

**THE RELATIONSHIP BETWEEN LIQUIDITY AND
PROFITABILITY ANALYSIS OF LIFE INSURANCE
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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Certification of Authorship

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “**The Relationship Between Liquidity and Profitability Analysis of Life Insurance 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 I 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.

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Report of Research Committee

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ABBREVIATIONS

ALI	:	Asian Life Insurance
C.V.	:	Co-efficient of Variation
CA	:	Current Assets
CL	:	Current Liabilities
CR	:	Current Ratio
e	:	Error Term
F/Y	:	Fiscal Year
GLI	:	Gurash Life Insurance
LIC	:	Life Insurance Corporation
LV	:	Leverage Ratio
MIL	:	Mit Life Insurance
NaLI	:	National Life Insurance
NaLI	:	Nepal life insurance
PLI	:	Prime Life Insurance
QR	:	Quick Ratio
r	:	Correlation Co-efficient
ROA	:	Return on Assets
ROE	:	Return on Equity
Rs.	:	Rupees
S.D	:	Standard Deviation
SLI	:	Surya Life Insurance
TA	:	Total Assets

ABSTRACT

This study analyses the relationship between liquidity and profitability of life insurance companies in Nepal for the period from 2070 to 2074. The study covers 8 life insurance companies out of the 18 life insurance companies listed on the insurance Board of Nepal. The study used secondary data. Data and information have been collected from insurance board of Nepal and annual report of selected life insurance companies. To drive the result of the study; financials tools, descriptive statistical analysis, correlation analysis, multiple regression analysis were applied. Profitability was measure by ROA and ROE while liquidity measure by quick ratio and leverage ratio. The analysis has done using statistical package for social science SPSS software version 25.

From the finding life insurance companies in Nepal holding too much liquidity but no stability. The study found out that there is a weak positive but insignificant relationship between liquidity and ROE, whereas there is a weak negative but insignificant relationship between liquidity and ROA. It is found that leverage ratio have significant positive impact on profitability (ROE). Whereas leverage ratio have a significant negative impact on profitability (ROA).

CHAPTER 1

INTRODUCTION

1.1 Background of the study

Insurance is the equitable transfer of risk or loss, from one entity to another in exchange for payment referred to as premium. The contract entered into by the insurer (company selling insurance) and the insured is meant to protect the insured against unexpected risks. The insurer undertakes to indemnify the insured when loss is incurred, as long as the loss falls under the terms of the contract that was signed by both the insurer and the insured.

Insurance companies provide unique financial services to the growth and development of every economy. In Nepal, the business of insurance plays significant intermediary roles in terms of risk transferring, enhancing private investment, creation of job opportunities and ensuring various development related projects. Insurance business creates capital fund and promotes development growth and prosperity of a country.

In Nepal, insurance business is regulated by the Insurance Board (Beema Samiti). The first insurance company was established in Nepal in 1947. Indian nonlife insurance company "National Insurance Company" opened its branch office in Kathmandu in 1974. Rastriya Beema Sansthan started nonlife insurance business from 1968 and life insurance business from 1973. Government adapted financial liberalization policy during the 1980s as a result National Life and General Insurance Company was established in 1988 as a composite insurer. In order to address various problems in the insurance sector, Insurance Act, 1992 was enacted in 1992. The Insurance Board replaced the Insurance Committee in 1992. After 1992, Government implemented economic liberalization policy more effectively. During the period of 18 years (1992-2008), additional 7 life and 13 nonlife insurers were established by private investors. The number of life, nonlife and composite insurance companies reached to 8, 16 and one respectively. In the meantime "Insurance Pool" was established by initiation of Government and nonlife insurance companies in 2003. The Insurance Pool provides the reinsurance service to the domestic nonlife insurance companies against the loss occurs due to terrorist activities only.

However, in Nepal the rise in insurance industry showed a turn around after the dreading earthquake of 2015. The number of insurance companies in 2018 totaled 39 including 18 companies dealing with life insurance, 20 with nonlife insurance and one with re-insurance (Annual report of Nepal Insurance Board 2018).

Liquidity management is very important for every organization that means to pay current obligations on business, the payment obligations include operating and financial expenses that are short term but maturing long term debt. Liquidity ratios are used for liquidity management in every organization in the form of current ratio, quick ratio and Acid test ratio that greatly effect on profitability of organization. So business has enough liquid assets (Cash, Bank) to meet the payment schedule by comparing the cash and near-cash with the payment obligations. Liquidity ratios work with cash and near-cash assets (together called "current" assets) of a business on one side, and the immediate payment obligations (current liabilities) on the other side. The near-cash assets mainly include receivables from customers and inventories of finished goods and raw materials. The payment obligations include dues to suppliers, operating and financial expenses that must be paid shortly and maturing installments under long-term debt.

Liquidity is the ability to meet expected and unexpected demands for cash. Specifically, it is a company's ability to meet the cash demands of its policy and contract holders without suffering any (or a very minimal) loss. The liquidity profile of a company is a function of both its assets and liabilities. Liquidity risk is inherent in the financial services industry and one must understand, measure, monitor and manage this risk. There are different levels of liquidity management. There is day-to-day cash management, which is commonly a treasury function within a company. There is ongoing cash flow management, which typically monitors cash needs for the next six to twenty-four months. The third category of liquidity management addresses the stress liquidity risk, which is focused on the catastrophic risk.

Profitability is one of the major goals of any business. Without being profitable it is not possible for a business to survive and the business growth is difficult. To generate profit a business need short-term funds to fulfill its day to day needs in operations and other requirements. Business will be more profitable when this short-term need of funds is generated by business operation not through external debts.

Management can earn profit by making use of all the available resources in the market. Hayward and Upton say, "Profitability is the ability of a given investment to earn a return from its use." However, the term 'profitability' is not synonymous to the term 'Efficiency'. Profitability is an index of efficiency and is regarded as a measure of efficiency and management guide to greater efficiency. Though, profitability is an important indicator for measuring the efficiency, the extent of profitability cannot be taken as a final proof of efficiency. Profitability and liquidity are the most prominent issues that management of each organization should take studying and thinking about them into account as their most important duties.

Profitability and liquidity are two important variable which give information about the performance of any business entity. For long-term survival and healthy growth both profitability and liquidity should go parallel to each other. Liquidity refers to the ability of a firm to meet its short term obligations. Liquidity plays a crucial role in the successful functioning of a business firm. A study of liquidity is of major importance to both the internal and external analysts because of its close relationship with day to day operations of a business (Bhunja, 2010). A weak liquidity position poses a threat to the solvency as well as profitability of a firm and makes it unsafe and unsound. Profitability is a measure of the amount by which a firm's revenues exceeds its relevant expenses.

Potential investors are interested in dividends and appreciation in market price of stock, so they pay more attention on the profitability ratios. Managers on the other hand are interested in measuring the operating performance in terms of profitability. Hence, a low profit margin would suggest ineffective management and investors would be hesitant to invest in the company.

The liquidity and profitability goals are contradictory to each other in most decisions which the finance manager takes. For example, the firm by following credit policy may be in a position to increase its sales, but its liquidity may tend to worse. In addition to this, referring to the risk return theory there is a direct relationship between risk and return. Thus, firms with high liquidity may have low risk and then low profitability. Conversely, firm that has low liquidity may face high risk results to higher return. Consequently, a firm is required to maintain a balance between liquidity and profitability in its day-to-day operations.

According to Ross, Westerfield & Jordan (2007) there is a negative relationship between liquidity and profitability. It therefore becomes a dilemma for managers to balance the two hence the need for a tradeoff between high amounts of net working capital and maximizing profitability. This is referred to as the liquidity-profitability trade-off. This dilemma would be a consequence of the fact that high values used in current assets tend to generate costs for maintenance, not directly adding value to the company and thereby generating profitability. According to Panigrahi (2012) current assets are liquid so holding more current assets refer to high liquidity but on the other hand current assets include such items such as cash which diminish firm's profitability.

1.2 Problem statement and research questions

Maintaining a proper liquidity indicates that funds are confined to liquid assets thereby making them unavailable for operational use or for investment purposes for higher returns. Thus, there is an opportunity cost associated with the maintenance of those liquid assets and this might affect the overall profitability of the firm. In other words, increasing profitability would tend to reduce firm's liquidity and too much attention on liquidity would tend to affect the profitability (Smith, 1980). Therefore, firms should always strike to maintain a balance between conflicting objectives of liquidity and profitability. The firm's liquidity should not be too high or too low. Excessive dependence on liquidity indicates the accumulation of idle funds that don't fetch any profits for the firm (Smith, 1980). On the other hand, insufficient liquidity might damage the firm's goodwill, deteriorate firm's credit standings and that might lead to forced liquidation of firm's assets. Hence, the present study is initiated to identify the relationship between liquidity and profitability of listed insurance company in Nepal.

There is a trade-off between liquidity and profitability; gaining more of one ordinarily means giving up some of the other. For example if a company's balance sheet is listed in order of liquidity with five items namely cash, marketable securities, accounts receivables, inventory and fixed assets it can be observed that moving from cash to fixed assets decreases liquidity. However, as you move from fixed assets to cash profitability increases.

Shrestha (2018) found out that there was a positive relationship between profitability and liquidity however, the coefficients from the study were not significant. Lartey, Antwi & Boadi (2013) found that there was a very weak positive relationship between the liquidity and the profitability of the listed banks in Ghana. Erasmus (2010) found liquidity affects profitability negatively. Eljelly (2004), empirically examined the relationship between profitability and liquidity showed that there exists a significant and negative relationship between them. The theoretical review on the relationship between liquidity and profitability is very clear that a negative relationship is expected between the two variables. However empirical evidence shows mixed results with some showing negative relationship and others showing positive or no relationship.

Hence, the present study is initiated to identify the relationship between liquidity and profitability of life insurance companies in Nepal. So following are the major problems that have been identified for the purpose of this study.

- i. What is the profitability and liquidity position of life insurance companies in Nepal?
- ii. What is the relationship between liquidity and profitability of life insurance companies in Nepal?
- iii. Does liquidity affect the profitability of life insurance companies in Nepal?

1.3 Objectives of the study

Every research study conducted with a view of achieving some objectives and this is of no exception. The main objective of this study are as follows;

- i. To measure the profitability and liquidity position of life insurance companies in Nepal.
- ii. To examine the relationship between liquidity and profitability of life insurance companies in Nepal.
- iii. To determine the effect of liquidity on profitability of life insurance companies in Nepal.

1.4 Rationale of the study

The nature of the relationship exists between liquidity and performance may vary from or to sector, but the existence of a relationship cannot be ignored. Managerial perspective is very important for better profitability and efficient management of

liquidity. The favorable liquidity and performance growth are helpful indicators to drive stakeholders' behaviors (Manyo & Ogakwu, 2013). A diminishing movement of profitability indicates a poor strategy of the liquidity management. This study will attempt to identify the nature of the relationship between liquidity and profitability variables. This identification will help to carefully devise trade policies. Further, this study will help management to know the most important factors to be in focus minutely to make sound decisions for better management of liquidity and profitability matters.

The study would be useful to the management of companies listed at Insurance board as it would provide information on alternative ways of managing liquidity to improve profitability. Many companies have collapsed due to inefficient management of liquidity. To the various sectors of companies listed at the Insurance board the study would also help re-emphasize the need for effective and efficient management of liquidity to improve profitability.

1.5 Limitations of the study

The limitations of the study are as follows:

- i. Only limited financial and statistical tool (i.e ratio analysis, mean, CV, correlations, as well as multiple regression).
- ii. In this study including profitability ratio (i.e ROA, ROE,)and other liquidity ratio (i.e Quick ratio, current ratio, and leverage ratio).
- iii. In this study only 8 life insurance companies are selected as a sample.
- iv. Its span of study period as only for 5 fiscal years i.e from 2070/71 to 2074/75
- v. Normality test and Multicollinearity test are not conducted to run multiple regression.

1.6 Chapter plan

A chapter plan is an outline that helps us to organize material in a way that is easy to comprehend. It can be a very useful tool in helping to find the main points of the chapter. This report has been divided into five chapters.

Chapter 1: Introduction

Chapter one gives detail about the study area and the concept note about the research problem under study. It includes background of the study problem statement, objectives, significance of the study, limitations and the conceptual framework.

Chapter 2: Literature review

Review of literature gives the investigator a throughout and profound knowledge of the research topic. It provides guidelines to use statistical methods for analysis of collected data.

Chapter 3: Research methodology

This chapter discusses in detail the research methodology applied in the context of this study. It includes research design, data sources, variables, population sample and sampling techniques, research tools and techniques and plan for data analysis.

Chapter 4: Results and discussion

This chapter includes the presentations and analysis of relevant data and applying various statistical tools, tables and also interpreted to accomplish the objective of the study. The details about the analysis and interpretation of the findings are described here.

Chapter 5: Summary and conclusion

This chapter presents the brief background of the study, objectives, literature review and methodologies. Chapter focuses on the major findings and compares them with theory and other empirical evidence to extend possible.

CHAPTER 2

LITERATURE REVIEW

This section deals with the brief review of existing and prior empirical studies, related to the subject of this study. The study of relationship between liquidity and profitability of Nepalese Life insurance companies has been a matter of interest for researchers for long time. Many studies have been carried out in developed as well as developing economies relating to this topic. Generally, the portion of literature review has divided into following parts:-

2.1 Introduction

Under this parts of the research the identification of key concept and relationship among them. Determination of profitability of listed insurance companies are discussed in this topic. The relationship between liquidity and profitability is also be discussed.

2.1.1 Determinants of profitability of insurance companies.

Malik, (2011). the profitability of insurance companies can be affected by a number of factors such as age, size, leverage ratio, premium growth, capital growth, tangibility ratio, liquidity ratio, loss ratio, market share, GDP growth and inflation rate. Some of these factors might have a positive impact on the insurers' profitability while others could have a negative effect. Furthermore, some of these factors that affect insurers' profitability could be under the control of the insurers' management (internal factors) whereas others might be out of its control (external factors). Understanding the internal and external factors that can have an impact on the profitability of insurers is essential not only for the insurance managers and supervisors but also for policy makers and regulators.

Berhe & Kaur, (2017) the performance of any business firm in addition to playing the role of increasing the value of the specific firm, it also leads to growth of the whole sector of the economy. Assessing the determinants of performance of insurance companies has gained tremendous importance in the corporate finance literature. Insurance companies act as intermediaries in financial institutions and helps in channeling funds to support business activities in the economy. Every firm is most concerned with profitability. Financial ratio analysis is among the commonly used tool

to determine a company's profitability (Lartey, Antwi & Boadi, 2013). Malik, K. (2011) observes that among the determinants of profitability of Insurance companies are; leverage, size, age of the company among others.

Liquidity ratio

Stolowy & Lebas, (2006) quick ratio is a measure of assets that can be easily converted in to cash. The quick ratio is a liquidity measure ratio. This ratio is calculated by the total of cash and cash equivalents, marketable securities and account receivables divided by current liabilities. Ahmed (2016) noted that ROA had statistically insignificant relationship with liquidity. Cheng and Wong (2004) found that liquidity is one of the important determinants of financial health of insurance companies. Companies with more liquid assets are less likely to fail because they can realize cash even in difficulty situations. Low liquidity ratio indicates that an insurer is facing difficulties in meeting its short term obligations on other hand, an extremely high ratio of liquidity could also mean that the insurer is keeping idle cash that could have generated income by investing in profitable areas.

Leverage ratio

Lartey, Antwi & Boadi (2013). defined leverage as total debts divided by total assets. Malik, (2011).the degree of financial leverage reflects insurance companies' ability to manage their economic exposure to unexpected losses. This ratio represents the potential impact on capital and surplus of deficiencies in reserves due to financial claims. There is an expected negative relationship between the return on assets and the insurance leverage.

Size

Malik, (2011) insurance company's size is measured in terms of premium volume. Economies of scale provide one theoretical basis for arguing that firm size is related to profitability. There is and expected positive relationship between firm size and profitability. The scale economy justification for a positive relationship between firm size and profitability is prominent in the works of Alexander

2.1.2 Impact of liquidity on profitability

The nature of liquidity – profitability relationship might be different. The results of most studies enable to conclude that the impact of liquidity on company profitability

might be negative. This statement was verified for instance by Deloof (2003) who used cash conversion period to study the impact of liquidity on profitability. The liquidity is importance an company performance and might influence on it is profitability. Eljelly (2004), suggested that practically, profitability and liquidity are effective indicators of the corporate health and performance, effective liquidity management helps ensure a insurance ability to meet cash flow obligations. It should be also emphasis that some researchers argue that relationship between liquidity and profitability might be both positive and negative. Lack of cash or liquid assets on hand may result in the firm not meeting its obligations to the suppliers of goods and services resulting in withdrawal of incentives to the firm. When the firm does not receive incentives from its suppliers it results in higher costs for goods and services which in turn affect the profitability of the business.

Niresh, (2012).Maintaining a proper liquidity indicates that funds are confined to liquid assets thereby making them unavailable for operational use or for investment purposes for higher returns. Thus, there is an opportunity cost associated with the maintenance of those liquid assets and this might affect the overall profitability of the firm. The firm's liquidity should not be too high or too low. Excessive dependence on liquidity indicates the accumulation of idle funds that don't fetch any profits for the firm. On the other hand, insufficient liquidity might damage the firm's goodwill, deteriorate firm's credit standings and that might lead to forced liquidation of firm's assets.

Operating cash flows generate by assets will affect continuing firm liquidity. It is not only because of the value of liquidation (Soenen, 1993). Firms with fewer current assets will having problem in continuing their operations while if the current assets are too much, it shows the return on investment is not in perfect condition. (Horne and Wachowicz, 2000). Since optimum cash levels are influenced by the factors outside the preventive concept of treasury, the company must think broad and take serious operational decisions on how to the profit opportunities that is available in cash flow process.

2.1.3 Relationship between liquidity and profitability

According to Ross, Westerfield and Jordan (2007) there is a negative relationship between liquidity and profitability. It therefore becomes a dilemma for managers to

balance the two hence the need for a trade-off between high amounts of net working capital and maximizing profitability. This is referred to as the liquidity-profitability trade-off. This dilemma would be a consequence of the fact that high values used in current assets tend to generate costs for maintenance, not directly adding value to the company and thereby generating profitability. According to Panigrahi (2012) current assets are liquid so holding more current assets refer to high liquidity but on the other hand current assets include such items such as cash which diminish firm's profitability.

According to Gijare, Raul, & Panigrahi (2018) Liquidity plays a vital role in the successful functioning of every business. The important part in managing working capital is maintaining liquidity on a day-to-day basis to ensure the smooth running of the organization and to meet its obligations. Hence, it is very important to keep a close eye on the liquidity position of the company as without it, the company cannot survive. But efforts to increase the profitability would tend to reduce firms' liquidity and too much attention on liquidity would tend to affect profitability. No doubt, every firm tries to maximize profitability by maintaining liquidity. However, increasing profits at the cost of liquidity might cause serious problems for the firm including financial insolvency. It is essential that the firm's liquidity should be properly balanced because excessive liquidity on one hand, indicates the accumulation of idle funds that don't fetch any profits for the firm and on the other hand, insufficient liquidity might damage the firm's goodwill, deteriorate the firm's credit standing, which may lead to forced liquidation of the firm's assets.

2.2 Theoretical review

2.2.1 Miller & Orr model,

Miller & Orr (1966) developed a model of demand for money. Under the model, the firm allows the cash balance to fluctuate between the upper control limit and the lower control limit, making a purchase and sale of marketable securities only when one of these limits is reached. The assumption is that the net cash flows are normally distributed with a zero value of mean and a standard deviation. This model provides two control limits – the upper control limit and the lower control limit as well as a return point. When the firm's cash limit fluctuates at random and touches the upper limit, the firm buys sufficient marketable securities to come back to a normal level of cash balance that is the return point. Similarly, when the firm's cash flows wander and

touch the lower limit, it sells sufficient marketable securities to bring the cash balance back to the normal level that is the return point.

2.2.2 Pecking order theory of liquidity

Myers & Majluf (1984) introduced very influential pecking order theory saying; manager prefers to finance deficit of capital by issuing safe security. The theory states that, in the event where retained earnings and other internal source of financing will be low to invest then manager will issue debt and only issue new equity with possibility of issuing junk debt (financial distress possibility). The theory emerges as a result of asymmetric information existing in the financial markets, that is, corporate managers often have better information about the health of their companies than outside investors. Apart from the transaction costs of issuing new securities, companies have to accept the information costs arising from asymmetric information. In this way, new securities issued on the financial market could be infra-valued because of informational asymmetries, and this is especially true in the case of new equities. Tradeoff and pecking order theories center the importance of the thought of liquid assets. Tradeoff advocates an inverse relationship between liquidity and profitability that center the cost and benefit of every decision. Whereas, pecking order advocate the positive relationship between liquid assets and performance.

2.2.3 Dynamic theory of profit

According to Clark (1902) profit accrues because the society is dynamic by nature. Since the dynamic nature of society makes future uncertain and any act, the result of which has to come in future, involves risk. Thus profit is the price of risk taking and risk bearing. It arises only in a dynamic society which means in a society where changes does not occur that is, it is static by nature the risk element disappears and hence the profit element does not exist there. A society is said to be dynamic when there is a change in its population, change in trends of the people, change in stock of the capital, change in the supply of entrepreneurs among others. When all these factors become constant, the future also becomes certain and the risk element disappears from the society.

According to Clark (1902), profit is the result of an adjustment, which is brought about by the entrepreneurs themselves. They may find new techniques of production

by inventing new machines. Their use reduces the cost of production and reduces the course of time as well and gives the entrepreneur higher profits. But when the use of machinery and production becomes common and used by the other entrepreneur operating in the economy, the supply of goods increase and the prices fall. Hence the profit margin also goes down. Under this situation the profit is determined by the demand and supply of enterprise at a point where they are equal. This theory is also known as windfall theory of profits. This theory treats profits as a residue in price after deducting costs; hence it is a residual theory of profits.

2.2.4 Baumol's model

Baumol (1952) developed an inventory management model which was applicable in determining the level of cash to be held by the business firms. He described the holding costs and the ordering costs of cash in a fashion similar to those costs associated with inventory. His conclusion was that the rational individual will, given the price level, demand cash in proportion to the square root of the value of these transactions. The Baumol model assumes the cash manager invest excess fund in interest bearing securities and liquidates them to meet the firm's demand for cash. As investment return increase, the opportunity cost of holding cash increases and the cash manager decreases cash balance. As transaction cost (cost of liquidating short-term investment) increase, the cash manager decrease the number of times the liquidates securities, leading to higher cash balances. However as is the case with the Nevertheless, the economics order quantity model, Boumol's model has restrictions when using the assumptions of fixed and predictable demand, as well as instant supplies when applying for replacement cash.

2.2.5 Liquidity preference theory

Keynes (1936) was the first to develop the concept of liquidity in his book *The General Theory of Employment, Interest and Money* to explain determination of the interest rate by the supply and demand for money. Liquidity preference refers to the demand for money, considered as liquidity. The idea that investors demand a premium for securities with longer maturities, entail greater risk, because they would prefer to hold cash, which entails less risk. The more liquid an investment, the easier it is to sell quickly for its full value. Because interest rates are more volatile in the short term, the premium on short- versus medium-term securities will be greater than the

premium on medium- versus long term securities. For example, a three-year Treasury note might pay 1% interest, a 10-year treasury note might pay 3% interest and a 30-year treasury bond might pay 4% interest.

2.2.6 Theories of liquidity management

Diamond & Rajan (2001) postulated that liability management theory focuses in banks issuing liabilities to meet liquidity needs. Liquidity and liability management are closely related. It is one of the essential tools for decision making that sets out to maximize stakeholder value. Asset liability management (ALM) is the management of the total balance sheet dynamics and it involves quantification of risks and conscious decision making with regard to asset liability structure in order to maximize the interest earnings within the framework of perceived risks. The primary objective of ALM is not to eliminate risk, but to manage it in such a way that the volatility of net interest income is minimized in the short run and economic value of the organization is protected in the long run.

2.3 Empirical review

2.3.1 Review of journal articles

Deloof (2003) conducted a study on the relationship between working capital management and corporate profitability on Belgian firms. He investigated a sample of 1,009 large Belgian non-financial firms out of the population of 5,045 firms for the 1992 - 1996 period. Profitability was measured by gross operating income. Trade credit policy and inventory policy were measured by number of days, accounts receivable, accounts payable and inventories, and the cash conversion cycle was used as a comprehensive measure of working capital management.

He used correlation and regression analysis to measure the impact of working capital management on corporate profitability. They found a negative relation between gross operating income and the measures of working capital management (number of days, accounts receivable, inventories and accounts payable and cash conversion cycle). The coefficient of the accounts receivable variable was negative and highly significant. The coefficients of the other variables included in the model were also highly significant.

A significant negative relation was found between gross operating income and number of days inventories. Regression showed a very significant negative relation between gross operating income and number of days, accounts payable. The coefficient of the cash conversion cycle variable was negative. The results suggested that managers could increase corporate profitability by reducing the number of days, accounts receivable and inventories. Less profitable firms wait longer to pay their bills.

Eljelly (2004) conducted a study examining the relationship between profitability and liquidity as measured by current ratio and cash gap (cash conversion cycle). The study was based on a sample of 29 joint stock companies in Saudi Arabia. He used correlation and regression analysis for analysis and found significant negative relation between the firm's profitability and its liquidity level, as measured by current ratio. This relationship was more evident in firms with high current ratios and longer cash conversion cycles. At the industry level, however, the study found that the cash conversion cycle or the cash gap was of more importance as a measure of liquidity than current ratio that affects profitability. The size variable was also found to have significant effect on profitability at the industry level. Finally, the results were stable over the period under study.

Lazaridis & Tryfonidis (2006) conducted a study investigating the relationship between working capital management and profitability of listed companies in the Athens stock exchange. They used a sample of 131 companies listed in the Athens Stock Exchange for the period of 2001-2004. The purpose of their study was to establish a relationship that was statistically significant between profitability, the cash conversion cycle and its components for listed firms in the ASE. They use regression analysis with 21 the gross operating profit as the dependent variable and independent variables being number of days accounts receivables, number of days accounts payables and cash conversion cycle. They observed that the net operating profit was negatively correlated with the variables of number of days accounts receivables, number of days accounts payables and cash conversion cycle. The results of their research showed that there was statistical significance between profitability, measured through gross operating profit, and the cash conversion cycle. They concluded that managers could create profits for their companies by handling correctly the cash

conversion cycle and keeping each different component (accounts receivables, accounts payables, inventory) to an optimum level.

In a study to measure the effect of working capital management on the net operating profitability and liquidity, Raheman and Nasr (2007) selected a sample of 94 Pakistani firms listed on Karachi Stock Exchange for a period of 6 years, and found that there is a strong negative relationship between variables of working capital management and profitability of the firms. The study also shows a significant negative relationship between liquidity and profitability, and that a positive relationship exists between size of the firm and its profitability. Also, there is a significant negative relationship between debt used by the firm and its profitability. Variables used in their analysis included average collection period, inventory turnover in days, average payment period, cash conversion cycle, current ratio, debt ratio, size of the firm and financial assets to total assets ratio.

Erasmus (2010) conducted a study investigating the relationship between working capital management and firm profitability for a sample containing both listed and delisted South African industrial firms. The results obtained from the full sample revealed statistically significant negative relationships between a firm's profitability (as quantified by the return on assets in the narrower sense) and its net trade cycle, debt ratio and liquidity ratio. Similar results were observed when the listed firms were investigated separately. In the case of firms that delisted during the period under review, however, the liquidity and debt ratios appeared to play a more important role than the net trade cycle. Based on the results of this study, it would appear that management could attempt to improve firm profitability by decreasing the overall investment in net working capital.

Bhunia, Khan and Mukhuti (2011) investigated the liquidity management efficiency and liquidity -profitability relationship in steel companies of private sector in India for the period between 1997 and 2006. They analyzed data from income statements, balance sheets, and cash flow statements of sampled firms attained from the Companies Annual Reports accessible from the India Stock Exchange and CMIE database. They studied important liquidity indicators and analyzed that optimal working capital management can be achieved by controlling the trade-off between profitability and liquidity of a firm. They used multiple regression techniques to study

the joint influence of the selected ratios syndicating company's liquidity position and performance on the profitability. They concluded that liquidity and profitability are significantly positively associated. Their study however relied only on the on the published financial data, and hence was subject to all limitations that are inherent in the condensed published financial statements.

Boadi & Lartey (2013) conducted a study to find out the determinants of the profitability of insurance firms in Ghana. Secondary data on financial reports were collected from sixteen insurance firms in Ghana for the period 2005 to 2010. The study was quantitative in nature. It adopted the longitudinal time dimension, specifically, the panel method and ordinary least square regression. The study discovered that, apart from tangibility which has a negative relationship, there was a positive relationship between leverage, liquidity and profitability of insurance firms in Ghana. It was also concluded that, the profitability model adopted was explained in respect to all the independent variables and that the degree of error was less than 20%. Finally, it was suggested that the explanatory variables used in that study should be regressed on Return on Equity to find their extent of relationship on profitability.

Ajanthan (2013) investigated the relationship between liquidity and profitability of trading companies in Sri Lanka. The main objective was to examine the nature and extent of the nexus between liquidity and profitability in profit-oriented quoted trading companies and also to determine whether any relationship exist between the two performance measures. Analysis was based on data extracted from annual reports and accounts of the companies for the relevant period. Correlation and regression analysis respectively were employed to examine the nature and extent of the relationship between the variables and determine whether any cause and effect relationship between them. The study covered 08 listed trading companies in Sri Lanka over a period of past 5 years from 2008 to 2012. Correlation & regression analysis and descriptive statistics were used in the analysis and findings suggest that there is a significant relationship exists between liquidity and profitability among the listed trading companies in Sri Lanka. However, the findings of this paper are based on a study conducted on the selected companies.

Lartey, Antwi & Boadi (2013) conducted a study on the relationship between liquidity and profitability of listed banks on the Ghana Stock Exchange for the period 2005-

2010. Seven out of the nine listed in nature. It adopted the longitudinal time dimension, specifically, the panel method. Document analysis was the main research procedure adopted to collect secondary data for the study. The financial reports of the seven listed banks were studied and relevant banks were involved in the study. The study was descriptive liquidity and profitability ratios were computed. The trend in liquidity and profitability were determined by the use of time series analysis. The main liquidity ratio was regressed on the profitability ratio. It was found that both the liquidity and the profitability of the listed banks were declining. Again, it was also found that there was a very weak positive relationship between the liquidity and the profitability of the listed banks in Ghana.

Shafana (2013) examined the degree and pattern of determinants of liquidity on profitability of financial institutions in Sri Lanka for the period from 2009 to 2013. The study covers 16 Banks and Finance Companies listed on the Colombo Stock Exchange. For these objectives, the study used Cash Position Indicator (CPI), Capacity Ratio (CR) and Total Deposit Ratio (TDR) as independent variables to measure the liquidity level to examine its determinants on Return on Assets (ROA) of financial institutions in Sri Lanka. The correlation and regression model were used as statistical tools for hypotheses testing to draw final conclusions. The findings revealed that CPI and TDR have significant determinants on ROA with sign of positive and negative respectively while CR has insignificance on ROA of Banks and Finance Companies in Sri Lanka. The overall finding from regression model is that 30% of variation in profitability (ROA) is explained by variation of liquidity of Banks and Finance Companies in Sri Lanka. Further, the liquidity has negative and significant impact on profitability of financial institutions in Sri Lanka. The finding is more useful to finance decision makers of financial institutions for taking sound decisions on proper trade-off between liquidity and profitability.

In the study of the determinants of liquidity and their impact on financial performance in Nepalese commercial banks by Sushil & Bivab (2013), the results of regression analysis showed that capital adequacy, bank size, share of non-performing loans in the total volume of loans and liquidity premium paid by borrowers had negative and statistically significant impact on banks' liquidity. Growth rate of gross domestic product on the basis price level, short term interest rate and inflation rate had negative

and statistically insignificant impact on banks' liquidity. And, loan growth rate had positive and statistically insignificant impact on banks liquidity. Among the statistically significant factors affecting banks liquidity capital adequacy, bank size and growth rate of gross domestic product on the basis price level had negative impact on financial performance whereas, liquidity premium paid by borrowers had positive impact on financial performance.

Rizwan & Ismail (2016). this study has examined the impact of the liquidity management on the performance of the 64 Pakistani non-financial companies constituting Karachi Stock Exchange (KSE) 100 Index for the period of 2006-2011. To derive the results of the study; descriptive statistical analysis, correlation analysis and multivariate regression tools of analysis were applied. According to the results of analyses, it is found that liquidity variables current ratio and the cash conversion cycle have significant positive impact on profitability (ROA). Further, results indicate that high current ratio and longer cash conversion cycle lead firms towards better performance. This study suggested firms to relax their credit sales policies, and devise inventory & collection turnover system in a wise manner to be more accessible to a large number of customers.

2.3.2 Review of previous thesis

Ngwili (2013). conducted a study on the relationship between liquidity and profitability of insurance companies in Kenya. The population of the study comprised of all the 49 insurance companies registered. A census was carried out covering all the 49 insurance firms for five years period (1st January 2009 to 31st December 2013). The study used secondary data. The collected data was analyzed using descriptive statistics. Profitability was measured by ROA, while liquidity was measured by Quick ratio and Leverage ratio. Firm size as measured by log of net premium and loss ratio were the control variables. The t-test was used to determine the significance of the constant term and the coefficients terms for each of the regressions.

The importance of each of the regressions was determined by carrying out the F-test at 95% confidence level. The coefficient of determination R² was used to measure the strength to which independent variables explain the variations in the dependent variables. The analysis was done using Statistical Package for Social Sciences (SPSS) software version 21. The study established a positive relationship between quick ratio

and profitability of insurance companies in Kenya. The study indicated that leverage ratio has a negative influence on ROA. The study established a positive relationship between log of net premiums and ROA. Finally, the study indicated a negative but significant relationship between loss ratio and profitability of the insurance industry in Kenya. This study recommends that managers should maintain a tradeoff between profitability and liquidity, invest in liquid assets to improve liquidity as well as focus on exploring opportunities for growth and diversification and proper management of investment portfolios.

Botoe (2011) conducted a study on the impact of liquid asset holdings on Commercial Banks in Liberia profitability. Using the regression analysis, this study analyzes the profitability of commercial banks using balanced data over the period of 2006-2011. The study used the liquidity asset and liquidity assets for estimating liquid asset and profitability relationship. The estimated relationship between liquid assets and bank profitability was as expected. Coefficients for the liquid assets ratio, its square, business cycle, and its product of interactive business cycle and regulation were positive and also statistically significant. The regulation coefficient was though negative. As expected, we find evidence of a non-linear relationship between profitability and liquid asset holdings. An important finding of this study is that the business cycle of a commercial bank significantly affects its profit. The coefficient of regulation is negative and significant. Therefore if regulators reduce the constraints imposed on banks, banks obtain profit. The coefficient of the deposit ratio is positive and highly significant. A bank with a more deposit is able to be more profitable. The coefficient of loan asset ratio is positive and significant and this positive effect implies that banks with a high proportion of loan asset ratio have a higher profitability. In addition, an important finding of this study is that the business cycle significantly affects bank profits. Business cycle is estimated to have a positive and statistically significant impact on bank profitability. The coefficient of regulation is negative and significant and this implies that if regulators reduce the constraints imposed on banks, banks obtain profit. The empirical results show that concentration affects bank profitability negatively, but this affect is relatively insignificant. Management of liquidity position means the management of current assets and current liabilities, and financing these current assets. If these firms properly manage their cash, accounts

receivables and inventories in a proper way, this will ultimately increase profitability of these companies.

Buseretse (2014) conducted a study on the effect of liquidity on profitability of microfinance banks in Kenya. The population of the study was comprised of all 9 microfinance banks in Kenya operating in the years 2011 to 2014. For a microfinance bank to qualify it needed to have been in operation during the whole period of the study and therefore institutions that were not in operation in the whole period of study were eliminated. Secondary data was used in conducting the study. The study involved secondary data collection of the return on assets, to measure profitability and the ratio of loans to deposits to measure liquidity during a specific year. The study used secondary data obtained from Central Bank of Kenya annual supervision reports and Association of Microfinance institutions annual publications. The study used descriptive statistics and regression analysis to establish the relationship between the study variables. The response rate was 67% that is a total 6 out of 9 licensed microfinance banks in Kenya that satisfied the data collection criteria. The study found out that there is a weak negative relationship between liquidity and profitability of microfinance banks in Kenya. Liquidity was found to be one of the determinants of profitability of Microfinance Banks in Kenya. The study recommends that the finance managers of microfinance banks maintain optimal levels of liquidity in order to remain profitable.

Akhwale (2011) investigate the relationship between liquidity and profitability for companies listed at the NSE. This research was conducted through a diagnostic research design. The diagnostic research design was considered appropriate as it tries to determine the association of the subject matter with something else. This study used secondary data. The secondary data was obtained from the annual financial reports of the sampled listed firms in Kenya over a period of 5 years (2009-2013). The data was collected based on the information about the variables. Quantitative data was analyzed by descriptive analysis while qualitative data was analyzed through content analysis.

From the findings, the study established that cash conversion period and the current ratio as liquidity measures negatively affected the profitability of the firms listed in the NSE over the 5 year period while the quick ratio as a liquidity measure did not significantly affect the profitability of the firms listed in the NSE over the 5 year

period. The study concludes that there exists a significant relationship between liquidity and profitability of listed firms in Kenya. The study recommends that the management of the firms listed in the NSE should institute efficient cash management techniques that would help reduce the cash conversion period. Further, the study recommends that the management of the firms listed in the NSE should strive to achieve and maintain an optimal liquidity position that holds adequate cash/liquid resources for operational needs while the surplus liquid resources are invested in existing viable projects.

2.3.3 Summary table on the basis of literature

Author (year)	Title of article	Major objective	Variable used	Methodology used
Deloof, (2003).	Does working capital management affect profitability of Belgian firm	Find out working capital management affect profitability	Account receivable, cash conversation cycle ,Inventories, Gross operating income	Correlations and regression analysis used
Eljely, (2004).	Liquidity – profitability tradeoff :an empirical investigation in an emerging market	Examine the relationship between liquidity and profitability	Current ratio, cash gap, net operating income	Correlation and regression analysis used
Lazaridis, & Tryfonidis, (2006).	Relationship between WCM and profitability of listed companies in the Athens stock exchange	Investigate the relationship between corporate profitability and WCM.	Gross operating income ,account receivable ,no. of days and CCC	Primary data , descriptive statistic , correlation and ,regression used
Rehaman & Nasr (2007)	Working capital management and profitability – case of Pakistani Firms	To Examine the effect of working capital management on profitability of the Pakistani firm.	Net operating profitability, CR, CCC, ACP ,	Descriptive statistic , Panel data regression analysis used
Bhuni, Khan,& Mukhuti (2011)	A study of managing liquidity	To explore the liquidity profitability association.	CR, Liquid ratio, D/E ratio, Return on investment ratio	Descriptive statistic , multiple regression model used
Malik, (2011).	Determinations of insurance company profitability : an analysis of insurance sector of Pakistan	To determine the relationship between profitability and internal factor of insurance	Leverage ratio, loss ratio , size , age of company , ROA	Descriptive statistic and multiple regression model used
Akhwale (2011)	Relationship between liquidity and profitability of companies listed at the Nairobi securities exchange	To find out the relationship between liquidity and profitability	Current ratio, quick ratio, cash conversation period and profitability	Descriptive statistic, correlation, panel multiple regression analysis are used
Shafanaa (2013)	Liquidity and profitability of	Investigate the impact of liquidity on profitability ,	Cash position indicator, total deposit	Correlation and panel regression

	financial institutions in Srilanka		ratio, capacity ratio, ROA	are used.
Boadi, Antwi and Lartey (2013)	Determinants of profitability of insurance firms in Ghana	Find out the determinants of the profitability.	Return on assets, leverage ratio, liquidity ratio, tangibility.	Descriptive and inferential statistic , ordinary list square regression used
Ajanthan (2013)	A Nexus between liquidity and profitability: A study trading company in Sri Lanka	To determine the nature and extent of the relationship between liquidity and profitability	Current ratio , liquid ratio, quick ratio, return on asset , return on equity	Descriptive statistic , correlation , multiple regression are used
Lartey, Antwi, & Boadi (2013)	The relationship between liquidity and profitability of listed bank in Ghana	To find out the relationship between liquidity and profitability	Return on assets and temporary investment ratio (liquidity)	Quantitative technique and correlation, regression analysis used
Rizwan & Ismail (2016)	Impact of liquidity management on profitability of Pakistani firms : A case of KSE-100	To check the impact of liquidity management on the performance of Pakistani companies.	Current ratio, quick ratio, cash ratio, return on assets	Descriptive statistic ,correlation and multiple regression analysis used

2.4 Research gap

From the studies reviewed it is evident that liquidity plays a significant role in better performance of business entities. The review highlights the effects of the various components of liquidity management on profitability. Most of the studies indicate that there is a significant relationship between liquidity and profitability. Above literature indicated that there was a trade of between liquidity and profitability in the financial sector and two variable are reinforced each other. There was also observed varying results depending on the industry in which the research was conducted. Whereas the studies have been mainly conducted in life insurance sectors, this study established the relationship between liquidity and profitability in life insurance sectors in Nepal.

The previous research is only limited few variables, it has not explained the specific determinant of profitability. The previous research has been incomplete to so the impact of profitability over the maintained liquidity. It has become incomplete to explain the impact over the operational efficiency and specific problem faced by the insurance due to conflicting impact of profitability.

The Previous research is only limited to financial and statistical tools. These study has been used only descriptive research design. Most of the study has been used

correlations, simple regression, and panel regression analysis. Different financial and statistical analysis have been used in this study. Among them ratio analysis correlation analysis and multiple regression analysis. In this study have been used descriptive and analytical research design. From the above studies cover the period 2003 to 2016. In this study cover the period 2014 to 2018.

CHAPTER 3

RESEARCH METHODOLOGY

Research methodology is the way to solve systematically about the research problem. study which includes various sections describing research plan and design, description of the sample, instrumentation, data collection procedure and time frame, validity and reliability of the study and analysis plan. In the absence of methodology, it is likely that the conclusions drawn Research methodology is a systematic way to solve a problem. It is a science of studying how research is to be carried out. Essentially, the procedures by which researchers go through their work of describing, explaining and predicting phenomena are called research methodology. This chapter therefore explains the methodology that is employed in this may be misunderstood.

Research methodology describes the method and process applied in the entire aspects of study and helps to resolve the systematic problems. Research methodology is used to collect information and data and sets out overall plan associated with a study.

3.1 Research design

The study uses descriptive and analytical research design. Descriptive research design is a research design concerned with finding out who, what, where, or how of the research. It describes a population with respect to important variables. Descriptive research design is used for various purposes one of which is to determine relationships between variables. A descriptive research design is adopted in the study to explain the relationship between liquidity and profitability. Descriptive research design is used to determine financial position because descriptive research consists of surveys and fact finding inquiries of different types. Analytical research design is an impact measurement research design. The study adopted an analytical model to analyze the result of this study by determining the effect of liquidity on profitability of life insurance companies in Nepal. Analytical research designs are used to facts or information already available, and analyze these to make a critical evaluation of the subject.

3.2 Population and sample

Population involves all elements, individuals, or units that meet the selection criteria for a group to be studied and from which a representative sample. Sample is taken for

detailed examination. The population of the study comprised of the 18 life insurance companies registered with as at insurance board. This study adopts convenience sampling method. In this research total 8 life insurance companies are selection for five financial period 2070/71 -2074/75. The list of sample life insurance companies are as follows:

S.N	Name of companies	Establishment year	Sample selection
1	Rastra Beema sasthan	01/19/2025	
2	National life insurance company limited	23/09/2044	Sample
3	Nepal life insurance company limited	04/01/2058	Sample
4	Life insurance corporation Nepal limited	23/04/2058	Sample
5	Mit life insurance company limited	18/04/2058	Sample
6	Asian life insurance company limited	21/12/2064	Sample
7	Surya life insurance company limited	06/12/2064	Sample
8	Gurans life insurance company limited	18/12/2064	Sample
9	Prime life insurance company limited	22/02/2065	Sample
10	I.M.E. life insurance company limited	20/03/2074	
11	Union life insurance company limited	20/03/2074	
12	Sun life insurance company limited	18/04/2074	
13	Reliable life insurance company limited	18/04/2074	
14	Joti life insurance company limited	20/03/2074	
15	Reliance life insurance company limited	18/04/2074	
16	Citizen life insurance company limited	07/05/2074	
17	Sanima life insurance company limited	07/05/2074	
18	Prabhu life insurance company limited	07/05/2074	

(Sources: insurance board website)

3.3 Sources of data

The paper will be based on published literature and secondary data. Data are obtained from the annual reports of insurance companies and Insurance Board. Data are taken from annual reports (statement of financial position and income statement) of insurance companies' website for the five financial period. The total number of life insurance companies in operation is taken from the website of the insurance

Board. Insurance Act, Regulation, Directives, Guidelines and Circulars are also consulted for literature review. Most of the information were available from the official websites Insurance Board and companies.

3.4 Data collection and processing procedure

The study employed secondary data and the variables were deduced from the audited financial statements of the 8 registered life insurance firm for five financial periods 2070 to 2074. This was influenced by the availability of the audited financial reports. The required information collection from annual report, journal, article, research report as well as insurance Board websites.

3.5 Data analysis tools and techniques

Ratio analysis will chose to measure the position of liquidity and profitability of the life insurance companies on the basis of income statement and balance sheet. Profitability will be measure by ROA, ROE, while liquidity measure by Current ratio, Quick ratio and leverage ratio. The factor liquidity Influence on profitability indicators will be express through correlations analysis. Multiple linear regression will used to determine the relationship between liquidity (independent variable) and profitability (dependent variable). The collected data will analyses descriptive statistics which employs tools such as percentages, mean, and standard deviation to help the researcher describe data. The collected data was analyzed by the use of descriptive statistics using SPSS. While the analytical statistic are used to get to conclusions about a specific sample data.

3.5.1 Financial analysis

A widely used tool for the financial analysis is ratio analysis. Ratio analysis is a technique of analysis and interpretation of financial statement. Ratio analysis is widely used tolls for financial analysis, which establishes the numerical or quantitative relationship between two items. Under the ratio analysis, the following ratios can be analyze to determine financial position of a companies.

3.5.1.1 Profitability ratio

The main objective of each and every business concern is to earn maximum profit. The position of the profitability of the company is analyzed with the help of this ratio. The profitability ratio is used to measures the operating performance of the

companies. The profitability of the firms is measured by return on assets (ROA) and return on equity (ROE).

a) Return on assets

Return on assets manifest the efficiency of the companies in transforming the money utilized to purchase assets in to net income. Therefore the higher return on assets shows the firms are more profitable. It is an important indicator of the overall productivity of the company, and shows the percentage of profit, company earns in relative to its total resources. It is determine by the following was.

$$\text{Return on assets} = \frac{\text{Net profit after tax}}{\text{total assets}} \times 100\%$$

b) Return on equity

Return on assets manifest gauge the capacity of the companies to yield profit from it is owners' investment. This ratio is considered from the investors perspectives. Higher is the ROE higher efficiency of management in optimize the equity revealed. It is determine by the following was.

$$\text{Return on Equity} = \frac{\text{Net profit sfter tax}}{\text{total equity}} \times 100\%$$

3.5.1.2 Liquidity ratio

Liquidity ratios measure the ability of the firm to meet its current obligations. This refers to the ability of an insurer to meet its short term obligations when it is due. It also shows the ability of an insurer to convert its assets in to cash as quickly as possible. In financial parlance, liquidity ratio generate than one manifest that the firms to be in good financial position.

a) Current ratio

The current ratio is calculated by dividing current assets by current liabilities. This shows the solvency and financial strength of the firm. It is basic yardstick of measuring the solvency and liquidity position of the firm. It is determined by the following was

$$\text{Current Ratio (CR)} = \frac{\text{Current Assets (CA)}}{\text{Current Liabilitie s (CL)}}$$

The higher ratio indicates the position of the company is in liquid and able to pay its bills. Generally, the current ratio of 2:1 is considered to be satisfactory. Higher ratio indicates the greater amount of working capital and less ratio vice-versa.

b) Quick Ratio

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

$$\text{Quick Ratio (QR)} = \frac{\text{Quick Assets (QA)}}{\text{Current Liabilities (CL)}}$$

c) Leverage ratio

The leverage ratio of an insurance company is defined as the ratio of total debt to total assets. It indicates the amount of debt used to finance the assets of a given firm. This ratio can be used to measure a company's growth through its acquired assets over time. An insurance company with significantly more debt than equity is considered to be highly leveraged. The risk of an insurer may increase when it increases its leverage. Literatures in capital structure confirm that a firm's value will increase up to optimum point as leverage increases and then declines if it is further increased beyond that optimum level. For instance, Renbao and Wong (2004) stated that leverage beyond the optimum level could result in higher risk and low value of the firm.

$$\text{leverage ratio} = \frac{\text{total debts}}{\text{total Assets}}$$

3.5.2 Statistical analysis

Descriptive statistics are used to describe and discuss characteristics of a data set more generally and orderly than using raw data alone. Under the primary and secondary data analysis the percentage, mean, median, standard deviation maximum and minimum results i.e. each variables have been described in clear way for the detail analysis about its significance. The help of statistical tools is essential to measure the relationship of two or more variable. In this study, the following statistical tools are used.

I. Standard deviation (SD)

The standard deviation is the square root of the average of the square distances of the observation from the mean. The standard deviation enables us to determine, with a great deal of accuracy, where the values of a frequency distribution are located in relation to the mean. Different formulae are used to calculate standard deviation; among them following formulae has been use here:

$$\text{S.D } (\sigma) = \sqrt{\frac{\sum (\mathbf{x} - \bar{\mathbf{x}})^2}{\mathbf{N}}}$$

II) Co-efficient of variation (CV)

The relative measure of dispersion based on the standard deviation is known as the coefficient of standard deviation. The percentage of measure of co-efficient of standard deviation is called co-efficient of variation.

$$\text{C.V} = \frac{\text{S.D.}}{\text{Mean}} \times 100$$

It is used for comparing the homogeneity and the uniformity of two or more distributions.

III) Correlation analysis

The study uses Pearson correlation analysis to define the association between liquidity on company's profitability. There is a majority of previous researches have chosen to employ correlation analysis to first see the correlation between variables before conducting regression analysis. However, one of the shortcomings of correlation analysis is that it cannot identify a cause-and-effect relationship.

Correlation co-efficient is defined as the association between the dependent variable and independent variable. It is a method of determining the relationship between these two variables. To calculate the Pearson correlation analysis SPSS version 25.0 database is used for tabulation and data analysis. Simple statistical tools like mean, standard deviation were analyzed.

IV) Multiple regression analysis

Multiple regression analysis was carried out to identify the relationship between liquidity and profitability. Here liquidity is the independent variable, profitability is the dependent variable it can be represented as follows:

$$P = f(L)$$

Which show profitability is the function of liquidity

Where:

P = liquidity

L = profitability

In the present study, profitability is measured by using two ratios namely net return on assets and return on equity whereas liquidity is measured by using current ratio, quick ratio and leverage Ratio. The following two models are formulated to measure the impact of Liquidity and Profitability.

$$ROE = \beta_0 + \beta_1 CR + \beta_2 QR + \beta_3 LR + e \text{ ----- (1)}$$

$$ROA = \beta_0 + \beta_1 CR + \beta_2 QR + \beta_3 LR + e \text{ ----- (2)}$$

Where,

$\beta_0, \beta_1, \beta_2, \beta_3$ are the regression co-efficient

e → Error term

ROE → Return on equity

ROA → Return on assets

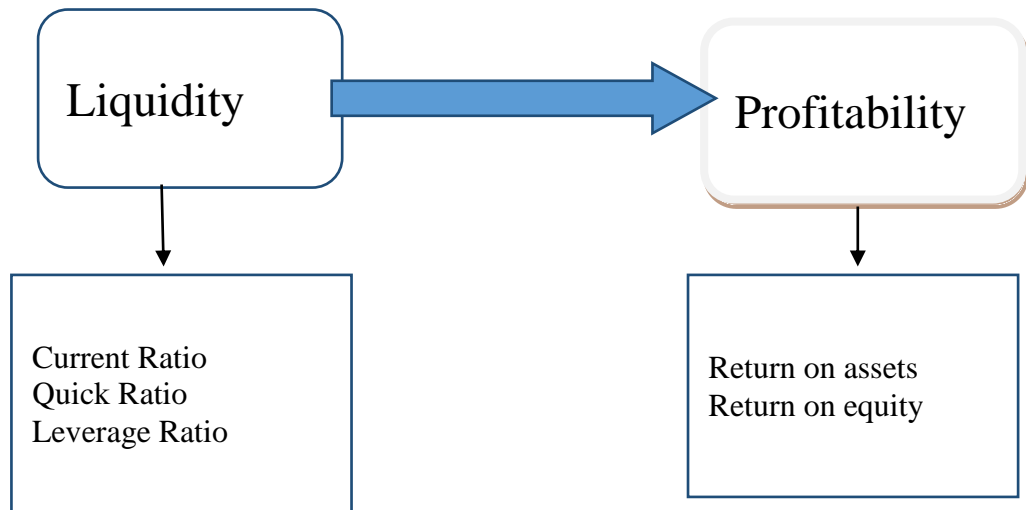
CA → current ratio

QR → Quick ratio

LR → leverage ratio

3.6 Conceptual framework

Conceptual framework of the study describes the systematic explanations of the relationship among the dependent and independent variables for the purpose of clarifying the relationship between liquidity and profitability variables of life insurance companies in Nepal. This section provide the conceptual framework of study and describes about variables that have been in study. In this study, dependent variables is return on equity and return on assets. Where current ratio, quick ratio and leverage ratio are the independent variables. Thus, the following conceptual model is framed to summarize the main focus and scope of this study.



CHAPTER 4

RESULTS AND DISCUSSION

4.1 Data presentation and analysis

This chapter presents the data analysis of information collected on the relationship between liquidity and profitability of life insurance companies in Nepal. The collected data are recorded systematically and organized them to analyze using different tools and techniques. So, this chapter is the main body of the study which concerned with presentation, analysis and interpretation of collected data.

In order to analyze the effect of liquidity on profitability of Nepalese life insurance companies, the necessary information and data are collected through audited financial statement, annual reports. The major variables of this study are current ratio, quick ratio, Leverage ratio, Return on equity, Return on assets etc. which are very sensitive and pertinent for the study. Only collecting and presenting the data are not sufficient for the study purpose. Therefore, various financial and statistical tools have applied to examine the relationship between liquidity and profitability of Nepalese life insurance companies.

4.2 Liquidity position

Liquidity position is most important for the operation of the firms and it is seen as the basic input needed to keep a business running on a day to day basis. Liquidity ratio generate than one manifest that the firms to be in good financial position. So, to analysis of liquidity position of life insurance companies and measure the liquidity position indicates the ability to pay of its short-term obligation. Liquidity position indicates the how many times the current assets is available to meet the onetime of current liabilities.

4.2.1 Current ratio

Current Ratio serves a similar purpose and it is frequently used. It is also called Liquidity ratio. It is considered as an index of solvency of company. It indicates the ability of the company to meet its current obligations. Change in current ratio can however be misleading. If a company raises money through commercial paper & invests the amount in marketable securities, net working capital is unattached but the current ratio changes. A current ratio of 2:1 in generally considered satisfactory for

insurance company. It constitutes a rule of thumb for measuring liquidity. The ratios of selected companies for the period of study are calculated below.

Table 4.1
Current Ratio (CR)

Company	Year					Mean	S.D	C.V
	2070/71	2071/72	2072/73	2073/74	2074/75			
Asian life insurance	31.34	7.43	6.34	5.87	3.04	10.80	11.60	107.33
Gurash life insurance	13.13	11.90	13.95	11.24	6.51	11.35	2.90	25.58
Life insurance corporation	12.08	13.86	16.68	4.84	3.63	10.22	5.72	55.98
Mit life insurance	7.05	11.71	10.43	13.23	12.78	11.04	2.48	22.45
National life insurance	10.57	12.47	11.20	4.22	2.72	8.24	4.44	53.88
Nepal life insurance	8.08	12.56	15.64	8.76	4.83	9.98	4.19	42.02
Prime life insurance	4.55	5.15	5.65	3.91	5.31	4.91	0.69	14.03
Surya life insurance	6.71	4.75	5.22	4.06	3.82	4.91	1.15	23.36

Source: Annual reports of life insurance companies

The findings as shown in table 4.1 above indicate the position of current ratio over the 5 years period of eight life insurance companies and mean, standard deviation, and coefficient of variation have also calculated. The highest current ratio of ALI is 31.34 times in the fiscal years 2070/71 which is highest than other companies and lowest 3.03 times in the fiscal year 2074/75. Current ratio of ALI is very highly fluctuating than other. It is closer to zero continuously from 2070/71 to 2071/72. The mean value of current ratio of ALI, GLI, LIC, MLI, NaIL, NeIL, PLI and SLI are 10.80, 11.35, 10.22, 11.04, 8.24, 9.98, 4.91 and 4.91 respectively which are higher the current ratio standard. The average current ratio is highest for GLI for a time of study period but lowest for PLI. This shows that the life insurance companies has maintain a highest level of the current ratio over the 5 year period. The standard deviation of ALI is 11.60 which is higher than other. The CV of current ratio of ALI, GLI, LIC, MLI,

NaIL, NeIL, PLI and SLI are 107.32, 25.58, 55.98, 22.45, 53.88, 42.02, 14.03 and 23.36 respectively, the coefficient of variation of ALI is 107.32 which is higher than other companies. Which indicate that ALI is more risky. In this study shows that the liquidity varies widely with in different life insurance companies.

4.2.2 Quick ratio

Quick ratio measures the liquidity position in net term. Current ratio measures the short-term solvency in gross term, which cannot measure the actual liquidity position due to inclusion of less liquid assets. Quick ratio indicates the availability of highly liquid assets, which can be converted into cash within short period as compared to current assets. The quick ratio is considered as perfect when the ratio comes 1:1. The findings on the current ratio mean value and coefficient of variation are as presented in the table 4.2

Table 4.2
Quick assets ratio (QR)

Company	Year					Mean	S.D	C.V
	2070/71	2071/72	2072/73	2073/74	2074/75			
Asian life insurance	30.34	6.43	5.34	4.87	2.03	9.80	11.59	118.28
Gurash life insurance	12.13	10.90	12.95	10.24	5.51	10.35	2.90	28.05
Life insurance corporation	11.08	12.86	15.68	3.84	2.63	9.22	5.72	62.05
Mit life insurance	6.05	10.71	9.43	12.24	11.78	10.04	2.48	24.68
National life insurance	9.57	11.47	10.20	3.22	1.72	7.24	4.44	61.33
Nepal life insurance	7.09	11.57	14.64	7.76	3.83	8.98	4.19	46.69
Prime life insurance	3.55	4.15	4.65	2.91	4.31	3.91	0.69	17.61
Surya life insurance	5.71	3.75	4.22	3.06	2.82	3.91	1.15	29.33

Source: Annual reports of life insurance companies

The findings as shown in table 4.1 above indicate the position of Quick ratio over the 5 years period of eight life insurance companies and mean, standard deviation, and coefficient of variation have also calculated. The highest Quick ratio of ALI is 30.34 times in FY 2070/71 which is highest than other companies but lowest 2.03 in FY 2074/75. QR of ALI is very highly fluctuating than other companies. It is closer to zero continuously from 2070/71 to 2071/72.

The mean value of Quick ratio of ALI, GLI, LIC, MLI, NaIL, NeIL, PLI and SLI are 9.80, 10.35, 9.22, 10.04, 7.24, 8.98, 3.91 and 3.91 respectively which are higher than quick ratio standard. The average Quick ratio is highest for GLI for the time of study period but lowest for PLI. Which indicates shows that the quick ratio of PLI is best. This finding shows that the life insurance companies has maintain a high level of the quick ratio over the 5 year period. The standard deviation of ALI is 11.60 which is higher than other. The CV of quick ratio of ALI, GLI, LIC, MLI, NaIL, NeIL, PLI and SLI are 118.28, 28.05, 62.05, 24.68, 61.33, 46.69, 17.61 and 29.33 respectively, the coefficient of variation of ALI is 118.28 which is highest of all life insurance companies But the CV of PLI is 17.61 which is lowest. This means that the trend of QR of ALI is more fluctuating than others. In this study shows that the liquidity varies widely with in different life insurance companies. From this finding life insurance companies in Nepal have a lot of liquidity but no stability and liquidity has not been able to determine profit.

4.2.3 Leverage ratio

The degree of financial leverage reflects insurance companies' ability to manage their economic exposure to unexpected losses. The risk of an insurer may increase when it increases its leverage. For the investor, the challenge is determining whether the organizations debt level is sustainable. Lower indicates of leverage is less dependent on borrowing for company operations. The finding on the leverage ratio mean value and coefficient of variation are as presented in the table 4.3

Table 4.3
Leverage ratio (LV)

Company	Year					Mean	S.D	C.V
	2070/71	2071/72	2072/73	2073/74	2074/75			
Asian life insurance	0.84	0.87	0.91	0.91	0.90	0.89	0.02	3.22
Gurash life insurance	0.64	0.72	0.76	0.80	0.83	0.75	0.07	10.33
Life insurance corporation	0.94	0.94	0.95	0.96	0.95	0.95	0.005	0.56
Mit life insurance	0.95	0.95	0.93	0.91	0.89	0.93	0.025	2.79
National life insurance	0.90	0.90	0.90	0.89	0.91	0.90	0.007	0.79
Nepal life insurance	0.91	0.91	0.91	0.85	0.87	0.89	0.029	3.27
Prime life insurance	0.72	0.75	0.77	0.79	0.73	0.75	0.03	4.01
Surya life insurance	0.55	0.59	0.72	0.73	0.74	0.67	0.088	13.26

Sources: Annual reports of life insurance companies

The findings as shown in table 4.1 above indicate the position of leverage ratio over the 5 years period of eight life insurance companies and mean, standard deviation, and coefficient of variation have also calculated. The mean value of LIC is 0.95 which is highest of all insurance companies but the mean value of SLI is 0.67 which is lowest of all companies. The company SLI is less dependent on borrowing and its level of leverage is healthy. The standard deviation and coefficient of variation of SLI are 0.088 and 13.26 respectively, which is highest than other insurance companies. This means LV of SLI is more fluctuating than other. The lowest standard deviation and coefficient of variation of LIC are 0.005 and 0.56 respectively. Which indicates that the range of LV of LIC is low fluctuating and largely smooth.

4.3 Profitability position

The profitability ratio is used to measure the operating performance of the companies. Generally, the firm's performance can be estimated by measuring the firm's profitability. It is the measure of efficiency. Liquidity position has affected

profitability position of the life insurance business. The strong profitability position fulfill the aims of wealth maximization as well as profit maximization, which motivate investor to invest.

4.3.1 Return on equity

Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. ROE is a metric of how well the company utilize its equity to generate profits. High return on equity are usually more capable of generating cash internally and therefore less dependent in debt financing. The findings on the return on equity ratio, mean value and coefficient of variation are as presented in the table 4.4

Table 4.4
Return on Equity (ROE)

Company	Year					Mean	S.D	C.V
	2070/71	2071/72	2072/73	2073/74	2074/75			
Asian life insurance	8.92	8.82	10.77	4.90	-2.074	6.27	5.13	81.85
Gurash life insurance	5.95	5.42	10.02	8.85	9.56	7.96	2.13	26.69
Life insurance corporation	19.07	19.78	20.52	7.97	53.66	24.20	17.25	71.29
Mit life insurance	12.35	11.47	36.58	32.92	28.47	24.36	11.72	48.13
National life insurance	20.74	24.44	19.45	18.70	20.64	20.80	2.21	10.61
Nepal life insurance	33.12	22.36	28.04	12.93	14.18	22.12	8.71	39.36
Prime life insurance	14.79	11.30	16.39	15.69	6.69	12.97	4.02	31.01
Surya life insurance	6.90	3.46	16.94	13.00	12.61	10.58	5.35	50.58

Sources: Annual reports of life insurance companies

The findings as shown in table 4.1 above indicate the position of return on equity over the 5 years period of eight life insurance companies and mean, standard

deviation, and coefficient of variation have also calculated. The value of return on equity of ALI earn maximum 10.77% of return whereas minimum of -2.074% return. Which negative indicate that company is not properly utilizing its equity capital. Likewise, the return on equity of LIC shows maximum 53.66% and minimum 7.97% of return. Which indicates that the company's return on equity is very highly fluctuating than other. Mean value of return on equity ratio of MLI is higher than other life insurance companies (i.e 24.36), which indicates more capable of generating cash internally. The coefficient of variation of ALI is 81.85% which is higher than other companies. This means high variation of return on equity of ALI. Which indicates that the company ALI is more risky.

4.3.2 Return on assets

This ratio measure for the operating efficiency for the company based on the firm's generated profits from its total assets. It shows the efficient management at using assets to generate earnings. ROA is often called the firm's return on total assets, measure the overall effectiveness of management in generating profit with its available assets. The higher the firm's return on assets the better it is doing in operation and firms are more profitable

Table 4.5
Return on Assets (ROA)

Company	Year					Mean	S.D	C.V
	2070/71	2071/72	2072/73	2073/74	2074/75			
Asian life insurance	1.39	1.13	1.18	0.45	-o.20	0.79	0.66	83.38
Gurash life insurance	2.17	1.57	2.37	1.74	1.59	1.89	0.36	19.05
Life insurance corporation	1.13	1.10	1.10	0.36	2.81	1.30	0.91	69.67
Mit life insurance	0.62	0.60	2.63	3.03	3.09	1.99	1.28	64.05
National life insurance	2.12	1.86	2.05	1.97	1.82	1.97	0.13	6.45
Nepal life insurance	3.07	1.95	2.49	1.98	1.78	2.26	0.53	23.37
Prime life insurance	4.17	2.78	3.73	3.31	1.83	3.16	0.91	28.64
Surya life insurance	3.09	1.43	4.74	3.48	3.31	3.21	1.19	36.98

Sources: Annual reports of life insurance companies

The findings as shown in table 4.1 above indicate the position of return on assets over the 5 years period of eight life insurance companies and mean, standard deviation, and coefficient of variation have also calculated. The return on assets of SLI is 4.74% which is higher than other life insurance companies. Return on assets of SLI seems to be the highest return which indicates shows that SLI Company's return on assets is excellent. The table show that highest return on total assets ratio of ALI is 1.39 in FY 2070/71 but lowest - 0.20 in FY 2074/75. Negative ROA indicates that a company is not properly utilizing available assets. Mean value of return on assets ratio of SLI is higher than other life insurance companies (i.e 3.21), It shows the efficient management at using assets to generate earnings. The coefficient of variation of ALI is 83.38%% which is higher than other companies. This means high variability of return on assets of ALI. Which indicates that the company ALI is more risky.

4.4 Descriptive analysis

The descriptive statistical used in this study consists of mean, median, standard deviation, coefficient of variation, minimum and maximum values associated with variables under consideration. Table summarizes the descriptive statistics for the Nepalese life insurance companies used in this study during the period 2070/71 through 2074/75 for 8 sample life insurance companies of Nepal.

Table 4.6

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	CV
Current Ratio	40.00	2.72	31.34	8.93	5.38	60.27
Quick Ratio	40.00	1.72	30.34	7.93	5.38	67.87
Leverage Ratio	40.00	0.55	0.96	0.84	0.11	12.55
ROE	40.00	-2.07	53.66	16.16	10.55	65.30
ROA	40.00	-0.20	4.74	2.07	1.08	52.56

Source: SPSS output

The descriptive statistics show that over the period under study, the criteria used for measuring liquidity including current ratio, quick ratio and leverage ratio averaged 8.93, 7.93 and 0.84 respectively. Furthermore, the mean value of profitability measures (i.e ROE and ROA) are 16.16 and 2.07 respectively. The mean values of profitability measures ROE is found to be higher than those of liquidity measures.

The mean value of profitability measures ROA is found to be less than those of liquidity measures. The mean value of current ratio and quick ratio is higher than standard that indicate high liquidity is not good for the companies because too much liquidity reduces investment. The coefficient of variation of CR, QR, LR, ROE, ROA are 60.27, 67.87, 12.55, 65.30, 52.56 respectively. Thus, coefficient of variation reveal the high volatility of profitability and liquidity measures used in the study.

4.4.1 Correlation analysis

Pearson's correlation is used to analyze the relationship between current ratio, quick ratio, leverage ratio with return on equity and return on assets in Nepalese life insurance companies. Correlation measure the strength and the direction of a linear relationship between dependent and independent variables. The study has used correlations analysis to show the correlation between the dependent variables Return on equity (ROE) and Return on assets (ROA) and the independent variables Current ratio (CR), Quick ratio (QR) and Leverage ratio (LV).

Table 4.7 Pearson's correlations coefficient matrix

Correlations						
		ROE	ROA	Current Ratio	Quick Ratio	Leverage Ratio
ROE	Pearson Correlation	1				
	Sig. (2-tailed)					
ROA	Pearson Correlation	.391*	1			
	Sig. (2-tailed)	.013				
Current Ratio	Pearson Correlation	.092	-.167	1		
	Sig. (2-tailed)	.573	.302			
Quick Ratio	Pearson Correlation	.092	-.167	1.000**	1	
	Sig. (2-tailed)	.573	.302	.000		
Leverage Ratio	Pearson Correlation	.470**	-.454**	.187	.187	1
	Sig. (2-tailed)	.002	.003	.248	.248	

Sources: SPSS data

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.7 shows the correlations coefficient between dependent and independent variables. The extent of the relationship is shown in the correlation table indicate positive relationship (0.092) between current ratio and return on equity but it is insignificant (0.573). Current ratio and quick ratio seems to be same results. There is positive relationship between quick ratio and return on equity which indicates that increase in liquidity ratio leads to increase in return on equity. Change in liquidity has a weak effect on Return on equity. The extent of the relationship as shown in the correlation table indicate positive and significant relationship between leverage and return on equity, value of correlation coefficient is 0.470 and it is significant at 1 percent.

The extent of the relationship as shown in the correlation table indicate negative relationship between quick ratio and return on assets, it is insignificant at 0.05 level, which indicates that increase in liquidity ratio leads to decreasing in return on assets. Likewise there is negative and significant relationship between leverage and return on assets which indicates that increasing in leverage ratio leads to decreasing in return on assets.

4.4.2 Multiple regression analysis

A multiple regression analysis was conducted to study the relationship between liquidity and profitability of life insurance companies in Nepal. Regression analysis is done to find out the effect of predictors (independent variables) on the dependent variables. Regression is able to estimate the coefficients of the linear equation, involving one or more independent variables, which best predicted the value of the dependent variable. Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (profitability indicated by ROA, ROE) that is explained by independent variables (quick ratio, leverage ratio).

4.4.2.1 Regression result of model 1

Table 4.8 Model summary 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.470 ^a	.221	.178	9.5641954

a) Dependent variable: ROE

b) Predictors: (constant), QR, LR

Sources: SPSS data

Model summary indicates that the coefficient of determination (R square value) explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (ROE) that is explained by two independent variables (quick ratio, leverage ratio). The independent variables (liquidity factors) that were studied, explain only 22.10% of the return on equity of life insurance companies in Nepal as represented by the value of R-square. However the remaining 77.90% is unexplained in this research. Model summary also indicates the standard error of estimate of 9.56 which shows the more variability of the observation.

Table 4.9 ANOVA result -1

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	957.829	2	478.915	5.236	.010 ^b
	Residual	3384.532	37	91.474		
	Total	4342.361	39			

a. Dependent variable: ROE

b. Predictors: (constant), QR, LR

Sources: SPSS data

The result of significant value 0.000 indicate that the model is good predictor of the relationship between the dependent and independent variables. The ANOVA test shows that significance value is 0.010 which is less than alpha value 0.05 thus the model is statistically significance in predicting quick ratio, leverage ratio influences profitability of life insurance companies in Nepal.

Table 4.10 Coefficient analysis of ROE and variable

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-23.324	12.295		-1.897	.066
	Quick Ratio	.008	.290	.004	.027	.978
	Leverage Ratio	46.941	14.791	.469	3.174	.003

Sources: SPSS data

a. dependent variable: ROE

The table gives the regression coefficients which are used to answer the regression model proposed

Model 1

$$ROE = \beta_0 + \beta_1 QR + \beta_2 LR + e \dots\dots\dots (1)$$

From the data in Table 4.10 the model therefore becomes:

$$ROE = -23.32 + 0.008 (QR) + 46.94 (LR)$$

Where ROE is Return on equity (a measure of profitability), QR is Quick Ratio, LV is leverage ratio. In the regression analysis, the beta coefficient are used to explain the relative importance of the independent variables in contribution to the variance in dependent variable. The result presented in table 4.12 shows that the coefficient of intercept β_0 has a value (-23.324) and it is insignificant at 95% confidence level. From the regression model, taking factors (Quick Ratio, Leverage Ratio) constant at zero, return on equity of insurance companies in Nepal was -23.32. The result presented that a unit increase in Quick ratio will lead to a 0.008 increasing in return on equity, a unit increase in leverage ratio will lead to a 46.941 increasing in return on equity. The result reveals that the beta coefficient for leverage are positive and significant with return on equity. This reveals that leverage has positive impact on return on equity. Likewise, the beta coefficient for liquidity ratio are positive and insignificant with return on equity. It indicates that liquidity has positive little impact on return on equity.

4.4.2.2 Regression result of model 2

Table 4.11 Model summary 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.462 ^a	.213	.171	.9910839

Sources: SPSS data

- a) Dependent variable : ROA
- b) Predictors : (constant), QR, LR

Model summary indicates that the coefficient of determination (R square value) explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (ROA) that is explained by two independent variables (quick ratio, leverage ratio). The independent variables (liquidity factors) that were studied, explain only 21.30% of the return on assets of life insurance companies in Nepal as represented by the value of R- square. However the remaining 78.70% is unexplained in this research.

Table 4.12 ANOVA result -2

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9.865	2	4.932	5.021	.012 ^b
	Residual	36.343	37	.982		
	Total	46.208	39			

Sources: SPSS data

- a. Dependent variable: ROA
- b. Predictors: (constant), QR, LR

The result of significant value 0.000 indicate that the model is good predictor of the relationship between the dependent and independent variables. The ANOVA test shows that significance value is 0.012 which is less than alpha value 0.05 thus the

model is statistically significance in predicting how quick ratio, leverage ratio influences profitability of life insurance companies in Nepal.

Table 4.13 Coefficient analysis of ROA and variable

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.010	1.274		4.717	.000
	Quick Ratio	-.017	.030	-.085	-.575	.569
	Leverage Ratio	-4.528	1.533	-.438	-2.954	.005

Sources: SPSS data

a. dependent variable: ROA

The table gives the regression coefficients which are used to answer the regression model proposed

Model 2

$$ROA = \beta_0 + \beta_1 QR + \beta_2 LR + e$$

From the data in Table 4.13 the model therefore becomes:

$$ROA = 6.010 - 0.017(QR) - 4.528(LR)$$

Where ROA is Return on Assets (a measure of profitability), QR is Quick Ratio, LV is leverage ratio. In the regression analysis, the beta coefficient are used to explain the relative importance of the independent variables in contribution to the variance in dependent variable. The result presented in table 4.13 shows that the coefficient of intercept β_0 has a value 6.010 and it is insignificant at 95% confidence level. From the regression model, taking factors (Quick Ratio, Leverage Ratio) constant at zero, return on assets of insurance companies in Nepal was 6.010. The result presented that a unit increase in Quick ratio will lead to a -0.017 decreasing in return on assets, a unit increase in leverage ratio will lead to a -4.528 decreasing in return on assets. The result reveals that the beta coefficient for leverage are negative and significant with return on assets. This reveals that leverage has negative impact on return on equity. Likewise, the beta coefficient for quick ratio are negative and insignificant with return on assets. It indicates that liquidity has negative and weak impact on return on assets.

4.5 Major finding

In this study used secondary data. This is undertaken with reference of result obtained from the analysis made in the previous section to examine the relationship between liquidity and profitability. The major findings of the study can be presented below in this point wise:

- i. The average current ratio of GLI Company is 11.35, which is higher than other sampled life insurance companies but lowest of PLI and SLI is 4.91. This means that GLI Company has maintained higher liquidity. The CV of ALI company is 107.33 which is higher than other companies. This means that current ratio of ALI Company is very highly fluctuating.
- ii. The average quick ratio of GLI Company is 10.35, which is higher than other sampled life insurance companies. This means that GLI Company has maintained higher liquidity. The CV of ALI company is 118.28, which is higher than other companies. This means that quick ratio of ALI Company is very highly fluctuating.
- iii. The mean value of leverage ratio of LIC is 0.95 which is highest of all life insurance companies but the mean value of SLI is 0.67 which is lowest of all companies. The standard deviation and coefficient of variation of SLI are 0.88 and 13.26 respectively, which is highest than other insurance companies.
- iv. Mean value of return on equity ratio of MLI is higher than other life insurance companies (i.e 24.36), which indicates more capable of generating cash internally. The coefficient of variation of ALI is 81.85% which is higher than other companies. This means high variation of return on equity of ALI. Which indicates that the company ALI is more risky.
- v. Mean value of return on assets ratio of SLI is higher than other life insurance companies (i.e 3.21), it shows the efficient management at using assets to generate earnings. The coefficient of variation of ALI is 83.38% which is higher than other companies. This means high variability of return on assets of ALI. Which indicates that the company ALI is more risky.
- vi. The descriptive analysis shows that the average current ratio of Nepalese life insurance companies is 8.93 times while the average of quick ratio is 7.93 times. The average ratio of leverage of selected companies during the study period is noticed to be 0.84. The average return on equity of selected life

insurance companies is 16.16%, while the average ratio of return on assets is 2.07%.

- vii. The correlation analysis shows that there is a positive relationship (0.092) between current ratio and return on equity which indicates that increase in current ratio leads to increase in return on equity. Similarly there is positive relationship (0.092) between quick ratio and return on equity. Likewise there is positive relationship (0.470) between leverage ratio and return on equity. Which indicates that increase in leverage ratio leads to increase in return on equity.
- viii. The correlation analysis shows that there is a negative relationship (-0.167) between current ratio and return on assets which indicates that increase in current ratio leads to decrease in return on assets. Similarly there is negative relationship (-0.167) between quick ratio and return on assets. Likewise there is negative relationship (-0.454) between leverage ratio and return on assets. Which indicates that increase in leverage ratio leads to decrease in return on assets.
- ix. The model summary of regression analysis shows that independent variables (quick ratio, leverage ratio) that were studied, explain only 22.10% of dependent variable (ROE). Further, the model summary of regression analysis shows that independent variables (quick ratio, leverage ratio) that were studied, explain only 21.30% of dependent variable (ROA).
- x. The regression result reveals that the beta coefficient for leverage are positive and significant with return on equity. This reveals that leverage has positive impact on return on equity where an increase in leverage would result to 46.94 times increase in ROE. Likewise, the beta coefficient for liquidity ratio are positive and insignificant with return on equity. It indicates that liquidity has positive little impact on return on equity where an increase in liquidity ratio would result to 0.008 times increase in ROE.
- xi. The regression result reveals that the beta coefficient for leverage are negative and significant with return on assets. This reveals that leverage has negative impact on return on equity where an increase in leverage would result to -4.52 times Decrease in ROA. Likewise, the beta coefficient for quick ratio are negative and insignificant with return on assets. It indicates that liquidity has

negative and weak impact on return on assets where an increase in quick ratio would result to -0.017 decrease in ROA.

4.6 Discussion

Liquidity and profitability are two very crucial issue that organization's management always considers evaluating the financial health of the company. This study sought to investigate the relationship between liquidity and profitability of life insurance companies in Nepal. The study applied a descriptive and research design. The study data gathered systematically for the 5 years period of time in order to answer a research question. The sample of 8 life insurance companies in Nepal was conducted in this study. Data has obtained from secondary sources such as the annual report of the life insurance companies. To serve the propose the following specific objective have been formulated ; To measure the profitability position and liquidity position of life insurance companies in Nepal, To test the relationship between liquidity and profitability of life insurance companies in Nepal, To find out the factor other than liquidity influence on profitability of life insurance companies in Nepal.

The ratio analysis is used to measure the position of liquidity and profitability. The measure ratio analysis consists of current ratio, quick ratio, leverage ratio, Return on equity ratio and return on assets ratio. A correlation analysis is used to examine the how effect of liquidity on companies profitability. A multiple regression analysis undertaken to study the relationship between independent variables and dependent variables. The significance of the results was tested at 5% significance level in a 2-tailed test. A statistical package like (statistical package for social sciences) SPSS 25 version was used in order to examine the data.

From the descriptive statistics, the study found out the liquidity and profitability position of life insurance companies in Nepal have been more fluctuation in year on year. Which indicates shows that liquidity and profitability of life insurance companies is not stability. From the correlations analysis, the study found out the current ratio, quick ratio, leverage ratio influenced profitability of the companies. While current ratio, quick ratio, leverage ratio influenced return on equity positively. Further, current ratio, quick ratio, leverage ratio influenced return on equity negatively. The results show from regression analysis profitability is significantly

affected by only leverage ratio but Profitability is not significantly affected by quick ratio.

This is in line with the finding of Larney, Antwi,&Boadi (2013) who researched on relationship between liquidity and profitability of listed banks on the Ghana stock exchange and found out that there were a very weak positive relationship between liquidity and profitability. Further this result is consistent with the result of the study of Malik (2011) who researched determinants of insurance companies' profitability of Pakistan and find out that leverage ratio showed negative but significant relationship with profitability. Likewise this result is different with the result the study of Ajanthan (2013) who investigated the relationship between liquidity and profitability of trading companies in Sri Lanka and found out there is a significant relationship between liquidity and profitability.

CHAPTER 5

SUMMARY AND CONCLUSIONS

This final chapter involves Summary, conclusions and implications of the research work. The facts and findings from secondary data analysis are presented in this chapter. This study is carried out to assess the effect of Liquidity on profitability of Life insurance companies in Nepal. This study is conducted to establish the relationship between liquidity and profitability of insurance companies in Nepal. This chapter provides a summary of findings presented in Chapter Four.

5.1 summary

This study conducted to investigate the relationship between liquidity and profitability analysis of life insurance companies in Nepal. The study applied a descriptive and analytical research design. The study data gathered systematically over a period of time in order to answer a research question. The sample of 8 life insurance companies in Nepal was conducted in this study. Data was obtained from secondary sources such as the financial statements of the life insurance companies. The ratio analysis is used to measure the position of liquidity and profitability. The measure ratio analysis consists of current ratio, quick ratio, leverage ratio, Return on equity ratio and return on assets ratio. A correlation analysis is used to examine the how effect of liquidity on companies profitability. A multiple regression analysis was undertaken to study the relationship between independent variables and dependent variables. The significance of the results was tested at 5% significance level in a 2-tailed test. A statistical package like (statistical package for social sciences) SPSS 25 version was used in order to examine the data.

From the financial ratio analysis, the current ratio and quick ratio of PLI and SLI is the best among the eight life insurance companies included in the study. Because PLI and SLI companies are maintain a suitable current ratio and quick ratio. From the correlations analysis, the study found out the current ratio, quick ratio, leverage ratio influenced profitability of the companies. While current ratio, quick ratio, leverage ratio influenced return on equity positively. Further, current ratio, quick ratio, leverage ratio influenced return on equity negatively. The results show from regression analysis profitability is significantly affected by only leverage ratio but Profitability is not significantly affected by quick ratio.

5.2 Conclusion

The study concludes that the current ratio and quick ratio of PLI and SLI is the best among the eight life insurance companies included in the study. Because PLI and SLI companies are maintain a suitable current ratio and quick ratio. Other companies in the study need to reduce their liquidity position for better execution. The CR and QR ratio takes into account short-term investment and assets which are more liquid. Striving to maintain financial liquidity on a high level indicates keeping a large share of current assets, especially cash. The company SLI is less dependent on borrowing and its level of leverage are healthy. The return on equity position of MLI is better than other companies. The ROA of SLI companies is excellent.

The study concludes that there is a positive but insignificant relationship between (current ratio, quick ratio) and ROE in life insurance companies in Nepal. Based on the research finding clarify that the current ratio and quick ratio have a positive but weak relationship with companies return on equity. This means that life insurance companies with higher level of liquidity cannot reach a higher level of return on equity. The study concludes that there is a positive significant relationship between leverage ratio and ROE in insurance companies. This means that insurance companies are unable to manage their economic exposure to unexpected losses.

Further, the study concludes that there is negative insignificant relationship between (current ratio, quick ratio) and return on assets in life insurance companies in Nepal. Based on the research finding clarify that the current ratio, quick ratio have a negative but weak relationship with companies return on assets. This means that life insurance companies with lower level of liquidity cannot reach a higher level of return on assets. The study concludes that there is a negative significant relationship between leverage ratio and ROA in insurance companies. This means that insurance companies are able to manage their economic exposure to unexpected losses. In this study the change in the dependent variable (profitability) has not fully explained by the changes in the independent variable (quick ratio) the study concluded that there are other factor that determine profitability apart from liquidity. This is in line with the finding of Shrestha, (2018) who researched on relationship between the liquidity management is not a significant contributor alone of the firms profitability and there exist other variables that will influence ROA.

5.3 Implications

Based on the analysis, finding and conclusions. The following implication are put forward.

5.3.1 General implications

Managers should balance between profitability and liquidity of their companies. This means they should maintain a trade - off between profitability and liquidity. Profitability plays an important role in the financial position of enterprises.

Since the survival of life insurance companies depend on liquidity management and profitability, they should not only concentrate on the profit maximization goal but should also adopt measures that will ensure proper liquidity management. The measures will help to minimize or avoid cases of excessive and deficient liquidity.

From the findings, the study established that quick ratio as a liquidity measure did not significantly affect the profitability of life insurance companies in Nepal. Therefore, the study recommends that the management of the companies should focus on identifying viable investment opportunities in the operating environment to enhance the growth and profitability of the firms should also adopt measures that will ensure proper liquidity management. In addition, management of life insurance companies should identify and address other factors that may be affecting their profitability other than liquidity.

In view of the fact that liquidity has some amount of bearings on the profitability of companies, it is important that companies are manage their liquidity very well. But liquidity should not be too much.

5.3.2 Implications for future studies

- i) This study was carried out to determine the relationship between profitability of life insurance companies in Nepal. It would be recommends to carry out a similar study in different nonlife insurance industries. The study focused on insurance companies since there is a regulatory requirement that require a certain level of Liquidity be maintained.
- ii) The present study has covered only eight life insurance companies in Nepal. It has also studied data of only 5 fiscal years. Therefore, further studies should also

cover as many more companies and years as possible to make their findings more valid and should use more scientific tools and analysis.

- iii) The study further recommends that different independent variables may be used instead of the three used in this study (Current ratio, Quick Ratio, Leverage Ratio).
- iv) The study established that quick ratio as a liquidity measure did not significantly affect the profitability of life insurance companies in Nepal, the study recommends an investigation on any other factors that may be affecting profitability other than liquidity.

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APPENDICES

Raw Data

Surya life insurance					
particulars	2070	2071	2072	2073	2074
Equity	634273382	633516072	781835356	1048048113	1478887564
non current liability	672299114	672229114	1646024767	2417175694	3524699961
current liability	112741534	233000064	364795141	451021124	631553500
current assets	756596129	1106730525	1904499864	1830814149	2414804736
net current assets	643854595	873730461	1539704723	1379793025	1783251236
total assets	1419314030	1538815250	2792655264	3916244931	5635141025
profit	43791302	21941458	132466752	136252539	186541958
total debt	785040648	905229178	2010819908	2868196818	4156253461

Gurash life insurance					
particulars	2070	2071	2072	2073	2074
Equity	645623039	682655260	756071320	826749890	914194878
non current liability	1010268018	1515608684	2221656259	3036612316	4187993665
current liability	115905837	177001967	217327041	342103895	373179577
current assets	1522038314	2106997220	3032602781	3845715560	2429233453
net current assets	1406132477	1929995253	2815275734	3503611665	2056053876
total assets	1772156894	2357265911	3195054626	4205466101	5475368120
profit	38416583	37032221	75731849	73179622	87444989
total debt	1126173855	1692610651	2438983300	3378716211	4561173242

Nepal life insurance					
particulars	2070	2071	2072	2073	2074
Equity	1854275948	2359015947	3233056215	7766804655	7846380324
non current liability	17050813692	23291010775	31405207890	39541510027	49596796284
current liability	1135084142	1444045462	1672890009	3442559374	4913095427
current assets	9177414383	18143902304	26164551007	30153826908	23749355306
net current assets	8042330241	16699856842	24491660998	26711267534	18836259879
total assets	20020173782	27094072184	36311154114	50750874056	62356272035
profit	614111885	527555789	906634254	1004634123	1112831917
total debt	18185897834	24735056237	33078097899	42984069401	54509891711

Mit life insurance					
particulars	2070	2071	2072	2073	2074
Equity	502709596	592834456	940827306	1398567269	1961369316
non current liability	8566005870	9923314546	11177455928	12857835386	14866331214
current liability	959248486	841523287	968915056	915704933	1199477114
current assets	6760676332	9852381517	10108998503	12114147121	15325170798
net current assets	5801427846	9010858230	9140083447	11198442188	14125693684
total assets	10027963952	11338468795	13087198290	15172107588	18027177644
profit	62101278	68007096	344135750	460410265	558330847
total debt	9525254356	10764837833	12146370984	13773540319	16065808328

Asian life insurance					
particulars	2070	2071	2072	2073	2074
Equity	843105734	885589175	984592656	1032693076	1467416049
non current liability	4429657214	5854822807	7744325438	10000111401	13005401696
current liability	134211510	168510367	223986349	305880888	553379571
current assets	4206711517	1251697471	1420160829	1796576875	1679539549
net current assets	4072500007	1083187104	1196174480	1490695987	1126159978
total assets	5406974458	6908922349	8952904443	11338685365	15026197316
profit	75214329	78072845	106070089	50644397	-30430668
total debt	4563868724	6023333174	7968311787	10305992289	13558781267

Prime life insurance					
particulars	2070	2071	2072	2073	2074
Equity	950438304	1071471172	1274675484	1500171194	2798951487
non current liability	1871122389	2638696421	3583139304	4800340487	6580182718
current liability	546937659	637558328	747549734	820033862	854966292
current assets	2488585410	3282894687	4220885054	3202358697	4540319172
net current assets	1941647751	2645336359	3473335320	2382324835	3685352879
total assets	3368498352	4347725921	5605364522	7120545543	10234100497
profit	140605895	121032868	208933294	235389813	187177919
total debt	2418060048	3276254749	4330689038	5620374349	7435149010

National life insurance					
particulars	2070	2071	2072	2073	2074
Equity	1217516583	1079125721	1797419695	2187746474	2297135460
non current liability	9882428056	11919902025	14316251231	17293413237	21472469258
current liability	787242946	807316674	924496016	1330867245	2223623937
current assets	8322977153	10067204787	10356827825	5613762092	6043458302
net current assets	7535734207	9259888112	9432331809	4282894847	3819834365
total assets	11887187585	14192351507	17035224112	20812026958	25992247710
profit	252514776	263707686	349719304	409153790	474239008
total debt	10669671002	12727218699	15240747247	18624280482	23696093195

Life insurance corporation Nepal					
particulars	2070	2071	2072	2073	2074
Equity	1021401683	1259186455	1566662296	1693206651	2507528902
non-current liability	15505209418	20248350632	26484403810	33559608877	42233444411
current liability	713253107	1077923364	1227810400	2659398747	3151822025
current assets	8613546343	14939930379	20484002630	12878439901	11432245791
net current assets	7900293236	13862007015	19256192230	10219041154	8280423766
total assets	17239864208	22564609776	29278876506	37912214275	47892795338
profit	194829700	249042175	321435018	134973897	1345548211
total debt	16218462525	21326273996	27712214210	36219007624	45385266436