assets and return on equity against capital structure variables of total debt to total assets, total debt to equity. In his study results he revealed that capital structure has negatively related to firm performance.

Adesina et.al (2015), studied found that capital structure has been found to have impact on firm's performance. Bank consolidation in Nigeria has increased bank equity capital against debt. This study aims to determine the impact of post consolidation capital structure on the financial performance of Nigerian quoted banks. The study used profit before tax as a dependent variable and two capital structure variable i.e. equity and debt as independent variables. The sample for the study consists of ten Nigerian banks quoted on the Nigerian stock exchange. The required data and information for the study were gathered from the published annual reports. Ordinary least square regression analysis of secondary data shows that capital structure has a significant positive relationship with the financial performance of Nigerian banks. The researcher suggests that the management of quoted banks in Nigeria consistently use debt and equity capital in financing to improve earnings.

Iqbal et. al (2015), to analyse and understand the association between capital structure and profitability and the fastidious to measure their significance in manufacturing and non-manufacturing industries of Pakistan. The paper adopts a quantitative data of different manufacturing and non-manufacturing organizations in Pakistan. The financial statements were analysed of manufacturing and non-manufacturing organizations of Pakistan for the period of 2008- 2013. The study reveals the fact, profitability and debt in manufacturing and non-manufacturing industry is an insignificant relationship and a strong positive link between profitability and debt. In this paper descriptive statistics were used to interpret the data. It is proved that manufacturing industry has found a strong negative regression between debts and profit and the non-manufacturing has found a strong positive regression between debt and profit.

Rajakumaran and Yogendrarajah (2015), did a study on the impact of capital structure on profitability in trading companies in Sri Lanka. For this purpose the study investigated eight listed trading companies in Colombo Stock Exchange of Sri Lanka the past 5years period from 2008 to 2012. The data has been analysed by using descriptive statistics, correlation analysis and regression analysis to find out the association between the variables. The results suggest that 44% of the total assets in the trading companies of Sri Lanka are representing by debt and on the basis of correlation analysis Debt to equity ratio and Debt to total Assets ratio positively and moderately correlated with gross profit ratio, negatively and moderately correlated with net profit ratio, positively and weakly created with return on capital employed and negatively and weakly correlated with other profitability ratios.. The outcome of the study may help to the entrepreneurs, Board of directors and policy makers to design better decisions in the debt-equity choice.

Vatavu (2015), studied the relationship between capital structure and financial performance in 196 Romanian companies listed on the Bucharest Stock Exchange and operating in the manufacturing sector, over a period of eight-years (2003-2010). The analysis is based on cross sectional regressions. Results indicate that performance in Romanian companies is higher when they avoid debt and operate based on equity. However, it seems that manufacturing companies do not have sufficient internal funding to undertake profitable investments and do not use their assets effectively. During times of increased taxes and inflation profitable companies divest part of their assets reducing their costs. There is an indication of risk-taking behaviour across manufacturing companies. This show a preference for debt when they are in financial difficulties and they face high business risks, or when they cannot settle their debts due to a lack of cash. Due to missing data regarding long-term debt ratios, those regression results are not statistically significant. Moreover, the regression models referring to return on equity explain a reduced proportion of its variation.

Shah (2016), studied the impact of capital structure on firm performance using 25 cement companies listed on Karachi stock exchange during 2009 to 2013. Descriptive statistics results show a poor performance by cement companies, because about 64.51 percent of total assets of cement companies are financed by debt. Based on the correlation results this study finds a negative relation between debt to assets and firm

performance variables (GPM, NPM, ROA, & ROE). It also indicates a positive relation between debt to equity and firm performance variables (GPM & NPM), whereas negative relationship between debt to equity and firm performance variable. (ROA & ROE). Besides, regression results reveal that there is a significant impact of capital structure on firm's performance. Based on empirical literatures and findings the study concludes that there is a significant impact of capital structure on firm's performance. Although business companies generally depend on the debt capital therefore financial analyst and managers should be cautious while using debt as a source of finance, since there exist almost negative relationship between capital structure and firms performance.

Sadiq and Sher (2016), studied found that in finance literature capital structure received considerable attention as factor affecting the profitability of firms. The aim of this paper is to contribute to literature on this factor (Capital structure) and evaluate its impact and nature of relationship with the profitability of Automobile companies listed in Karachi stock exchange.19 companies were selected as sample. Regression analysis and correlation test is used with the help of statistical package SPSS in order to predict the result. Study concludes that capital structure (Debt/Equity) is negatively associated with the profitability, which implies that an increase in debt capital caused a decrease in the profitability of the firms and vice versa. These results are supportive for the business companies during the financing of capital.

Abeywardnana (2016), has studied the impact of capital structure on firm performance. This study examined the impact of capital structure on firm performance of manufacturing sector SMEs in UK for the period of 1998-2008. The authors hypothesize that there is a negative relationship between capital structure and firm performance. To examine the association, the authors run a Pearson correlation and multiple regression analysis. Results of this study reveals that there is a significant negative relationship between leverage and firm performance (ROA, ROCE), strong negative relationship between liquidity and firm performance and highly significant positive relationship between size and the firm performance. This study concluded that firms which perform well do not rely on debt capital and they finance their operations from retained earnings and specially SMEs have less access to external finance and face difficulties in borrowing funds. It is recommended that firm should establish the point

at which the weighted average cost of capital is minimized and to maintain the optimal capital structure and thereby maximize the shareholders wealth.

Kalyani and Mathur (2017), studied the impact of capital structure on overall profitability of a firm. The Corporate financial performance, which is represented by dependent variables ROA (Return on Assets) and Net Profit Ratio, is taken into consideration and the effect of independent variables which are Sales of a firm, Total Assets of a firm, Debt Service Capacity, Dividend Pay-Outs, Degree of Financial Leverage, Degree of Operating Leverage of the firms belonging to the Oil and Natural Gas Industry of India were chosen for study. A sample of seven firms listed in NSE and BSE were selected and the financial data of these companies during the period 2005 and 2015 is used for this study. The correlations and regression analyses were used to estimate the functions relating to profitability measured by Return on Assets and Net Profit Ratio with measures of capital structure. The study witness that Log sales, degree of operating leverage and growth of asset are significant variables in determining the profitability when dependent variables are ROA and log assets, degree of financial leverage, Log sales, degree of operating leverage and growth of asset have significant relationship with net profit ratio of the select firms from Oil and Natural Gas Industry of India.

Ashraf, Amen and Shahzadi (2017), conduct the studied on the impact of capital structure on firm's profitability and explore the optimal capital structure of cement industry of Pakistan. The data are collected of 18 companies listed on Karachi Stock Exchange (KSE) for the time series of 10 year from 2006-to-2015. The firm's profitability is measured by ROA and ROE, while capital structure determinants like, debt equity ratio (DER), interest coverage ratio (ICR), debt Ratio (DR), short term debt ratio (STDR), and long term debt ratio (LTDR). The balance panel data has been used to obtain results of descriptive, correlation and panel least square by using E-Views. Results demonstrate that debt ratio and long term debt ratio have significantly negative relationship with return on asset (ROA) and return on equity (ROE), while short term debt have significantly positive link with ROA and ROE.

Basit and Irwan (2018), studied the impact of capital structure on firm performance of Malaysia listed industrial product company. The independent variables used in this research are debt to equity ratio, total debt ratio and total equity ratio. Return on asset

(ROA), return on equity (ROE) and earning per share (EPS) are used as dependent variable to measure firm performance. Descriptive statistics and multiple regression are used in this research to analyses the data. This research found industrial product company are heavily rely on equity finance in their capital structure. Besides that, the regression result found debt to equity has negative impact on ROA, total debt ratio and total equity ratio has insignificant impact on ROA. Debt to equity has negative impact on ROE, total debt has positive impact on ROE and total equity has insignificant impact on ROE. Besides that, debt to equity has negative impact on ROE, total debt has positive impact on ROE and total equity has insignificant impact on ROE. Finally, debt to equity has a negative significant impact on EPS, total debt ratio has positive significant impact on EPS and total debt has insignificant impact on EPS. In conclusion, industrial product company raise debt finance can reduce agency problem and enjoy tax advantage, but debt level over the optimum capital structure will bring a negative impact on firm performance. This research will benefit for the industry, manager, shareholder, investor and future researcher. Future researchers are recommending to use large sample size and other variable to identify the impact of capital structure on firm performance.

Ajibola, Wisdom and Qudus (2018), conduct the research on impact of capital structure on financial performance of quoted manufacturing firms in Nigeria over the period 2005-2014. Panel methodology was applied to analyse the impact of capital structure on financial performance of quoted manufacturing firms in Nigeria. The findings of the panel ordinary least square show that a positive statistically significant relationship exist between long term debt ratio(LTD) (0.0001), total debt ratio (TD) (0.0065) and return on equity (ROE) while a positive statistically insignificant relationship between ROE (return on equity) and STD (Short term debt ratio). There was also a negative insignificant relationship between all the proxies of capital structure (LTD, STD and TD) and ROA which makes ROE a better measure of performance. The study concluded that capital structure has a positive impact on financial performance and companies should employ more of long term debts.

Raman, Sharker and Uddinj (2019), conduct the study on impact of capital structure on the profitability of publicly traded manufacturing firms in Bangladesh. In this paper, we applied the fixed effect regression to find out the correlation among independent

variables (debt ratio, equity ratio and debt to equity ratio) and dependent variables (return on asset, return on equity and earnings per share). This research reveals that the debt ratio and equity ratio have a significant positive impact but debt to equity ratio has a significant negative impact on ROA. This paper also exposes that, equity ratio has a significant positive impact but debt to equity ratio has a significant negative impact on ROE. Finally, debt and equity ratio has a significant negative impact on EPS.

Miko and Para (2019), conduct the study on effect of financial structure on profitability of manufacturing firms in Nigeria. The study considers a sample size of 39 manufacturing firms in listed on the Nigerian Stock Exchange. The data were analysed using Ordinary Least Square regression technique. The result revealed that debt finance, equity finance and debt to equity finance have significant impact on the profitability of manufacturing firms in Nigeria. The study concludes that financial structure plays a major role in improving the performance of manufacturing firms listed in Nigeria. The study recommended that management should properly manage their debt in such a way to increase profitability.

Ali and Faisal (2020), conduct the study on impact of capital structure, profitability and financial performance on the success of the business organization. Capital structure of the business organization refers to the proportion of external funds and internal funds, i.e., debt and equity. In Saudi Arabia, petrochemicals companies are working on equity, but financial performance reflects negative trend for the period 2004 to 2016. The research is based upon secondary data available on the websites of petrochemicals companies of Saudi Arabia. Financial Ratio variability analysis and Trend Indices of financial ratios measure and compare the financial variability and sensitivity of financial ratios of the business organization. Correlation between Trend Indices (TICBI) of independent variable and dependent variables are to be calculated to know the impact of changes in debt equity on other dependent variables. The results reveal the unexpected performance of petrochemicals companies due to under-utilization of the resources caused by low demand and lower prices of the products governed by some internal and external factors. The study finds that size, demand, cost of production, profitable streams of products, and low cost capital in external funds are the factors responsible for overall growth development of the petrochemicals industry of Saudi Arabia.

Hajisaaid (2020), conduct the study on relationship between capital structure and profitability of eight companies working in the basic material sector in Saudi Arabia during the period 2009 to 2018. The statistical techniques used are regression analysis, fixed effect model, random effect model, and Housman test. The dependent variable is the return on equity (ROE). In contrast, independent variables are a short-term debt to total assets ratio (SDA), long-term debt to total assets ratio (LDA), and total debt to total assets ratio (DA). The results illustrate a negative relationship between short-term debt to total assets ratio (SDA) and return in equity ratio (ROE). A negative relationship between long-term debt to total assets ratio (LDA) and return in equity ratio (ROE), and positive relationship between total debt (DA) and profitability.

2.3 Review of previous thesis

During study, several thesis works has been carried out by the previous students. Among them some research are found to be relevant for this study. They are presented as follows:

Baral, (2012) he found that an attempt has been made to examine the determinants of capital structure -size, business risk, growth rate, earning rate, dividend pay-out, debt service capacity, and degree of operating leverage-of the companies listed to Nepal Stock Exchange Ltd. as of July 16, 2010. Eight variables multiple regression model has been used to assess the influence of defined explanatory variables on capital structure. In the preliminary analysis, manufacturing companies, commercial banks, insurance companies, and finance companies were included. However, due to the unusual sign problem in the constant term of the model, manufacturing companies were excluded in final analysis. This study shows that size, growth rate and earning rate are statistically significant determinants of capital structure of the listed companies.

Mishra (2015) in his analytical study, A Study of Capital Structure Management of Selected Manufacturing Companies. This study has specific objective are analyze cost of capital and return on capital in relation of the employed. To examine the capital structure and debt servicing capacity of the company, he used analytical tools ratio analysis, means, standard deviation, coefficient of variation, correlation coefficient. This study find average DOL is negative which shows the inefficient earning capacity of the firm. The average DFL is less than one. There is no any consistency in the DOL and DFL for the same types of manufacturing companies. Debt equity and interest

coverage ratio for Jyoti Spinning mills Ltd. is negative as the company has negative equity. Interest coverage ratio is negative, its show that the company's earnings are not sufficient even to repay their interest. Due to the use of lower amount of debt, the profit margin for the Joyti Spinning shows negative, which indicate that the company is suffering in losses during almost all the study periods? ROA for Jyoti spinning is negative which indicates that the assets of the company are not generating profit. The higher P/E ratio indicates greater confidence of investor with its future. Average overall cost of capital and cost of equity of Jyoti Spinning is negative and other Nepal lever Ltd. and Bottlers Nepal are positive. Correlation coefficient of debt and shareholder equity for Jyoti spinning negative correlation but Nepal level and Bottlers Nepal are positive correlation. Correlation coefficient between EBIT and net profit for Jyoti spinning mills and Nepal lever Ltd. are negative correlation but Bottlers Nepal Ltd. is positive correlation. Correlation between EBT and net profit for Jyoti Spinning mills and Nepal Liver Ltd is positive correlation and Bottlers Nepal Ltd shows negative correlation. He concluded that the company's policy to increase current liabilities by replacing long term loan is not according to the principle of capital structure management. The use of debt would save the tax if they would be earning but in reality of Jyoti Spinning mills. There is no earning so there is not saving. His recommendation was increase in current liabilities would affect the liquidity aspect of the company. Short-term borrowing is more risky because short term interest rates are little than longer rates. Therefore, there is maintaining proper capital structure be including long term debt.

Bhattarai (2017) studied the effect of capital structure on the performance of manufacturing company listed at the Nepal stock exchange. Secondary data of eight manufacturing companies were obtained from the published annual report and financial statement of the respective companies covering the 10 years. The result of the multiple regression analysis shows that capital structure has a significant negative relationship with the performance of the Nepalese manufacturing companies. In addition to capital structure, the firm performance is significantly positively associated to the firm size but negatively associated to the tangibility.

Mallik (2017) in this thesis, "Capital Structure Management in Nepal" His thesis analyse and studies the secondary data. Descriptive research design were used. Major

finding of this study are being big financial houses NTC and NEA dominates other organization in volume related issues so the gearing of other organizations is not seen in the figure. Other than these houses don't have debt transaction during the sampled period too. Comparatively, total loan liabilities to shareholders fund ratio of NBL is highest, ratio of Nabil is in second, NEA is in third position, HGICl is in forth position and NTC is in fifth position. Comparatively, total debt to total assets ratio of NIBL is highest, ratio of Nabil is higher, NEA is in third position HGICL is in forth position and NTC is in fifth position. Interest bearing capacity of NTC is higher than other organization and HGICL is in moderate capacity to bear the load of interest expenses and other organization are seem very weak in the concern of interest expenses bearing.

Panthi (2018) has conducted a study on "A Comparative Study on Capital Structure Management of Listed Manufacturing Companies: A Case Study of Bottlers Nepal Limited and Unilever Nepal Limited." The main objective of the study is to evaluate the capital structure management by the selected organizations. The specific objectives of the study were pointed out the capital structure of Unilever Nepal Limited and Bottlers Nepal Limited and to examine the cost of capital and return on capital. Descriptive and analytical research design has been employed in the study. The various financial tools were used to measure the financial position. The major findings were the average of DOL for UNL and BNL are 1.72 and 3.29 respectively. As compare to the UNL and BNL, the DOL for UNL is quite good. The higher DOL indicates the riskiness of the company. The average DFL of UNL is 3.12 times whereas for UNL is 1.21 times only. This shows the UNL has greater DFL than UNL. The average of long-term debt as a percentage of total debt for UNL is zero, which means UNL has no long-term debt. For BNL long-term debt as a percentage of total debt in average is 12.448.The average ratio between debt and total assets is above 50 for the UNL and BNL both i.e. 63.29 and 54.48 respectively. This situation indicates that the debt amount is comparatively high for assets financing as per the figure of the ratio. The average ratio between shareholders equity and total assets for UNL is 62.65 and for BNL is 47.31. Those figures indicate that more than 50 percent of assets are financed through the outsider's fund.

Dhodary (2018) conduct the study on capital structure in Nepalese non-financial enterprises. The study is based on primary data. A descriptive research design has been

adopted for the study. Different descriptive statistical measures such as minimum, maximum, percentage, average, standard deviation and coefficient of variation have been used to analyse. This study is directed towards examining the capital structure policy of Nepalese non- financial firms. The primary information required for the said purpose has been collected through the survey of opinions of board of directors, company secretary, executives, chief fiancé officers and other line managers through administering the well structure multi- part questionnaire. For the purpose of field survey, 90 questionnaires were distributed among the respondents located in Kathmandu using non probabilistic sampling. The survey result shows that preference toward maturity structure of borrowing varied among the Nepalese non-financial firms, and majority of Nepalese firms do not consider interest rate and practice of matching between asset and liabilities structure while they go for borrowing. As proper matching between assets and liabilities structure is required, companies should pay attention towards this aspect. Outside security analysts and comparative industry have only a minimal effect on the development of these targets.

Shrestha (2018), has conducted a study on "A Study on Working Capital Management of Dairy Development Corporation". During his study, he had basically used the secondary data and mainly financial tools are embodied for analysing the working capital management of DDC. He had derived following major findings from his study. The objectives of the study were as to analyze the current assets and current liabilities and their impact and relationship to each other, to show the trend of composition of assets and capital structure and to analyze the return on equity and assets. Major findings of the study were The Corporation’s investment in the form of working capital has been increasing and DDC followed the conservative working capital policy with respect current assets management. The average investment in current assets is lower with respect to net fixed assets during this study period and DDC has no clear vision about the investment current assets portion. Cash and bank balance holds the second largest portion of the current assets and has fluctuating trend. Other major components of current assets i.e. inventories and receivables are in fluctuating trend. The company does not follow credit sales policy. The overall return position of DDC is negative, not in favourable condition. It is because of inefficient utilization of current assets, total assets and shareholders wealth.

Summary

Study	Methodology	Major finding
Gill(2011)	Effect of capital structure on profitability of the American service and manufacturing firms for the period of 2005 to 2007. This study were used correlation and regression analysis.	Positive relationship between short term debt to total assets and profitability, long term debt to total assets and profitability and between total assets and profitability in the manufacturing industry.
Kambuthu (2011)	Relationship between capital structure and return on equity for industrial and allied sectors in Nairobi securities exchange during the period 2004 to 2008. This study applied regression analysis.	Negative relationship between debt equity and return on equity.
Odita (2012)	Impact of capital structure on firm's performance in Nigeria during the period of 2004 to 2010. This study applied regression and person correlation analysis.	Negative relationship and significance relationship between performance measure of return on assets and equity against debt ratio.
Shubita (2012)	Relationship between capital structure and profitability of Jordan companies during the period of 2004 to 2009. Correlation and multiple regression analysis.	Negative relationship between debt financing and profitability.
Salim and Yadav (2012)	Influence of capital structure on company financial performance of Malaysian listed companies for the period of 1995 to 2011. Used panel data analysis.	The company performance ROA, ROE and EPS, adversely influence on long term debt ratio (LTD), short term debt ratio (STD) and total debt ratio (TD), while growth positively effects on financial performance for all 30 the sectors. Tobin's Q has positive and significance impact on short term and long term debt.
Zuraidah (2012)	Relationship between the capital structure and performance of Malaysian	Short term debt and total had a significance relationship with return assets and other capital variables had a significance relationship with ROE.

	firms for the period of 2005 to 2010. Used panel data analysis.	
Velnampy and Niresh (2012)	Relationship between the capital structure and profitability of ten listed Srilankan banks for the period of 2002 to 2009. Descriptive and correlation analysis.	There is a negative association between capital structure and profitability except the association between debt to equity and return on equity.
Nirajini and Priya (2013)	Capital structure and financial performance of listed trading companies in sir lank during 2006 to 2010. Correlation and regression analysis	Positive relationship between capital structure and financial performance. Capital structure was significance impact on financial performance.
Leon (2013)	Impact of capital structure on financial performance of the listed manufacturing firms in Sir lank during 2008 to 2012. Correlation and regression analysis	Significance negative relationship between leverage and return on equity at the same time the relationship between leverage and return on assets showed no relationship.
Nasreem (2013)	Relationship between firm's capital structure and financial performance in Pakistan during 2008 to 2012. Regression model was used	Financial performance of a company was significance affected by their capital structure and their relationship was negative.
Toraman (2013)	Relationship between capital structure and company profitability during 2003 to 2012. Regression analysis	Negative relationship between short term debt to total assets, long term debt to total assets and return on assets.
Alom (2013)	Effect on capital structure on financial performance in Malaysia during 2001 to 2010. Multiple regression analysis	Adverse and statistical significant relationship between capital structure and companies performance.
Jaffna (2013)	Impact of capital structure on financial performance of the listed trading company in Sir Lanka during 2006 to 2010. Correlation, regression and descriptive analysis	Positive relationship between capital structure and financial performance.

Lavorskyi (2013)	Relationship between capital structure and firm performance in Ukraine during 2001 to 2010. Regression analysis	Negative relationship between capital structure and firm performance.
Kajananthan and Nimalthasan (2013)	Capital structure and its impact on firm's performance on Sir Lankan listed manufacturing companies during 2008 to 2012. Descriptive, correlation and regression analysis	Gross profit, net profit, ROE, ROA are not significantly correlated with debt assets ratio. Gross profit margin and ROE are significantly correlated with debt assets ratio. Capital structure has significant impact on gross profit and return on equity.
Tailab (2014)	Effect of capital structure on profitability of energy in American firms during 2005 to 2013. Multiple regression analysis	Negative relationship between capital structure and profitability.
Kayode et. al (2014)	Effect of capital structure on firm performance in Nigeria during 2003 to 2012. Descriptive and regression technique	Capital structure has negatively related to firm performance.
Adesina et. al (2015)	Impact of capital structure on the financial performance of Nigeria quoted bank during 2005 to 2012. Ordinary least square regression analysis	Capital structure has a significant positive relationship with the financial performance of 33 Nigerian banks.
Iqbal et. al (2015)	Capital structure and profitability of manufacturing and non-manufacturing industry in Pakistan during 2008 to 2013. Descriptive statistics was used	Manufacturing industry has found a strong negative regression between debt and profit. Non –manufacturing industry has found a strong positive regression between debt and profit.
Rajakumaran and Yogendrarajah (2015)	Impact of capital structure on profitability in trading company in Sir Lanka during 2008 to 2012. Descriptive, correlation and regression analysis	Debt to equity ratio and Debt to total Assets ratio positively and moderately correlated with gross profit ratio, negatively and moderately correlated with net profit ratio, positively and weakly created with return on capital employed and negatively and weakly correlated with other profitability ratios.

Vatavu (2015)	The impact of capital structure on financial performance in Romanian listed company during 2003 to 2010. Cross sectional regression analysis	Manufacturing company do not have sufficient internal funding to undertake profitable investment and do not use their assets effectively. Regression result are not statistically significant.
Shah (2016)	Impact of capital structure on firm performance on Karachi stock exchange during 2009 to 2013. Descriptive, correlation and regression analysis	Poor performance by cement company, because 64.51% of total assets are financed by debt. Negative relation between debt to assets and firm performance, positive relation between debt to equity and firm performance and negative relation between debt to equity and firm performance. There is a significant impact of capital structure on firm performance.
Sadiq and Sher (2016)	Impact of capital structure on the profitability of firm's evidence from automobile sector of Pakistan during 2006 to 2012. Regression and correlation analysis	Capital structure is negatively associated with profitability.
Abeywardnana (2016)	Impact of capital structure on firm performance from manufacturing sector SME in UK during 1998 to 2008. Correlation and multiple regression analysis	There is a significant negative relationship between leverage and firm performance. Strong negative relationship between liquidity and firm performance. Highly significant positive relationship between size and firm performance. SMEs have less access to external finance and face difficulties in borrowing funds.
Kalyani and Mathur (2017)	Relationship between capital structure and profitability on listed firm in India during 2005 to 2015. Correlation and regression analysis	Log sales, degree of operating leverage and growth of asset have significant relationship with net profit ratio of the select firms from Oil and Natural Gas Industry of India.
Ashraf, Amen and Shahzadi (2017)	The impact of capital structure on the profitability: A case of cement industry in Pakistan during 2006 to 2015.	Debt ratio and long term ratio have significant negative relationship with return on assets and return on equity.

	Descriptive, correlation and plane least square analysis	Short term debt have significantly positive relationship between return on assets and return on equity.
Basit and Irwan (2018)	The impact of capital structure on firm's performance from Malaysian industrial sector during 2011 to 2015. Descriptive and multiple regression analysis	Industrial product heavily rely on equity finance in their capital structure. Debt to equity has negative impact on ROA, ROE and EPS. Total debt and total equity ratio has insignificant impact on ROA. Total debt has positive impact on ROE and total equity has insignificant impact on ROE.
Ajibola, Wisdom and Qudus (2018)	Impact of capital structure on financial performance of quoted manufacturing firm in Nigeria during 2005 to 2014. Panel methodology	Positive statistically significant relationship exit between long term debt, total debt, and return on equity. Positive statistically insignificant relationship between long term debt, short term debt and total debt and ROA which makes ROE a better measure of performance.
Raman, Shaker and Uddinj (2019)	Impact of capital structure on the profitability of publicly traded manufacturing firms in Bangladesh during 2013 to 2017. Correlation and regression analysis	Debt ratio and equity ratio have a significant positive impact but debt to equity ratio has a significant positive impact on ROA. Equity ratio has a significant positive impact but debt to equity ratio has a significant negative impact on ROE. Debt and equity ratio has a significant negative impact on EPS.
Miko and Para (2019)	Capital structure and profitability of listed manufacturing firms in Nigeria during 2008 to 2017. Ordinary least square regression analysis	Debt financing, equity financing and debt to equity financing have significance impact on the profitability of manufacturing firm.
Ali and Fisal (2020)	Capital structure and financial performance: A case study of Saudi petrochemical industry during 2004 to 2016. Correlation analysis	Unexpected performance of petrochemicals companies due to under-utilization of the resources caused by low demand and lower prices of the products governed by some internal and external factors.

		Size, demand, cost of production, profitable streams of products, and low cost capital in external funds are the factors responsible for overall growth development of the petrochemicals industry.
Hajisaaid (2020)	The effect of capital structure on profitability of basic material Saudi Arabia firms during 2009 to 2018. Regression analysis, fixed effect model, random effect model, and hausman test.	Negative relationship between short term debt to total assets ratio and return on equity ratio. Negative relationship between long term debt to total assets ratio and return on equity ratio. Positive relationship between total debt and profitability.

2.4 Research gap

Many researchers who tested the relationship between capital structure and profitability of manufacturing firms came up with contradictory results. Some discovered positive relationship while some discovered negative relationship and some revealed there is no any relationship of capital structure and firm's performance. Because of this controversial result, researcher gets the chance to do further studies on this topic by testing the relationship between capital structure and firms profitability. This study is different from other research in term of including hydro sector, sample companies, data presentation as well as statistical and financial tools used for interpretation and analysis of data.

The lack of a consensus about what would qualify as optimal capital structure in the service and manufacturing industries has motivated researcher to conduct this research. Also in Nepal, there are few research held on this topic so it has high time to analyze and compare the results with the capital structure theories and see whether there is any relation between capital structure decision and firms profitability using listed manufacturing and hydro companies in Nepal Stock Exchange.

CHAPTER 3

RESEARCH METHOLODOGY

1.1 Introduction

Research methodology may be defined as “a systematic process that is adopted by the researcher in studying problem with certain objective and view”. In other word, research methodology describes the methods and process applied in the entire aspect of the study focus of data, data gathering instrument and procedure, data tabulating and processing and methods of analysis.

Research methodology is a path from which we can solve research dilemma systematically to accomplish the basic objective of the study. It consists of a brief explanation of research design, nature and sources of data, method of data collection and methods of tools used for analysing data.

3.2 Research design

Research design is a plan, structure and strategy of investigations conceived so as to obtain answer to research questions and to control variance. It is the arrangement of conditions for collection and analysis of data in a manner aiming at combining relevance to the research purpose with economy in procedure. Considering this study objectives, the analysis is based on certain research design. In order to achieve the objectives, descriptive research design has been adopted.

3.3 Population and sample

All the listed manufacturing and hydro power companies listed in NEPSE are taken as the population of the study. There are only five listed manufacturing company are taken out from nineteen listed manufacturing companies and there are only five listed hydro companies are taken out of forty listed hydro power companies, For selecting the samples, judgmental sampling method is used here among different methods, the population size is fifty-nine and the sample size is ten. Whose general major objectives are presented in chapter one. The sample organizations are as follows:

Manufacturing sector	Hydro power sector
Unilever Nepal limited(UNL)	Chilime hydropower company Ltd. (CHCL)
Bottlers Nepal limited(Terai)(BNTL)	Arun Vally hydropower company Ltd.(AVHCL)
Bottlers Nepal limited(Balaju)(BNL)	Sanima Mai hydropower company Ltd.(SMHCL)
Shivam cement limited(SHIVAM)	Api power company Ltd.(API)
Himalayan Distillery limited(HDL)	Butwal power company Ltd.(BPCL)

3.4 Nature and source of data

As the research is mainly based on secondary source of data, these can be obtained after high level of efforts, more time and convincing the concerned authorities. Published annual report, Nepal Stock Exchange (NEPSE), Security Board of Nepal as well as the website of the ten companies have been used as the sources of secondary information from the respective offices.

3.5 Data collection procedure and instrument

Data obtained from various sources cannot be directly used in their original form as they are raw data. When data will not be presented in understandable and easier way there would be no use of conducting research study or analysis of data. Analysis part would be difficult to understand to the readers without processing the data. So, to make the study understandable at the first sight data should be processed. A presentations of data means to keep raw data into understandable form by editing, rechecking and using various tools such as tables, charts, figures and trend lines. In this study also data are presented using all the necessary tools so as to make understand the analysis part in proper and easier way.

3.6 Data processing procedure and data analysis method

The thesis will cover and include the financial and statistical tools to analyse the data in order to reach to the conclusion of the research. In order to get the concrete results from this research, data are analysed, by using different types of tools. As per the topic requirement, emphasis is given on statistical tools, so for this study the following statistical tools are going to be used. Financial Tools Financial analysis is the process of identifying the financial strengths and weaknesses of the organization by properly establishing relationships between the items of the balance sheet and the profit and loss

account. Ratio analysis is a powerful tool of financial analysis. A ratio is designed as the indicated quotient of two mathematical expressions and as the relationship between two or more variables. In financial analysis, ratio is used as a benchmark for evaluating the financial position and performance of a firm.

Financial tools

Total debt to assets ratio: The debt to total assets ratio in an indicator of financial leverage. It shows the percentage of total assets that were financed by creditors, liabilities, debt. It is calculated as:

$$\text{Debt to total assets} = \frac{Total\ debt}{Total\ assets}$$

Total debt to equity ratio: The debt to equity ratio is used to measure a company's financial leverage. It indicates how much debt a company is using to finance its assets relative to the amount of value represented in shareholders' equity. It is calculated as:

$$\text{Total debt to equity ratio} = \frac{Total\ debt}{Total\ share\ holders\ equity}$$

Profitability ratios are class of financial metrics that are used to assess a business ability to generate earnings compares to its expenses and other relevant cost incurred during a specific period of time. It gives final answers about how effectively the firm is being managed. In this study following profitability ratio are calculated.

Return on total assets (ROA): Return on total assets or simply return on assets, measures the productivity of the assets. This ratio judges the effectiveness in using the total fund supplied by the owners and creditors. ROA is calculated as under;

$$\text{Return on Total Assets} = \frac{\text{Net profit}}{\text{Total assets}}$$

Return on equity (ROE): Return on equity relates the profitability of a company to equity shareholders' equity. ROE measures the company's profitability in terms of return to equity shareholders. It is calculated as under;

$$\text{Return on Equity} = \frac{Net\ profit}{Share\ \text{holders}\ equity}$$

Net profit margin: Profit margin is measure of how well management has generating operating revenue. Net profit margin indicates ratio of compensation left to the owners

for providing their capital, after all expenses have met. It helps in determining the efficiency with which the affairs of the business are being managed. A net profit margin would enable the firm to withstand adverse economic conditions and low ratio will have opposite implications.

Net Profit Margin = $\frac{Net\ Profit}{Total\ Sales}$

Statistical tools

Mean: Mean is the value, which represents the group of values and gives an idea about the concentration of values in the central part of the distribution. An average gives us a point which is most representative of the data. It is sum of all the observations divided by the number of observations.

Mathematically, Mean $(\bar{X}) = \frac{\sum X}{n}$

Standard deviation: Standard deviation is a statistical measure of the variability of a distribution of return around its mean. It is the square root of the variance and measure the unsystematic risk. A small standard deviation means a high degree of uniformity of the observation. It is denoted by Greek letter called sigma (σ).

Mathematically,

Standard deviation $(\boldsymbol{\sigma}) = \sqrt{\frac{(X-\bar{X})}{n-1}^2}$

Coefficient of variation: The relative measure of dispersion based on standard deviation is called coefficient of standard deviation and 100 time coefficient of standard deviation is called coefficient of variation. It is denote by C.V.

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

Where,

σ = Standard Deviation

$\bar{X}$ = Mean Value of Variables

Correlation coefficient: Correlation coefficient is a relative measure of co-movements between variables. It is the measurement of linear relationship between two or more variables. Its values lie between -1 and +1. Mathematically,

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

Regression analysis: The statistical technique which studies the average relationship between two or more variables in terms of original unit of data is called regression analysis. The simple regression analysis describes the average relationship between only two variables. It measures per unit change. The multiple regressions are a logical extension of the simple linear regression analysis. Instead of single independent variable, two or more independent variables are used to estimate the unknown values of a dependent variable.

ROA= $a1$ + $b1$ TDTE + $b2$ TDTA

ROE= $a1$ + $b1$ TDTE + $b2$ TDTA

NPM= $a1$ + $b1$ TDTE + $b2$ TDTA

Where,

a = Constant

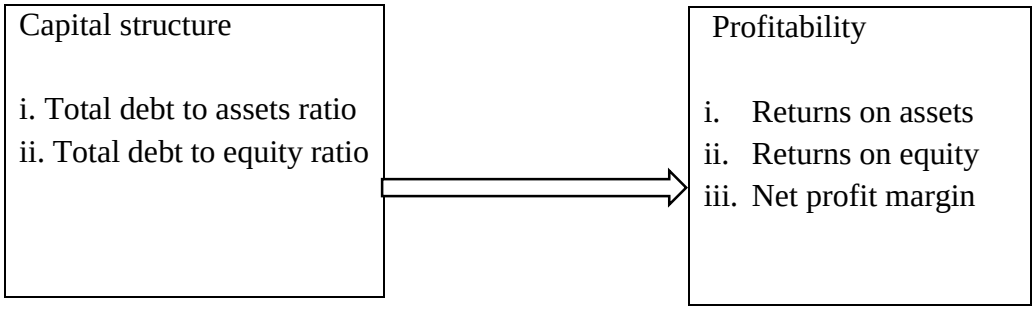
$b1$, $b2$ = Regression Coefficient

The secondary data collected is analyzed with the help of STATA 16 version software and MS excel.

3.7. Research framework

The research framework is the basis or foundation upon which the study is established. It is within the framework of this theory that the entire story proceed.

Independent variables **Dependent variables**



Source: Kajananthan and Nimalthasan (2013)

Figure 3.1 Research Framework (Relationship between Dependent and Independent Variables)

The figure 2.1 shows total debt to assets ratio and total debt to equity ratio as independent variable to measure the relationship between on return on assets, return on equity, and net profit margin. Return on assets, return on equity, and net profit margin is used as the dependent variable.

Capital structure

Capital structure can be a mixture of a firm's long-term debt, short-term debt, common equity and preferred equity. A company's proportion of short- and long-term debt is considered when analysing capital structure.

Total debt to assets ratio: Total debt to total assets is a leverage ratio that defines the total amount of debt relative to assets. This metrics enables comparisons of leverage to be made across different companies. The higher the ratio, the higher the degree of leverages and, consequently, financial risk.

Total debt to equity ratio: The debt to equity ratio is used to measure a company's financial leverage. It indicates how much debt a company is using to finance its assets relative to the amount of value represented in shareholders' equity.

Profitability

Profitability ratios are a class of financial metrics that are used to assess a business's ability to generate earnings relative to its associated expenses. For most of these ratios, having a higher value relative to a competitor's ratio or relative to the same ratio from a previous period indicates that the company is doing well.

Return on total assets (ROA): Return on Assets measures the net income on each rupee of assets. This ratio measures overall profitability from investment in assets. Return on assets is calculated as a ratio between Net Income and Total Assets. It indicates the efficiency of the banks by utilizing their assets in generating profits.

Return on equity (ROE): Return on equity is net profit after taxes divided by shareholder's equity which is given by net worth. It is a measure of how well management has used the capital invested by the shareholders.

Net profit margin: Profit margin is measure of how well management has generating operating revenue. Net profit margin indicates ratio of compensation left to the owners for providing their capital, after all expenses have met. It helps in determining the efficiency with which the affairs of the business are being managed.

CHAPTER 4

RESULT AND DISCUSSION

4.1 Results

In this chapter the effort has been made to analyse capital structure and profitability of the selected manufacturing company and hydro company. For this major variables affecting capital structure are considered for analysis. The analysis of data consists of organizing, tabulating and assessing financial and statistical result.

4.1.1 Data Presentation and analysis

Under this analysis, the annual report of selected manufacturing and hydropower companies since 2072 to 2076 and other essential data available from different organization has been presented with the help of table.

4.1.1.1 Analysis of total debt to shareholder's equity

This ratio measures the relative claims of outsiders and owner over the firm assets. The total debt to equity ratio indicates the relative contribution of debt capital and equity capital fund to the total investment. A high ratio shows the larger share of financing by the creditors, as compare to that of owners, creditors prefers low debt equity ratio.

A debt to equity ratio of 1 would mean that investor and creditor have an equal stock in the business assets. A lower debt to equity ratio usually implies a more financially stable business and is considered less risky.

Table: 4.1.

Total debt to total equity ratio

	Manufacturing sector					Hydro sector				
Year	**UNL**	**BNTL**	**BNL**	**SHIVAM**	**HDL**	**CHCL**	**AVHCL**	**SMHCL**	**API**	**BPCL**
2076	0.89	2.67	1.87	0.29	0.56	2.51	0.12	0.71	1.56	0.12
2075	0.66	1.67	1.61	0.45	0.41	2.05	0.09	0.88	1.70	0.15
2074	0.68	1.14	1.03	0.98	0.51	1.62	0.75	1.02	1.72	0.18
2073	0.60	2.32	1.86	1.11	0.75	1.05	0.26	1.96	1.15	0.22
2072	0.49	3.36	2.25	0.56	0.53	0.70	0.00	3.08	0.76	0.37
Mean	0.66	2.23	1.72	0.68	0.55	1.59	0.24	1.53	1.38	0.21
SD	0.13	0.77	0.40	0.31	0.11	0.65	0.27	0.89	0.37	0.09
CV	0.2	0.35	0.23	0.46	0.20	0.41	1.09	0.58	0.27	0.41

Source: Annual Report 2072-2076

The table 4.1 shows that the debt to equity ratio of UNL ranges from the 0.89-0.49 with the average mean of 0.66 and coefficient of variation is 0.2. Similarly the debt to equity ratio of BNTL ranges from the 2.67-3.36 with the average mean of 2.23 and coefficient of variation is 0.35. the debt to equity ratio of BNL ranges from the 1.87-2.25 with the average mean of 1.72 and coefficient of variation is 0.23.The debt to equity ratio of SHIVAM ranges from the 0.29-0.56 and coefficient of variation is 0.4.The debt to equity ratio of HDL ranges from0.56-0.53 with the average mean of 0.55 and coefficient of variation is 0.2. Here the lowest mean is that of UNL with the low coefficient of variation and SHIVAM has the highest mean and highest CV. Since lower debt to equity is preferable UNL is more financially stable business among BNL, SHIVAM, BNTL, and HDL.

The debt to equity ratio of CHCL ranges from the 2.51-0.70 with the average mean of 1.56 and coefficient of variation is 0.41. Similarly the debt to equity ratio of AVHCL ranges from the 0.12-0.00 with the average mean of 0.24 and coefficient of variation is 1.09. The debt to equity ratio of SMHCL ranges from the 0.71-3.08 with the average mean of 1.53 and coefficient of variation is 0.58. The debt to equity ratio of API ranges from the 1.56-0.76 with the average mean of 1.38 and coefficient of variation is 0.27. The debt to equity ratio of BPCL ranges from the 0.12-0.37 with average mean of 0.21 and coefficient of variation is 0.41.Hear the average mean is that of API with the lowest coefficient of variation and AVHCL has lowest mean and highest coefficient of

variation. Since low debt to equity is preferable API is more financially stable business among CHCL, AVHCL, SMHCL, and BPCL.

4.1.2. Analysis of total debt to total assets ratio

This ratio is computed by dividing total debt of the firm by its total assets. The total debt of the firm comprises long term debt plus short term debt while total assets consist of current assets and fixed assets. It shows the percentage of total assets that were financed by creditors, liabilities, debt.

If total debt to assets equals 1 it means that the company has the same amount of liabilities as it has assets. A company with a total debt to assets of greater than 1 means that the company has more liabilities than assets. It is more risky A company with a total debt to assets less than one shows that it has more assets than liabilities and could pay off its obligation by selling its assets if need arises.

Table: 4.2.

Total debt to total assets ratio

	Manufacturing sector					Hydro sector				
Year	**UNL**	**BNTL**	**BNL**	**SHIVAM**	**HDL**	**CHCL**	**AVHCL**	**SMHCL**	**API**	**BPCL**
2076	0.47	0.73	0.65	0.23	0.36	0.72	0.11	0.42	0.60	0.11
2075	0.40	0.70	0.62	0.31	0.29	0.67	0.08	0.47	0.63	0.13
2074	0.41	0.53	0.51	0.49	0.34	0.62	0.70	0.50	0.63	0.15
2073	0.38	0.70	0.51	0.53	0.43	0.51	0.25	0.66	0.53	0.18
2072	0.33	0.77	0.69	0.27	0.35	0.41	0.00	0.75	0.43	0.24
Mean	0.39	0.69	0.60	0.37	0.35	0.59	0.23	0.56	0.57	0.16
SD	0.05	0.08	0.07	0.12	0.04	0.11	0.25	0.13	0.08	0.05
CV	0.12	0.12	0.12	0.33	0.13	0.19	1.08	0.23	0.13	0.28

Source: Annual Report 2072-2076

The table 4.2 shows that the total debt to total assets ratio of UNL ranges from the 0.47-0.33 with average mean of 0.39 and coefficient of variation is 0.12. Likewise the total debt to total assets ratio of BNTL ranges from the 0.73-0.77 with the average mean of 0.69 and coefficient of variation is 0.12. The total debt to total assets ratio of BNL ranges from the 0.65-0.0.69 with average mean of 0.69 and coefficient of variation is 0.12. Among these five companies, BNTL has highest mean and lowest coefficient of

variation. Whereas HDL has lowest mean with lowest CV. UNL, BNTL, BNL has equal CV ie.0.12.The company with low total debt to assets BNTL is preferable because high mean with low CV than other company.

The debt to assets ratio of CHCL ranges from the 0.72-0.41 with the average mean of 0.59 and coefficient of variation is 0.19. Similarly the debt to assets ratio of AVHCL ranges from the 0.11-0.00 with the average mean of 0.23 and coefficient of variation is 1.08. The debt to assets ratio of SMHCL ranges from the 0.42-0.75 with the average mean of 0.56 and coefficient of variation is 0.23. The debt to assets ratio of API ranges from the 0.60-0.43 with the average mean of 0.57 and coefficient of variation is 0.13. The debt to assets ratio of BPCL ranges from the 0.11-0.24 with average mean of 0.16 and coefficient of variation is 0.28.Hear the highest mean is that API with the lowest coefficient of variation and AVHCL has lowest mean and highest coefficient of variation. Since low debt to assets API is preferable.

4.1.3. Analysis of return on assets

Return on asset is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets. High ratio is prefer.

Table 4.3
Return on assets

	Manufacturing sector					Hydro sector				
Year	**UNL**	**BNTL**	**BNL**	**SHIVAM**	**HDL**	**CHCL**	**AVHCL**	**SMHCL**	**API**	**BPCL**
2076	0.10	0.00	-0.01	0.10	0.24	0.02	0.06	0.07	0.03	0.09
2075	0.28	0.06	0.07	0.13	0.39	0.03	0.05	0.04	0.02	0.10
2074	0.31	0.17	0.15	0.11	0.24	0.04	0.02	0.05	0.02	0.09
2073	0.29	0.11	0.08	0.10	0.05	0.50	0.09	0.06	0.03	0.12
2072	0.37	0.07	0.08	0.13	0.26	0.07	0.10	-0.01	0.04	0.12
Mean	0.27	0.08	0.07	0.11	0.23	0.13	0.06	0.04	0.03	0.10
SD	0.09	0.06	0.09	0.01	0.11	0.19	0.03	0.03	0.01	0.01
CV	0.34	0.69	1.21	0.12	0.46	1.41	0.46	0.61	0.31	0.13

Source: Annual Report 2072-2076

The table 4.3 shows that the return on assets ratio of selected manufacturing and hydro companies for last five consecutive years. The returns on assets ratio of selected manufacturing companies are fluctuating trend during the study period. The average rate of return on assets of UNL is 0.27, BNTL 0.08, BNL 0.07, SHIVAM 0.11, and HDL 0.23. This shows UNL has highest ROA i.e. 0.27 and BNTL has lowest ROA i.e. 0.08 over the study period. C.V. measures the variation among variables. The CV of UNL is 0.34, BNTL 0.69, BNL 1.21, SHIVAM 0.12, and HDL 0.46. It shows BNL has highest CV i.e. 1.21 which indicates highly fluctuation on ROA and SHIVAM has lowest CV i.e. 0.12 which indicates more consistency on ROA.

Table 4.3 shows that the returns on assets ratio of selected hydro companies are fluctuating trend during the study period. The average rate of return on assets of CHCL is 0.13, AVHCL 0.06, SMHCL 0.04, API 0.03, and BPCL 0.10. This shows CHCL has highest ROA i.e. 0.13 and API has lowest ROA i.e. 0.03 over the study period. C.V. measures the variation among variables. The CV of CHCL is 1.41, AVHCL 0.46, SMHCL 0.61, API 0.31, and BPCL 0.13. It shows CHCL has highest CV i.e. 1.41 which indicates highly fluctuation on ROA and BPCL has lowest CV i.e. 0.13 which indicates more consistency on ROA.

4.1.4: Analysis of return on equity

The return on equity is the amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. High ratio is prefer.

Table: 4.4.

Return on equity

	Manufacturing sector					Hydro sector				
Year	**UNL**	**BNTL**	**BNL**	**SHIVAM**	**HDL**	**CHCL**	**AVHCL**	**SMHCL**	**API**	**BPCL**
2076	0.18	0.00	-0.02	0.12	0.37	0.06	0.06	0.11	0.08	0.10
2075	0.46	0.14	0.18	0.19	0.54	0.09	0.05	0.08	0.06	0.11
2074	0.52	0.37	0.30	0.22	0.37	0.10	0.02	0.10	0.05	0.11
2073	0.47	0.38	0.29	0.21	0.08	1.03	0.10	0.17	0.07	0.15
2072	0.55	0.32	0.25	0.26	0.40	0.12	0.10	-0.03	0.08	0.18
Mean	0.44	0.24	0.20	0.20	0.35	0.28	0.07	0.09	0.06	0.13
SD	0.13	0.15	0.12	0.04	0.15	0.38	0.03	0.06	0.01	0.03
CV	0.30	0.61	0.58	0.22	0.42	1.34	0.43	0.74	0.18	0.24

Source: Annual Report 2072-2076

The table 4.4 indicates the efficiency of the manufacturing and hydro companies in generating profit through mobilizing the shareholders' property. The table showed that the manufacturing companies the return on equity of UNL was highest, 0.55, in the fiscal year 2072 and lowest, 0.18, in the fiscal year 2076. In average, the return on equity of UNL was 0.44, which indicated that UNL was able to generate Rs.44 as net income from the mobilization of Rs.100 of shareholders' equity. The CV of UNL is 0.30. Also, the return on equity of BNTL was highest, 0.38, in the fiscal year 2073 and lowest, 0.00 in the fiscal year 2076. In average, return on equity of BNTL was 0.24. The CV of BNTL is 0.61. The return on equity of BNL was highest, 0.30, in the fiscal year 2074 and lowest,-0.02 in the fiscal year 2076. In average, return on equity of BNL was 0.20. The CV of BNL is 0.58. The return on equity of SHIVAM was highest, 0.26, in the fiscal year 2072 and lowest, 0.12 in the fiscal year 2076. In average, return on equity of SHIVAM was 0.20, and the CV is 0.22. The return on equity of HDL was highest, 0.54, in the fiscal year 2075 and lowest, 0.0.08 in the fiscal year 2073. In average, return on equity of HDL was 0.35, and the CV is 0.42.Comparing the ROE of sample manufacturing companies it can be concluded that the average ROE of UNL is highest i.e. 0.44 and the lowest is of BNL and SHIVAM i.e. 0.20 and 0.20. This shows that the return to shareholders of UNL get the highest return whereas the return to shareholders of UNL and SHIVAM was lowest.

Table 4.4 shows the return on equity of selected hydro companies are fluctuating trend during the study period. The return on equity of CHCL was highest, 1.03, in the fiscal year 2073 and lowest, 0.06, in the fiscal year 2076. In average, the return on equity of CHCL was 0.28, which indicated that CHCL was able to generate Rs.28 as net income from the mobilization of Rs.100 of shareholders' equity. The CV of CHCL is 1.38. Also, the return on equity of AVHCL was highest, 0.10, in the fiscal year 2072 and 2073, and lowest, 0.02 in the fiscal year 2074. In average, return on equity of AVHCL was 0.09. The CV of AVHCL is 0.61. The return on equity of SMHCL was highest, 0.11, in the fiscal year 2076 and lowest,-0.03 in the fiscal year 2072. In average, return on equity of SMHCL was 0.09. The CV of SMHCL is 0.74. The return on equity of API was highest, 0.08, in the fiscal year 2072 and 2076, and lowest, 0.05 in the fiscal year 2074. In average, return on equity of API was 0.06, and the CV is 0.18. The return on equity of BPCL was highest, 0.18, in the fiscal year 2072 and lowest, 0.10 in the fiscal year 2076. In average, return on equity of BPCL was 0.13, and the CV is 0.24.Comparing the ROE of sample hydro companies it can be concluded that the average ROE of CHCL is highest i.e. 0.28 and the lowest is of API i.e. 0.06. This shows that the return to shareholders of CHCL get the highest return whereas the return to shareholders of API was lower.

4.1.5: Analysis of net profit margin

Profit is the main target for any business organization. The company can find out its profitability with the help of profit margin ratio. The profitability is directly related to the sales revenue of the company; therefore, it is clearly known that the only way of increasing profit is the increase in sales volume.

Table: 4.5.

Net profit margin

	Manufacturing sector					Hydro sector				
Year	**UNL**	**BNTL**	**BNL**	**SHIVAM**	**HDL**	**CHCL**	**AVHCL**	**SMHCL**	**API**	**BPCL**
2076	0.06	0.00	-0.01	0.13	0.19	0.52	1.00	0.43	0.33	1.07
2075	0.19	0.08	0.08	0.15	0.17	0.67	0.98	0.32	0.40	1.11
2074	0.21	0.13	0.11	0.14	0.12	0.78	0.38	0.35	0.45	1.05
2073	0.22	0.11	0.09	0.11	0.04	6.99	1.76	0.35	0.54	1.01
2072	0.28	0.08	0.07	0.13	0.15	0.81	1.76	-0.07	0.77	1.04
Mean	0.19	0.08	0.07	0.13	0.13	1.95	1.18	0.27	0.50	1.06
SD	0.07	0.04	0.04	0.01	0.05	2.52	0.53	0.18	0.15	0.03
CV	0.37	0.55	0.61	0.09	0.41	1.29	0.45	0.64	0.31	0.03

Source: Annual Report 2072-2076

The table 4.5 in manufacturing sector shows that the net profit margin of UNL was highest in the year 2073 i.e. 0.22 and the lowest was 0.06 in the year 2076. The average net profit margin was 0.19 and the CV was 0.37. The highest net profit margin of BNTL was 0.13 in the year 2074 and the lowest was 0.00 in the year 2076. The average net profit margin of BNTL was 0.08 and the CV was 0.55 throughout the period of study. Likewise, the highest net profit margin of BNL was 0.11 in the year 2074 and the lowest net profit margin was -0.01 in the year 2076. The average net profit margin of BNL was 0.07 whereas CV is 0.61. The highest net profit margin of SHIVAM was 0.15 in the year 2075 and the lowest was 0.11 in the year 2073. The average net profit margin of SHIVAM was 0.13 and the CV was 0.09. The highest net profit margin of HDL was 0.19 in the year 2076 and the lowest was 0.04 in the year 2073. The average net profit margin of HDL is 0.13 and the CV is 0.14.

Comparing the average net profit margin of selected manufacturing companies, the highest net profit margin is of UNL i.e. 0.19 and the lowest is of BNL i.e. 0.07. From the above analysis we can interpret that the operational efficiency of UNL was best in the industries and the BNL was not so good as compared to industry.

Table 4.5 in hydro sector shows that the net profit margin of CHCL was highest in the year 2073 i.e. 6.99 and the lowest was 0.0.52 in the year 2076. The average net profit margin was 1.95 and the CV was 1.29. The highest net profit margin of AVHCL was 1.76 in the year 2073 and 2072 and the lowest was 0.38 in the year 2074. The average

net profit margin of AVHCL was 1.18 and the CV was 0.45 throughout the period of study. Likewise, the highest net profit margin of SMHCL was 0.43 in the year 2076 and the lowest net profit margin was -0.07 in the year 2072. The average net profit margin of SMHCL was 0.27 whereas CV is 0.64. The highest net profit margin of API was 0.77 in the year 2072 and the lowest was 0.33 in the year 2076. The average net profit margin of API was 0.50 and the CV was 0.31. The highest net profit margin of BPCL was 1.11 in the year 2075 and the lowest was 1.01 in the year 2073. The average net profit margin of BPCL was 1.06 and the CV was0.03.

Comparing the average net profit margin of selected hydro companies, the highest net profit margin is of CHCL i.e. 1.95 and the lowest is of SMHCL i.e. 0.27. From the above analysis we can interpret that the operational efficiency of CHCL was best in the industries and the SMHCL was not so good as compared to industry.

4.1.1.6. Descriptive Statistics for manufacturing companies

The table illustrates the descriptive statistics. It indicates the minimum, maximum and mean of the Return on assets, Return on equity, Net profit margin, Debt to total assets ratio and Debt to total equity ratio and the standard deviation of each of the variable.

Table: 4.6.

Descriptive statistics for manufacturing companies

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Return on assets	25	0.155	0.111	-0.006	0.385
Return on equity	25	0.287	0.158	-0.016	0.547
Net profit margin	25	0.121	0.067	-0.009	0.284
Debt to total assets ratio	25	0.479	0.160	0.227	0.771
Debt to total equity ratio	25	1.170	0.817	0.294	3.359

Source: STATA

Table 4.6, provides descriptive statistics for capital structure and profitability variables. Return on assets ranges from minimum -0.006 to maximum 0.385, with a mean value of 0.115, and a standard deviation of 0.111. This wider fluctuation indicates that the sample includes both high and low value firms. Return on equity ranges from minimum

-0.16 to maximum 0.547, with a mean value of 0.287, and a standard deviation of 0.158. Net profit margin ranges from minimum -0.009 to maximum 0.284, with a mean value of 0.121 , and a standard deviation of 0.067.Debt to total assets ratio ranges from minimum 0.227 to maximum 0.771, with a mean value of 0.479 , and a standard deviation of 0.160. Debt to total equity ranges from minimum 0.294 to maximum 3.359, with a mean value of 1.170, and a standard deviation of 0.817. This observation indicates that the companies used less debt than equity. The positive return on assets, return on equity and net profit margin indicates that the companies were on average profitable although some companies were operating at a loss as reflected in the negative minimum observed value of return on assets, return on equity and net profit margin.

4.3 Descriptive Statistics for hydro companies

The table illustrates the descriptive statistics. It indicates the minimum, maximum and mean of the Return on assets, Return on equity, Net profit margin, Debt to total assets ratio and Debt to total equity ratio and the standard deviation of each of the variable.

Table: 4.7

Descriptive statistics for hydro companies

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Return on assets	25	0.074	0.095	-0.007	0.501
Return on equity	25	0.126	0.193	-0.027	1.030
Net profit margin	25	0.992	1.323	-0.072	6.990
Debt to total assets ratio	25	0.421	0.237	0.002	0.755
Debt to total equity ratio	25	0.989	0.841	0.002	3.078

Source: STATA

Table 4.7, provides descriptive statistics for capital structure and profitability variables. Return on assets ranges from minimum -0.007 to maximum 0.501, with a mean value of 0.074, and a standard deviation of 0.095. This wider fluctuation indicates that the sample includes both high and low value firms. Return on equity ranges from minimum

-0.027 to maximum 1.030, with a mean value of 0.126, and a standard deviation of 0.193. Net profit margin ranges from minimum -0.072 to maximum 6.990, with a mean value of 0.992, and a standard deviation of 1.323. Debt to total assets ratio ranges from minimum 0.002 to maximum 0.755, with a mean value of 0.421, and a standard deviation of 0.237. Debt to total equity ranges from minimum 0.002 to maximum 3.078, with a mean value of 0.989, and a standard deviation of 0.841. This observation indicates that the companies used less debt than equity. The positive return on assets, return on equity and net profit margin indicates that the companies were on average profitable although some companies were operating at a loss as reflected in the negative minimum observed value of return on assets, return on equity and net profit margin.

4.4 Coefficient of correlation

Correlation analysis was used to determine the strength and direction of the linear relationship between the variables under consideration.

Table 4.8

Correlation Matrix of hydro companies

Variables	ROA	ROE	NPM	DTAR	DTER
ROA	1				
ROE	0.972	1			
NPM	0.969	0.949	1		
DTAR	-0.215	-0.009	-0.188	1	
DTER	-0.266	-0.080	-0.226	0.894	1

Source: STATA

Table 4.8 presents the correlation among the dependent and independent variables of hydro companies. Obviously, this table shows correlations between the capital structure variables (i.e. total debt to assets ratio, total debt to equity ratio) and profitability variables (i.e. return on asset, return on equity and net profit margin).

The correlation coefficient between ROA and DTAR is -0.215. The correlation of ROA with DTAR is meaningful. In the context of this is negative but relationship, highly inferences can be made. The correlation coefficient between ROA and DTER is -0.266. The correlation of ROA with DTER is negative relationship. Consequently, the correlation coefficient between ROE and DTAR is -0.009. This is negative relationship.

The correlation coefficient between ROE and DTER is -0.080. The correlation of ROE with DTER is negative relationship. The correlation coefficient between NPM and DTAR is -0.118. This is negative relationship. The correlation coefficient between NPM and DTER is -0.226. The correlation of ROE with DTER is negative relationship.

Table 4.9

Correlation Matrix of manufacturing companies

Variables	ROA	ROE	NPM	DTAR	DTER
ROA	1				
ROE	0.914	1			
NPM	0.886	0.843	1		
DTAR	-0.634	-0.405	-0.652	1	
DTER	-0.619	-0.358	-0.628	0.923	1

Source: STATA

Table 4.9 presents the correlation among the dependent and independent variables of manufacturing companies. Obviously, this table shows correlations between the capital structure variables (i.e. total debt to assets ratio, total debt to equity ratio) and profitability variables (i.e. return on asset, return on equity and net profit margin).

The correlation coefficient between ROA and DTAR is -0.634. The correlation of ROA with DTAR is meaningful. In the context of this is negative relationship, highly inferences can be made. The correlation coefficient between ROA and DTER is -0.619. The correlation of ROA with DTER is negative relationship. Consequently, the correlation coefficient between ROE and DTAR is -0.405. This is negative relationship. The correlation coefficient between ROE and DTER is -0.358. The correlation of ROE with DTER is negative relationship. The correlation coefficient between NPM and DTAR is -0.652. This is negative relationship. The correlation coefficient between NPM and DTER is -0.628. The correlation of ROE with DTER is negative relationship. The relationship between ROA with DTAR and DTER, and NPM with DTAR and DTER is highly negative.

In conclusion, the correlation coefficient between capital structure and profitability is negative.

4.5 Regression analysis

A regression analysis test was done to measure a relationship between capital structure and the profitability of the businesses.

Table. 4.10

Relationship between capital structure and ROA

ROA	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
DebtTA	.1	.165	0.61	.547	-.232	.432	
DebtTE	-.072	.04	-1.78	.082	-.153	.009	*
Constant	.147	.043	3.44	.001	.061	.233	***

Mean dependent var	0.114	SD dependent var	0.110
R-squared	0.147	Number of obs	50
F-test	4.059	Prob > F	0.024
Akaike crit. (AIC)	-81.741	Bayesian crit. (BIC)	-76.005

*** *p<.01, ** p<.05, * p<.1*

Dependent variable: ROA

Independent variable: DebtTA and DebtTE

Source: STATA

Table 4.10 shows that, the Regression analysis has been conducted on dependent variable as ROA and two independent variable: Total debt to total assets ratio and total debt to total equity ratio. The multiple regression of ROA on capital structure shows that regression coefficient is positive for total debt to total assets. Hence, larger the debt to total assets higher will be the impact on ROA. In this study there is a negative regression coefficient of debt to total equity and ROA. Hence, when total debt to total assets increases, ROA also increases and while total debt to total equity increase ROA decreases and vice versa. The R-square value is 0.147.It means 14.7% of the dependent variable (ROA) is explained by independent variable. In above table F statistics is 4.059, which is high significant at 0.024. Hence, as the P-value is less, 0.05, there can be linear regression relationship between the dependent variable and independent variable. The total debt to total assets ratio has a P- value of 0.547, and corresponding, t-value of 0.61. It signifies that the variable is not important in the model or insignificant relationship between ROA and total debt to total assets ratio because P-value>0.05. While total debt to total equity ratio has a P- value of 0.082, and corresponding, t-value of -1.78. The p-value>0.05 so it is insignificant relationship between ROA and total debt to total equity ratio.

Table. 4.11

Relationship between capital structure and ROE

ROE	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
DebtTA	.237	.308	0.77	.446	-.383	.858	
DebtTE	-.084	.076	-1.11	.273	-.236	.068	
Constant	.19	.08	2.38	.021	.03	.351	**

Mean dependent var	0.206	SD dependent var	0.193
R-squared	0.031	Number of obs	50
F-test	0.743	Prob > F	0.481
Akaike crit. (AIC)	-19.243	Bayesian crit. (BIC)	-13.507

*** *p<.01, ** p<.05, * p<.1*

Dependent variable: ROE

Independent variable: DebtTA and DebtTE

Source: STATA

Table 4.11 shows that, Regression analysis has been conducted on dependent variable as ROE and two independent variable: Total debt to assets ratio and total debt to equity ratio. The multiple regression of ROE on capital structure shows that regression coefficient is positive for total debt to total assets. Hence, larger the debt to total assets higher will be the impact on ROE. In this study there is a negative regression coefficient of total debt to total equity and ROE. Hence, when total debt to total assets increases, ROE also increases and while total debt to total equity increase ROE decreases and vice versa. The R-square value is 0.031.It means 3.1% of the dependent variable (ROE) is explained by independent variable. In above table F statistics is 0.743, which is low significant at 0.481. Hence, as the P-value>0.05, there can be insignificant relationship between the dependent variable and independent variable. The total debt to total assets ratio has a P- value of 0.446, and corresponding, t-value of 0.77. It signifies that the variable is not important in the model or insignificant relationship between ROE and total debt to total assets ratio because P-value>0.05. While total debt to total equity ratio has a P-value of 0.273, and corresponding, t-value of -1.11. The P-value>0.05 so it is also insignificant relationship between ROE and total debt to total equity ratio.

Table. 4.12

Relationship between capital structure and NPM

NPM	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
DebtTA	-.717	1.626	-0.44	.661	-3.987	2.554	
DebtTE	-.107	.398	-0.27	.789	-.909	.694	
Constant	.995	.421	2.36	.022	.148	1.841	**

Mean dependent var	0.557	SD dependent var	1.026
R-squared	0.049	Number of obs	50
F-test	1.215	Prob > F	0.306
Akaike crit. (AIC)	146.968	Bayesian crit. (BIC)	152.704

*** *p<.01, ** p<.05, * p<.1*

Dependent variable: NPM

Independent variable: DebtTA and DebtTE

Source: STATA

Table 4.12 shows that, Regression analysis has been conducted on dependent variable as NPM and two independent variable: Total debt to assets ratio and total debt to equity ratio. The multiple regression of NPM on capital structure shows that regression coefficient is negative for total debt to total assets and total debt to total equity. Hence, larger the debt to total assets higher will be the impact on ROA. Hence, when total debt to total assets and total debt to total equity increases, NPM decreases and vice versa. The R-square value is 0.049.It means 4.9% of the dependent variable (NPM) is explained by independent variable. In above table F statistics is 1.215, which is significant at 0.306. Hence, as the P-value>0.05, there can be insignificant relationship between the dependent variable and independent variable. The total debt to total assets ratio has a P- value of 0.661, and corresponding, t-value of -0.44. It signifies that the variable is not important in the model or insignificant relationship between NPM and total debt to total assets ratio because P-value>0.005. While total debt to total equity ratio has a P-value of 0.789, and corresponding, t-value of -0.27. The P-value>0.05 so it is insignificant relationship between NPM and total debt to total equity ratio.

Table. 4.13

Tolerance and VIF analysis

VIF	1/VIF
5.070	0.197
5.070	0.197

Source: STATA

Table: 4.13 shows that none of the tolerance level is < or equal to 1; and also VIF values are equal to 5. Thus measures selected for assessing independent variable in this study do not reach levels.

4.1.2 Findings

Based on the data provided by the concerned companies the findings of the study with respect to capital structure and profitability of manufacturing and hydro companies in Nepal are as follows:

i. The mean ratio of total debt to shareholders equity of selected manufacturing companies UNL, BNTL, BNL, SHIVAM and HDL are 66%, 223%, 172%, 68%, and 55%. BNTL has the highest mean ratio among the selected companies. High ratio indicates that the proportion of total debt is higher than shareholders equity. BNTL has quite satisfactory debt/equity ratio compare with other companies. Similarly, the mean ratio of total debt to shareholder equity of hydro companies CHCL, AVHCL, SMHCL, API, and BPCL are 159%, 24%, 153%, 138%, and 21%. CHCL has the highest mean ratio among the selected companies. CHCL has quit satisfactory debt to equity ratio compare other company. The manufacturing companies debt equity ratio has more satisfactory than hydro.

ii. High proportion of debt in the capital structure would link to inflexibility in the operation of the firms as creditors would exercise pressure and interfere in management. Furthermore such firm would be able to borrow only under very restrictive term and condition plus they have to bear heavy burden of interest payment.

iii. The mean average of total debt to total assets ratio of manufacturing companies UNL, BNTL, BNL, SHIVAM, and HDL are 39%, 69%, 60%, 37%, and 35%. The total debt to assets ratio of BNTL is very high. The high ratio indicates that the creditor's margin of safety is very low or they have high risk and creditors'

claims in total assets are very high. HDL has mean average of total debt to assets ratio of 35%. It shows less than 50% of total assets from the creditors claim it is the positive benefit of the company compared to BNTL and HDL. Similarly, mean average of hydro companies CHCL, AVHCL, SMHCL, API and BPCL are 59%, 23%, 56%, 57% and 16%. The total debt to assets ratio of API is very high. The higher ratio indicates that the creditor's margin of safety is very low or they have high risk and creditors' claims in total assets are very high. BPCL has mean average of total debt to assets ratio of 16%. It shows less than 50% of total assets from the creditors claim it is the positive benefit of the company compared to API and BPCL. The debt to total assets ratio of more manufacturing companies mean value are less than 50% and more hydro companies mean value are less than 50%, so hydro companies has high risk and creditors' claim in total assets are very high and vice versa.

iv. The average return on total assets of manufacturing companies UNL, BNTL, BNL, SHIVAM and HDL are 27%, 8%, 7%, 11% and 23%. The highest average ROA is UNL and lowest is BNL. It shows that the average return earned by UNL was highest in comparison to asset utilized whereas BNL was lowest. Similarly, the return on assets of hydro companies CHCL, AVHCL, SMHCL, API and BPCL are 13%, 6%, 4%, 3% and 10%. The highest average ROA is CHCL and lowest is API. It shows that the average return earned by CHCL was highest in comparison to asset utilized whereas API was lowest.

v. The average return on equity of manufacturing companies UNL, BNTL, BNL, SHIVAM and HDL are 44%, 24%, 20%, 20% and 35%. The highest ROE is UNL and lowest is BNL and SHIVAM. It shows that the return on equity utilized was more in UNL and less in BNL and SHIVAM among the selected manufacturing companies on the study. . ROE for BNL is negative in the FY 2076 in the study period which means there is no return on equity. Other fiscal year it has positive ROE that is good for shareholders. Similarly, the average return on equity of hydro companies CHCL, AVHCL, SMHCL, API and BPCL are 28%, 7%, 9%, 6% and 13%. The highest ROE is CHCL and lowest is API. It shows that the return on equity utilized was more in CHCL and less in API among the selected hydro companies on the study. . ROE for SMHCL is negative in the FY 2072 in the study period which means there is no return on equity. Other fiscal year it has positive ROE that is good for shareholders.

vi. The average net profit margin of manufacturing companies UNL, BNTL, BNL, SHIVAM and HDL was 19%, 8%, 7%, 13% and 13%. It shows that the highest NPM is earn UNL and lowest is earn BNL from operating activity. NPM for BNL is negative in the FY 2072 in the study period which means there is no profit. NPM of manufacturing companies fluctuation for the study period. Similarly, mean value of hydro companies CHCL, AVHCL, SMHCL, API and BPCL are 195%, 118%, 27%, 50% and 106%. It shows that the highest net profit margin is earn CHCL and lowest is earn SMHCL from operating activity.

vii. The calculated correlation value of return on assets has positive relation with return on equity and net profit margin, and negative relation with total debt to total assets and total debt to total equity. Similarly return on equity has positive relationship between net profit margin, and negative relation with total debt to total assets and total debt to total equity. Net profit margin has positive relationship between ROA and ROE, and negative relationship between total debt to total assets and total debt to total equity.

viii. The multiple regression of ROA on capital structure shows that regression coefficient between total debt to total assets is positive and insignificant. Where, H1 is rejected. Regression coefficient between total debt to total equity is negative and insignificant. Where, H0is rejected.

ix. The multiple regression of ROE on capital structure shows that regression coefficient between total debt to total assets is positive and insignificant, and regression coefficient between total debt to total equity is negative and insignificant relationship. Where, H0 is rejected.

x. The multiple regression of NPM on capital structure shows that regression coefficient between total debt to total assets is negative and insignificant, and regression coefficient between total debt to total equity is negative and insignificant relationship. Where, H0 is rejected.

4.2 Discussion

Capital structure plays a vital role in financial decision making process, maximizing the firm’s performance and its value. The term capital structure is the mix of different securities issued by firm to finance its operations. These mixes of different financing methods issued by firm are called firm’s capital structure.

This research analysed under descriptive and analytical research design, and describe variables characteristic as well analyse facts. Five manufacturing and five hydropower companies are taken as sample using judgmental sampling method for analysis purpose under the relationship between capital structure and profitability. Data are collected through annual statement of selected sample companies, NEPSE, as well as others various publication. Financial ratio, Mean, Standard Deviation, and Coefficient of variation, Correlation coefficient and Multiple Regression are used for analysis tools and summarized the conclusion.

This research specially conducts for the study of capital structure of manufacturing and hydropower companies. The special attention is given to the capital structure and its relationship on the profitability under this study. The study also compares the profitability performance measured in terms of Return on Assets (ROA), Return on Equity (ROE) and Net profit margin (NPM) of selected companies. This study investigates the relation of capital structure indicators (Debt to total assets ratio and Debt to total equity ratio) on the profitability of manufacturing and hydropower companies.

The higher total debt to total equity ratio is 2.23 and lower total debt to total equity ratio is 0.21. Which indicate some company use more debt and some company use less debt so there is not optimum capital structure for the companies. The total debt to total equity is negatively correlated with the ROA, ROE and NPM. The total debt to total equity ratio directly influences the companies' profitability. The higher total debt to total assets ratio is 0.69 and lower total debt to total assets ratio is 0.16. Which indicate some company use more debt and some company use less debt than their total assets. The total debt to total assets is negatively correlated with the ROA, ROE and NPM. The total debt to total assets ratio directly influences the companies' profitability.

The correlation value of return on assets has positive relationship with ROE and NPM, and negative relationship between total debt to total assets and total debt to total equity. NPM has positive relationship between ROA and ROE and negative relationship between total debt to total assets and total debt to total equity. ROE has positive relationship between ROA and NPM, and negative relationship between total debt to total assets and total debt to total equity. Hence, it shows that capital structure and profitability is negative relationship. Kaumbuthu (2011) in their findings also come up

with the same result that there is negative relationship between capital structure and profitability. Similarly, Sadiq and Sher (2016) findings are also negative relationship between capital structure and profitability. Whereas, Nirajini and priya (2013) in his study capital structure and financial performance reveals a positive relation between capital structure and financial performance which is contradictory from our findings. Previous research take sample only listed trading companies, data are collected on only five years and correlation and multiple regression analysis was used. This research take sample on listed manufacturing and hydropower companies, data are collected on five years and analytical research design is used.

ROA is positive insignificant relation with total debt to total assets and negative insignificant relationship with total debt to total equity ratio. ROE is positive insignificant relation with total debt to total assets and negative insignificant relation with total debt to total equity. NPM is negative insignificant relationship between total debt to total assets and total debt to total equity. Bist and Irwan (2018) findings are also insignificant on ROA and total debt to total assets result. Similarly, Kajananthan and Nimalthasan (2013) findings are also insignificant on total debt to total equity to NPM and ROE. Raman (2019) findings are also significant on total debt to total equity ratio and ROA. The tolerance level is < or equal to 1; and also VIF values are perfectly below 10. Thus measures selected for assessing independent variable in this study do not reach levels. Kajananthan and Nimalthasan (2013) in his study the tolerance level is < or equal to 1; and also VIF values are perfectly below 10. So the capital structure and profitability has insignificant effect. This research also agree with this statement.

Lamichine (2019) studied the impact of capital structure on firm's profitability of listed manufacturing companies his research finding there is significant relationship between total debt to total assets and total debt to total equity to ROA, ROE and ROS. But this research cannot support this argument.

In above previous research and this research conclusion conform that capital structure affect the profitability capital structure and profitability has negative relationship.

CHAPTER 5
SUMMARY AND CONCLUSION

This chapter will handle the summary, conclusion and implications of the study.

5.1 Summary

Capital structure can be a mixture of a firm's long-term debt, short term debt, Common equity and preferred equity. A company's proportion of short and long term debt is considered when analysing capital structure. When analysts refer to capital structure, they are most likely referring a firm's debt to equity ratio, which provides insight into how risky a company is. Usually, a company that is heavily financed by debt has a more aggressive capital structure and therefore poses greater risk to investors. This risk, however may be the primary source of the firm's growth.

The term capital structure refers to the percentage of capital at work in a business by types. Broadly speaking, there are two forms of capital: Equity capital and debt capital. Each types of capital has its benefits and drawbacks, and a substantial part of wise corporate steward ship and management is attempting to find the perfect capital structure regarding risk/ reward payoff for shareholders.

The capital structure of a concern depends upon a large number of factors such as leverage or trading on equity, growth of the company, nature and size of business, the idea of retaining control, flexibility of capital structure, requirement of investors, cost of flotation of new securities, timing of issue, corporate tax rate and the legal requirements. It is not possible to rank hem because all such factors of new securities, timing if issues, corporation tax rate and the legal requirements. It is not possible to rank hem because all such factors are of different important and the influence of individual factors of a firm changes over a period of time. Capital Structure is referred to as the ratio of different kinds of securities raised by a firm as long-term finance.

Capital Structure means a combination of all long-term sources of finance. It includes equity. Share capital, Reserve and Surplus, Preference Share capital, Loan, Debenture and other such long-term sources of finance. A company has to decide the proportion in which it should have its own finance and outsider's finance particularly debt finance. Based on the proportion of finance, WACC and value of a firm are affected.

This study has been prepared to know about the relationship between capital structure and profitability position of manufacturing and hydro companies in Nepal. The capital structure and profitability are two major components for manufacturing and hydro sector to achieve its objectives. If there is optimum level of capital structure companies will operating sustainable and earn profit. In the first chapter, the background and subject matter of the study consisting statement of the problem, objective of the study, significance and limitations of the study has been dealt. In the second chapter, the relevant review of literature has been made in terms of theoretical background of manufacturing and hydro companies' principles as well journals; articles and previous thesis have been reviewed.

Third chapter deals with the research methodology that has been used to evaluate the capital structure and profitability position of manufacturing and hydro companies under study. In the fourth chapter, the data and information are presented, analysed and interpreted by the help of financial and statistical tools. Finally, in the fifth and last chapter, summary, conclusion and recommendations have been made regarding the entire study. For the purpose of analysis and evaluation, different financial and statistical tools have been used. Here, financial tools include capital structure and profitability ratio whereas; statistical tools include average mean, standard deviation, co-efficient of variation, co-efficient of correlation and regression analysis. The capital structure includes total debt to total assets ratio and total debt to total equity ratio. These ratios help to analyse and evaluate the capital structure position manufacturing and hydro companies. Similarly, the profitability ratios such as return on asset, return on equity and net profit margin assist to analyse and evaluate the profitability position of manufacturing and hydro companies.

The data that have been analysed by such financial and statistical tool includes from FY 2072 to FY 2076. This study is mainly conducted on the basis of secondary data. Therefore, the study has inherent limitation of the secondary data. The authenticity of the study depends on the authenticity of the data provided and collected. For the systematic analysis of study, chapter plan have been made. Basically, the entire research work has focused on the descriptive study on relationship between capital structure and profitability of manufacturing and hydro companies in Nepal. In this study attempts are made to get knowledge about the relationship between capital structure and

profitability, operational efficiency of the management, efficient use of total assets by the management and found strength & weakness of selected manufacturing and hydro companies according to overall capital structure and profitability position. The result found that capital structure and profitability has negative relationship.

5.2. Conclusion

This study examined capital structure and profitability of five listed manufacturing companies and five hydropower companies for the period of five years i.e. from 2072 to 2076. Researcher analyzes the relationship between capital structure variable against profitability variables.

From this study it is concluded that manufacturing companies HDL is performing well in comparison to UNL, BNTL, BNL and SHIVAM. Its total debt to assets ratio and total debt to equity ratio is low. The profit margin of the HDL is higher among all companies which indicate good earning capacity of the companies. Similarly, hydropower companies BPCL is performing well in comparison to CHCL, AVHCL, SMHCL and API. Its total debt to assets ratio and total debt to equity ratio is low. The profit margin of the BPCL is higher among all companies which indicate good earning capacity of the companies. Investors are getting more returns from their investment. HDL and BPCL has borrowed a very little amount of debt. Whereas UNL, BNTL, BNL, SHIVAM, CHCL, AVHCL, SMHCL, and API has borrow huge amount of debt. Though higher volume of debt gives the tax advantage but excessive use of debt leads to higher interest expenses and in the times of financial distress company will go bankrupt.

Profitability is the measurement of efficiency. It indicates the degree of success in achieving desired profit. It shows entire performance of companies. In manufacturing companies UNL has higher mean value of ROA, ROE and NPM than BNTL, BNL, SHIVAM and HDL. UNL is earn high profit than others to efficient utilization of its total assets. Investors are getting more return from their investment and also company performance is good than other companies. Similarly, the hydro companies CHCL has higher mean value of ROA, ROE and NPM than APHCL, SMHCL, API and BPCL. CHCL has earn high profit than others to efficient utilization of its total assets. Investors are getting more return from their investment and also company performance is good than other companies. All manufacturing and hydro companies ROA, ROE and NPM

has positive mean value so all the company are running on profitable to use all resources. All company gives return on investor's investment.

After testing the relationship researcher reveals a mixed relationship between capital structure variables against profitability variables. ROA has positive insignificant relation with total debt to assets and insignificant negative relationship with total debt to equity. ROE has negative insignificant relation with total debt to equity and positive insignificant relation with total debt to assets. NPM has negative and insignificant relation with total debt to assets and negative and insignificant relationship with total debt to equity.

This study results reveal insignificantly negative relation between total debt and profitability. These findings imply that an increase in debt position is associated with a decrease in profitability; thus, the higher the debt, the lower the profitability of the firm. Although the financial leverage provides tax benefits to the corporations, it increases default risk. When the firm increases the volume of debt, interest expenses which is a fixed obligation also increases and if the firm is in its hard times then this fixed obligation will create the situation of financial distress and if its operating income is insufficient to cover interest charge then stockholder will have to make up the short fall and if they can't the firm may be forced into bankruptcy.

5.3 Implications

Managing manufacturing and hydro companies can be a very difficult venture in Nepal in the face of deteriorating economic condition. Increased liberalized market, transportation difficulties, unstable government, power cut, high inflation rates are some of the problem which has to be overcome. Manufacturing and hydro company generally plays a crucial role in the economic development of every nation. One critical decision manufacturing and hydro company face is the debt/equity choice. Among others this choice is necessary for the profit determination of firms. Manufacturing and hydro companies should make their financing decision prudently in order to achieve competitive advantage in the industries and make superior profits.

Based on the major findings of the study of the selected manufacturing and hydro companies listed in NEPSE, the following recommendation are presented:

i. An increase in the level of debt also increase the riskiness of companies so manufacturing and hydro companies should depend a lot on internal source of financing in order to increase their profitability. This kind of financing is less risky and more profit enhancing. The choice of debt financing should be a last resort.
ii. Investors of listed manufacturing and hydro companies in Nepal should review the capital structure of companies before investing in them because the strength of a company capital mix determines the level of return.
iii. An appropriate mix of capital structure should be adapted in order to increase the profitability of manufacturing and hydro companies. Finding reveals that debt has a negative relationship with profitability. In the case of higher debt profitability tends to decline it is due to the high interest charge.
iv. More companies in Nepal should put their financial information through NEPSE/ SEBON in order to allow investor to review their capital structure and attracts more investors in their companies.
v. The capital structure of the manufacturing and hydro companies are not consistent so the management should make more consistent and careful attention should be given to make optimal capital structure since it is important to maximize the value of the firm and minimize overall cost of capital.
vi. The total debt amount of manufacturing companies UNL, BNTL, BNL, and SHIVAM, and hydropower companies CHCL, AVHCL, SMHCL and API are little huge so there is a need to reduce the debt capital to relief the company from the burden of excess fixed obligation.
vii. HDL and BPCL has properly and productively utilized its fund and assets. It is suggested to get more profit for other companies and have to focus on proper utilization of its assets and fund. BNL, BNTL, API, SMHCL return on assets are little low. It is recommended to get more profit company has properly and productively utilized its fund and assets.
viii. A study should be taken to analyse capital structure and profitability of other banks, financial companies, service companies and non listed companies. In addition, future studies could be done to analyse the determinants of capital structure in Nepalese manufacturing and hydro companies. Moreover, study on impact on the capital structures and profitability manufacturing and hydropower companies in Nepal should be done.

ix. This study mainly based on secondary data. So, further studies can be based on using primary data or both primary and secondary data.
x. This study take only five years data. So, further study can be used more than five years data for analysis capital structure and profitability.
xi. Future research can also be carried out using different methodology, tools and technique.

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