

# **CHAPTER I**

## **INTRODUCTION**

### **1.1 GENERAL BACKGROUND**

Finance is the important prerequisite for establishing and developing any business organization. Finance helps to bring together all the factors of production in industrial unit. Therefore financing is a critical element for success of a business. In the absence of adequate finance, even the business having high potentiality may fail. Financial decision impacts on the long range. Financial strategies of the firm thereby putting affect on the value of the firm. Financial institutions provide the requisite funds to the business firms. Therefore, financial institutions in the economy play a crucial role in the process of economic growth of the country.

For the development of a country, economic development is the major requisite. For economic development, financial sector plays a very important role, where they collect funds from customers by paying some percent interest and invest it to large industries and other business sector by taking some percent interest. The participation of private financial institutions play even more important role for the economic development. Beside the economic sector, social culture, industrial and technology sector are also should be strong for the development and progress of a country.

Since, this is the era of globalization; rapid development in information technology and the advancement in transportation facilities have made the world as narrow as a village. The present world economy has been more competitive and complicated due to globalization of economies and market. Every sort of change occurring in one sector of the world affects the other. Healthy economy is dependent on efficient transfer of funds from people who are net savers to firms and individuals who need capital. Without efficient transfer the economy simply cannot function. Economic efficiency is simply impossible without a good system for allocating capital within the economy. Nepal has predominantly a subsistent

agricultural economy, which contributes about 40 percent of GDP and provides employment to more than 80 percent of the economically active population.

The improvements in transportation and communications that have resulted in global markets in goods and services have also created a world of international finance. Money and capital flow across national boundaries. Financial transactions in the United States are influenced by international financial markets. When the U.S. stock market crashed on October 19, 1987, similar declines were taking place in the financial markets of most of the other countries of the world as well. The rise in interest rates in Japan and Germany during the first quarter of 1990 put increased pressure on interest rates and bond prices in the United States (J. Fred Weston and Thomas E. Copeland, 1992:16).

The active participation of private sector will play an important role in the development of the financial sector. It is essential to flow financial resources easily and in a simple manner to enhance the role of this sector in economic development that help to achieve desired results from the economic development. Because of various responsible causes the country has not been able to realize the desired outcomes, one of them is poor capital market condition. The capital market of Nepal is at early stage of growth and small. There is a problem of asymmetric information between management of newly established Nepalese companies and Nepalese investors who have poured their funds therein.

Due to the early stage of economic growth and capital market, our country has not been able to achieve the desired level of growth in financial institutions. The main objective of such financial institution is to earn profit by proper utilization of funds and resources. There are different types of financial institutions established with the capital of general public in form of equity share capital. Among these the insurance company is one, which is purposed for the study of their share market price behavior.

### **1.1.1 CONCEPT OF INSURANCE AND INSURANCE COMPANIES**

The development of sophisticated technology and different scientific innovation has changed the human life. It has made the whole world a global village. But it has also increased a great deal of risk in human life. More specifically risk denotes

the uncertainty of loss. No human activity is free from the risk. Some sort of risk is beyond the human control but human being always wants safe and secured life. To reduce such type of risk and uncertainties the concept of insurance is developed. Insurance is a way of reducing uncertainty of future outcome. It provides financial security against risk.

Insurance is defined as a co-operative device to spread the loss caused by the particular risk over a number of persons, who are exposed to it and who agree to ensure themselves against that risk. Insurance gives relief from the risk. It performs the task of paying compensation for financial loss under the insurance, in return of little fixed amount if loss or damage has taken place. Insurance, in modern term, can be defined as a risk transfer mechanism whereby the one who is exposed to risks transfers all or some part of it to an Insurer. W.D. Dinsdale stated of the meaning of insurance as a mean of spreading over the many losses, which would otherwise be borne by the individual it provides, in effect a pool to which the many contributions, out of which the few who suffers losses are compensated (W.D. Dinsdale, 1958).

According to J.L. Athenian, Insurance is created by insurer which is a professional risk bearer, assumes the financial aspects of risk transferred to it by insured. As a device for handling the financial aspects of risk, insurance is feasible because insurance is able to combine the risks of individuals into groups and pay losses with funds collected from its members (J.L. Athenian, 1981).

Dr. V.N. Bhargave defined insurance as a provision made by a group of persons, each single in danger of some losses, the incidence of which cannot be foreseen that when such loss occurs to any of these, it shall be distributed over the whole group. Its elements therefore are foresight and cooperation (V.N. Bhargave, 2053).

M.C. Shukla and T.S. Grewal (1990) defined insurance as a contract settled between the parties, one is insurance company and another is insured party who insure his properties as well as lives. They have stated as, it undertakes to indemnity to loss suffered (due to specified cases) by the other party known as the insured in consideration for a sum of money known as premium. Since the amount of the premium is generally small, insurance contract spreads the losses suffered

by one person over a large number of persons. Everyone pays a premium those who suffer a loss are paid a sum of equivalent to loss (loss according to the term of contract) and those who do not suffer loss by the premium paid. The protection against unforeseen events is purchased through a contract of insurance (M.C. Shukla and T.S. Grewal, 1990).

From the above mentioned definition it is clear that the insurance reduces the risk and provides financial security in return of payment of a certain amount. Insurance is a powerful weapon to manage risk.

Hence, insurance is a contract where one party (the insurer) agrees to pay the other party (the insured or his beneficiary) a certain sum called premium upon a given contingency (the risk) against which insurance is sought (M.N. Mishra, 1996). Thus insurance safeguard the interest of people form uncertainty by providing certainty by providing certainty of payment at a given contingency. Insurance companies constitute one of the most important components of financial structure. They play two vital roles in the economy, safeguard against the risk of loss of property and life and accumulation of resources. The former role is unique to them while the later is also significant because they mobilize funds of long-term nature.

Insurance company is an institution, which accepts the premium for specific probable events and pays on the loss. Insurance company is a firm legally registered as per the state rule and regulation (insurance act) and insures the insured to make payment to a specific event or losses. Like the commercial banks, insurance companies are also responsible and contribute for the economic growth to the nation. They attract the people form door to door to insure against the possible loss and invest the fund to the more productive sectors.

Insurance companies play vital role for the economic development of the nation as well as for the world's economy. Whether the country is developed or non-developed, it is very important to mobilize the fund in different investment sectors. Though the history of insurance company is not very old in Nepal but they have come long way to reach the present position. The concept of insurance developed in ancient period in Nepal. The system of maintaining 'Guthi' can be taken as the beginning point for the development of insurance in Nepal. The income from such

Guthi was used to build building and repairing temple and so on. But now they are converted into commercial phenomenon. now Nepal 25 Insurance company , 8 are life Insurance company and 17 are General Insurance company but only 19 Company are listed in NEPSE.

**Listed Insurance Com. In Nepal Stock Exchange LTD in 2011-05-25**

S.N.	Name of Company	stock Symbol	Nepse Code No	Listed Share
1	Nepal Insurance Co.Ltd.	NICL	601	1026984
2	Rastruya Beema Sansthan	RBS	602	828999
3	National LifeInsu. Co.Ltd	NLICL	603	1320000
4	Himalayan Gen Insu Co.Ltd	HGI	604	1008000
5	United Insurance Co.(Nepal)Ltd	UIC	605	600000
6	Everest Insurance Co.Ltd	EIC	606	1012500
7	Premier Insurance Co.Ltd	PIC	607	1020000
8	Neco Insurance Co.	NIL	608	1100000
9	Allaiance Insurance Co.Ltd	AIC	609	689841
10	Sagarmatha Insurance Co.Ltd	SIC	610	1123122
11	NB Insurance Co.Ltd	NBIL	611	1000000
12	Nepal Life Insurance Co.Ltd	NLIC	612	3000000
13	Life Insurance Co. Nepal	LICN	613	2500000
14	Prudential Insurance Co.	PICL	614	1000000
15	Lumbini General Insurance	LGCL	615	1250000
16	Shikhar Insurance Co.Ltd	SICL	616	1250000
17	Siddhartha Insurance Ltd.	SIL	617	1000000
18	Asian Life Insurance Co.Ltd	ALICL	618	3600000
19	Prime Life Insurance Co.Ltd	PLIC	619	3600000

(Source: NEPSE Annual trading Report, 2066/67)

**1.1.2 A BRIEF OVERVIEW OF STOCK MARKET IN NEPAL**

In a simple sense, stock is a share or equity in the ownership of a company. Stock represents a claim on the company's assets and earnings. As we acquire more stock, our ownership stake in the company becomes greater. Most stocks are traded on exchanges, which are places where buyers and sellers meet and decide on a price. Some exchanges are physical locations where transactions are carried out on a trading floor. Hence, stock market is a place where shares of listed companies are traded or transferred from one hand to another at a fair price through the organized brokerage system. Share or stock market is a major component of the securities market. Stock market is a medium through which corporate sector mobilizes funds to finance productive projects by issuing shares in the market. The purpose of a stock market is to facilitate the exchange of securities between buyers and seller, reducing the risks of investing. The efficient collection of small amounts of savings and transferring funds into the competitive and efficient uses requires a well functioning capital to facilitate the process (Paudel, 2003:1).

To maintain high liquidity in the stock market, the market has to be efficient in pricing the shares. In an efficient market, prices 'fully reflect' available information. In this situation at every moment in time the actual prices of the security represent best estimate of its intrinsic value (Fama, 1965:40). That is participants in the market would be dealing with fair prices of the security. In this condition, the investment decision problem of the general investors is greatly simplified because random selection of the stocks which matches their portfolio risk class does not differ in its return significantly from others. In essence in a random walk market the security analysis problem of the average investors is greatly simplified (Fama, 1965:40). Further the pricing in the market allocate the scarce resources efficiently into the best uses on the interest of the country. "The ideal market is a market where prices are accurate signals for capital allocation" (Fama, 1997:133).

The most sensitive component for any economy of the world is "Capital market". It plays a vital role to direct the country's economic activities. So that it's smooth operation is significant in this free market world for making the economy of the country at ease.

Stock market is perhaps poorly understood among Nepalese investors. Its development remains almost impossible unless the people accept it as a way of their life. For this, first of all they have to know what stock market is, and how it functions. But such questions are almost unanswered. Yet, the price formation system in NEPSE is not understood by most of them. If it is not understood, it cannot attract the interests of investors. As a result, it is natural for the investors to seek investment opportunities in the fields, other than securities. Describing Nepalese stock market (Pradhan, 1994:42) writes “The Nepalese stock market is characterized by a low trading volume, absence of professional brokers, early stage of growth, limited movement of share price, and limited information to investors. “Due to the reality, in Nepal a large amount of funds is poured into non-productive sectors like house construction, jewelry collection etc. Therefore development of stock market is necessary to divert the funds towards productive sectors.

### **1.1.3 NEPALESE SECURITIES MARKET**

In simple sense, securities market is a place where people buy and sell financial instruments. These financial instruments may be in the form of government bonds, corporate bonds or debentures, ordinary shares, preference shares etc. So far securities market is concerned; it is an important constituent of capital market. It has a wide term embracing the buyer and sellers of securities and all the agencies and intuitions that assist the sale and resale of corporate securities (Patric D. Rugh, 1966:50).

Although securities market is concerned in few locations, they refer more to mechanism rather than to place designed to facilitate the exchange of securities. Thus securities market can be defined as a mechanism for bringing together buyer and sellers of financial assets in order to facilitate trading. In order to allocate capital efficiently, and to maintain higher degree of liquidity in securities, the securities market should be efficient enough in pricing the share solely by economic consideration based on publicly available information. Efficiency in the stock market implies that all available information regarding a given stock is

instantly reflected in its price. An efficient market is one where the current price of share gives the best estimate of its true worth.

The major function of securities market is to provide ready and continuous market for purchases and sales of securities at a competitive price thereby, importing future market ability and liquidity to them. Thus, it is a medium through which scattered saving and scarce resource transferred into productive areas that ultimately help to the economic development and industrialization of the nation.

As a vital part of economic development and activities, securities market encourage saving, help channel saving into productive investment and encourage entrepreneurs to improve the efficiency of investment, the discipline of corporate management through competitive selection in the market for corporate control.

Further, securities market liquidity may influence economic development. Many profitable projects require a long-term venture capital to finance. Most investors tend to avoid the risk and are often reluctant to tie their savings into long-term commitment. Liquid stock market makes the investment less risky and more attractive. It encourages savers to invest in the long-term projects, because they can sell the securities quickly and easily if they want to get back their savings before the project matures. While at the same time, companies receive easy access to capital through new issuance of shares. Stock market liquidity is positively and robustly correlated with contemporaneous and future rates of economic growth, capital accumulation and productivity growth.

#### **1.1.3.1 Nepal Stock Exchange Ltd. (NEPSE)**

Though the historical development of securities market is not very old in Nepal, the organization of security market has changed radically in several new dimensions. The history of securities market began with the floatation of shares by Biratnagar Jute Mills Ltd. and Nepal Bank Ltd. in 1937. Introduction of the Company Act in 1964, the first issuance of Government Bond in 1964 and the establishment of Securities Exchange Centre Ltd. in 1976 were other significant development relating to capital markets.

Securities Exchange Centre was established with an objective of facilitating and promoting the growth of capital markets. Before conversion into stock exchange it was the only capital markets institution undertaking the job of brokering, underwriting, managing public issue, market making for government bonds and other financial services. His Majesty's Government, under a program initiated to reform capital markets converted Securities Exchange Centre into Nepal Stock Exchange in 1993.

Nepal Stock Exchange, in short NEPSE, is a non-profit organization, operating under Securities Exchange Act, 1983. The basic objective of NEPSE is to impart free marketability and liquidity to the government and corporate securities by facilitating transactions in its trading floor through member, market intermediaries, such as broker, market makers etc. NEPSE opened its trading floor on 13th January 1994. His Majesty's Government, Nepal Rastra Bank, Nepal Industrial Development Corporation and members are the shareholders of the NEPSE.

#### **Process to obtain membership of Stock Exchange :**

Corporate bodies wishing to be member shall have to submit application in prescribed format within specified time along with certificate of incorporation, tax certificate, Memorandum of Association, Articles of Association and concerned Act, rules and regulations in the case of corporate body other than company after the incorporation and the projected B/S and PL A/C for the next three years, last three years audited financial statement, if the year of incorporation is less than three years, the B/S and A/C of investment in shares of subsidiary company or investment made in its parent company's share capital, details of share investment in any other company other than subsidiary, the name, address, number of shares subscribed and the amount invested by shareholders having more than 5% of the share capital need to be submitted.

#### **Board of Directors:**

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The Board of Directors (BOD), which will govern NEPSE, constitutes of members representing different sectors as per Securities Act 2006. At present, the present,

the BOD constitutes 2 Member including a chairman from Nepal Government, 2 Members from Nepal Rastra Bank, 1 from NIDC. Moreover , one member will be nominated by BOD as an expert in capital market. General Manger of NEPSE will serve as a director on the BOD

### **Capital Structure:**

The authorized and issued capital of the exchange is Rs.50 million. Of this Rs.34.91 millions is subscribed by HMG/N, Nepal Rastra Bank, Nepal Industrial Development Corporation and licensed members.

**Table 1**

#### **Ownership structure of NEPSE**

<b>S.No.</b>	<b>Shareholders</b>	<b>Rs. In Million</b>	<b>Percentage (%)</b>
1	HMG/N	20.48	58.67
2	NRB	12.08	34.60
3	NIDC	2.14	6.13
4	Members	0.21	0.60
	<b>Total</b>	<b>34.91</b>	<b>100</b>

(Source: NEPSE Annual trading Report, 2066/67)

### **Member**

Members of NEPSE are permitted to act as intermediaries in buying and selling of government bonds and listed corporate securities. At present, there are 23 member brokers and 2 market makers, who operate on the trading floor as per the Securities Exchange Act, 1983, rules and bye-laws. Besides this, NEPSE has also granted membership to issue and sales manager securities trader (dealer). Issue and sales manager works as manager to the issue and underwriter for public issue of securities whereas securities trader (dealer) works as individual portfolio manager. At present there are 11 sales and issue manager and 2 dealers (secondary market).

### **Tenure of Membership**

The tenure of t

he membership is one year. The license should be renewed within 3 months after the closure of the fiscal year. If not, it can be done within another three months by paying 25% penalty.

### **Listing**

Trading on the floor of the NEPSE is restricted to listed corporate securities and government bonds. At present, 137 companies have listed their securities to make them eligible for trading end of the fiscal year 2067. Besides this, NCM Mutual Fund enlisted its units to make them eligible to trade in the floor.

### **Listing & Annual Fee to be Submitted**

The listing fee and the annual fee to be paid by the listed company is based on the capital of the company.

#### **FAR SHARE**

s.n.	Issued capital	Listing Fee	Annual Fee As per issued Capital
1	Upto Rs. 10 million	0.20% or minimum 15,000	Rs. 15,000
2	Rs. 10 million to Rs. 50 million	0.15% or minimum 45,000	Rs. 25,000
3	Rs. 50 million to Rs. 100 million	0.10% or minimum 75,000	Rs. 35,000
4	Above Rs. 100 million	0.075% or minimum 100,000	Rs. 50,000

#### **FOR DEBENTURES AND MUTUAL FUNDS**

s.n.	Issued capital	Listing Fee	Annual Fee As per issued Capital
1	Upto Rs. 10 million	0.20% or minimum 15,000	Rs. 15,000
2	Rs. 10 million to Rs. 50 million	0.15% or minimum 45,000	Rs. 25,000
3	Rs. 50 million to Rs. 100 million	0.10% or minimum 75,000	Rs. 35,000

4	Above Rs. 100 million	0.075% or minimum 100,000	Rs. 50,000
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(Source: NEPSE Annual trading Report, 2066/67)

### **Trading System**

NEPSE has adopted an “Open Out -Cry” system. It means transactions of securities are conducted on the open auction principle on the trading floor. The buying broker with the highest bid will post the price and his code number on the buying column, while the selling broker with the lowest offer will post the price and code number on the selling column on the quotation board. The market maker quotes their bid and offer price on their own board before the floor starts. Once the bid and offer price match, contracts between the buying and selling brokers or between the brokers and market makers are concluded on the floor.

But now NEPSE the only Stock Exchange in Nepal introduced fully automated screen based trading since 24<sup>th</sup> August, 2007.

The NEPSE trading system is called 'NEPSE' Automated Trading System (NATS) is a fully automated screen based trading system, which adopts the principle of an order driven market

### **Trading days & hours**

Trading on equities takes place on all days of week (except Saturday and holidays declared by exchange in advance). On Friday only odd lot trading is done.

The Market timings of the equities are:-

Market Open:- 12:00 Hours

Market Close:- 15:00 Hours

Odd Lot Trading is done on Fridays. For Odd Lot Trading Market Timings are

Market Open:- 12:00 Hours

Market Close:- 15:00 Hours

**Note:-** The exchange may however does the market on days other than schedule holidays or open the market on days originally declared as holidays. the exchange may also extend, advance or reduce trading hours when it deems fit necessary

### **Securities Available for Trading**

NEPSE facilitates trading in the following instruments

- A. Shares
  - ) Equity Shares
  - ) Preference Share
- B. Debentures
- C. Government Bonds
- D. Mutual Funds

### **Circuit Breakers**

NEPSE has implemented index-based circuit breakers with effect from 2064/6/4(21 September 2007), In addition to the circuit breakers, price range in also applicable on individual securities.

### **Index-based Circuit breakers**

The index-based circuit breaker system applies at 3 stages of index movement of 3%, 4% and 5% These circuit breaker when triggered bring about a trading halt in all equity.

- ) In case of 3% movement either way, there would be a market halt for 15 minutes if the movement takes place during first hour of trading i.e.13:00 hour. In case this movement after 13:00 hours there will be no trading halt at this level and market shall continue trading. .
- ) In case of 4% movement either way, there would be a market halt for half an hour if the movement takes place before 14:00 hours, In case this movement takes 14:00hours there will be no trading halt at level and market shall continue trading.
- ) In case of 5% movement in either way, trading shall be halted for the remainder of the day.

### **Price Range**

Price Range is applicable on individual securities. The trading of the individual securities are not halted but allowed to trade within the price range.

) The Price band is 10% of previous dose on either way.\*

\*During the ATO session the range is 5% on either way of previous Close Price. After the band is 2% on either way of the Last traded price till it reaches to 10% of previous dose.

### **Trading Location**

The trading can be done either from NEPSE's trading floor or from the broker's office. NEPSE uses sophisticated technology through brokers can trade remotely from their office located inside the Kathmandu valley. This remote trading facility was started from 1 November 2007.

### **Order Matching Rules**

The system adopts principle of order driven market. The best buy order is matched with the best sell order. An order may match partially with another order producing multiple trades. For order matching the best buy order is the one with the highest price and the best sell is the one with the lowest price. This is because the system views all buy orders available from the point of view the sellers and all sell orders from the point of view of the buyers in the market. So, of all buy orders available in the market at any point of time, a seller would obviously like to sell at the highest possible buy price that is offered. Hence, the best buy order is the order with the highest price and the best sell order with the lowest price.

### **Board lot**

NEPSE has fixed the board lot of 10 shares if the face value is Rs.100 or 100 shares if the face value is Rs.10. The transactions on regular trading should be done on at least one board lot. The transactions of less than 10 shares are permitted only on odd lot trading hours

## **Settlement**

NEPSE has adopted a T+3 settlement system, Settlement will carried out on the basis of paper verses payment. The trading is done at "T" and at T+1; the buying brokers have to submit bank vouchers for settlement with covering letter, At T+2, the selling brokers must submit share certificate with covering letter, At T+3, NEPSE prepare billing for payment and this will be forwarded to the bank.

Once the settlement is done the buying brokers with the consultation of the dients must decide and present the purchased shares if they want to record it as blank transfer. This must be completed within T+5.

## **Blank Transfer**

Under this mechanism an opportunities to derive the market benefit is provided . But presently, the buying brokers must complete the BT process within T+5. The transctions that are executed can be recorded in different way and NEPSE has considered all possible retention. The followings are the major key points to be considered.

1. This is related only with buy of the securities.
2. The buyer may decide to have market benefit either to have capital gains or to minimize the loss.
3. In order to do this She/he may partly send for name transfer or may register it in blank transfer.
4. If she/he register total purchase in blank transfer and can put for sale and if only the part of the shares are subscribed then she/he can handover the part and the part can be forwarded for name transfer to the concerned company. In order to do this S/he has to cancel the blank transfer for that portion.

## **Brokerage**

### **1. Brokerage for equity**

<b>S.N.</b>	<b>Trading Amount</b>	<b>Brokerage %</b>
A	up to 50,000	1
B	>50,000 &< 5,00,000	0.9

C	>5,00,000 &< 10,00,000	0.8
D	>10,00,000	0.7

## 2. Brokerage for Government Bond

S.N.	Trading Amount	Brokerage %
A	up to 50,000	0.20
B	>5,00,000 &< 50,00,000	0.10
C	< 50,00,000	0.05

## 3. Brokerage for all other stocks which is not listed in 1 and 2.

S.N.	Trading Amount	Brokerage %
A	up to 50,000	0.75
B	>5,00,000 &< 50,00,000	0.60
C	< 50,00,000	0.40

(Source: NEPSE Annual trading Report, 2066/67)

NEPSE has experienced many rise and fall of stock market since its origination. At one time, there had been sufficient investor's optimism over the performance of companies that have raised capital by floating shares to the public. Brokers were busy in transaction of shares with good income in their as well as investor's favor. But as the time passed by, stock market began to be inactive and slack due to several reasons. The listed companies could not match performance in accordance with the commitments made in prospectus. The political uncertainty as a result of change in government has also affected the environment to some extent. The trend of movement of price of stock shows that the market is largely rumor oriented because when the earning is not satisfactory the prices of some securities goes

very high than their book value, which results in over valuation and under valuation and of the stock. The prices are also deeply affected by the factors like issuance of right shares and bonus shares.

### **Number of Listed Companies**

As concerned with the number of listed companies present there 176 company are listed in NEPSE he fiscal year 2009/2010 they are as follows. 19 insurance company are listed in NEPSE total no. of shares are 24329446 and 2.96 % of Insurance company.

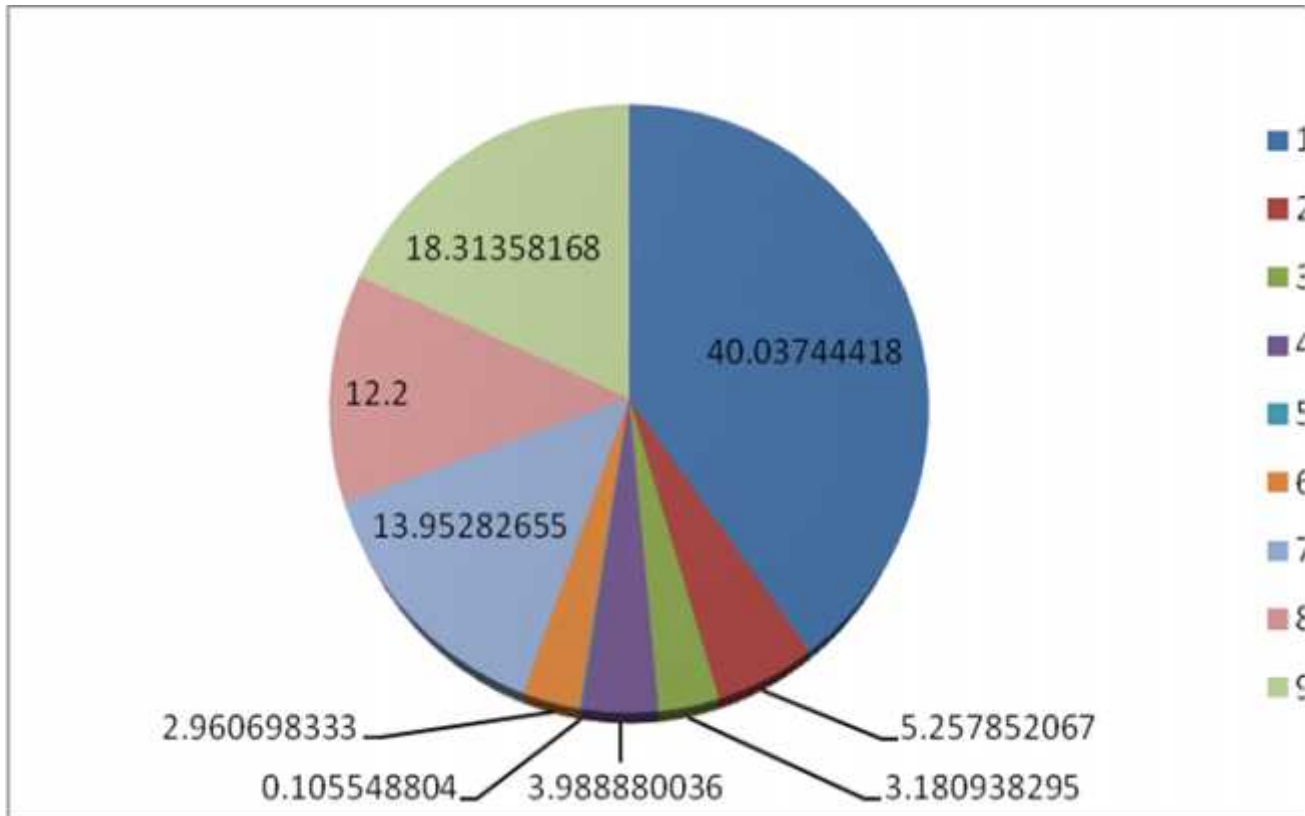
**Table 2**

#### **Listed Com. In Nepal Stock Exchange LTD in 2011-05-25**

<b>S.N.</b>	<b>Name of company</b>	<b>No. of Company</b>	<b>Listed shares</b>	<b>% of shares</b>
1	Commercial Banks	23	329006446	40.04%
2	Manufacturing and processing	18	43206235	5.26%
3	Hotel	4	26139261	3.19%
4	Hydro Power	4	32778497	4%
5	Trading	4	867344	0.1055%
6	Insurance	19	24329446	2.96%
7	Finance	62	114656916	13.95%
8	Development Bank	40	100271444	12.20%
9	Others	2	150491285	18.31%
	<b>Total</b>	<b>196</b>	<b>821746874</b>	<b>100%</b>

(Source: NEPSE Annual trading Report, 2066/67)

**Figure 1**  
**Listed Com. In Nepal Stock Exchange LTD in 2011-05-25 in %**



(Source: NEPSE Annual trading Report, 2066/67)

### 1.1.3.2 Securities Board of Nepal (SEBON)

Securities Board of Nepal (SEBON) was established by the Government of Nepal on June 7, 1993 as an apex regulator of Securities Markets in Nepal. As per the Securities Ordinance, 2005, the major objectives of SEBON are to regulate issue and trading of securities and market intermediaries, promote market development and protect investor's right. The functions of SEBON are as follows.

- ) Offer advice to Government on matters connected with the development of the capital market.
- ) Register the securities of corporate bodies established with the authority to make a public issue of its securities.

- J Provide license to operate stock exchanges.
- J Provide license to operate securities businesses.
- J Regulate and systematize the issue, transfer, sale and exchange of registered securities.
- J Give permission to operate collective investment schemes and investment funds.
- J Draft regulations, issue directives and guidelines, and approve bylaws of stock exchanges.
- J Inspect whether or not any stock exchange is executing its functions and activities in accordance with this Ordinance or the rules and bye-rules framed under this Ordinance, and to suspend or cancel the license of any stock exchange which is not found to be doing so.
- J Supervise and monitor stock exchanges and securities business activities.
- J Take enforcement measures to ensure market integrity.
- J Make or ensure necessary arrangements to regulate the volume of securities transacted and the procedure of conducting such transactions in order to ensure the promotion, development and clean operation of stock exchanges.
- J Systematize the task of clearing accounts related to transactions in securities.
- J Review reporting of issuer and listed companies, and securities businesspersons.
- J Conduct research, study and awareness programs regarding securities market.
- J Coordinate and cooperate with other domestic as well as international regulators.
- J Frame policies and programs relating to securities markets and advise Government in this aspect.
- J Establish coordination and exchange cooperation with the appropriate agencies in order to supervise and regulate matters concerning securities or companies.

The Governing Board of SEBON is composed of seven members including one full time chairman appointed by the Government for tenure of four years. Other members of the Board include joint secretary of Ministry of Finance, joint secretary of Ministry of Law, Justice and Parliamentary Affairs, representative from Nepal Rastra Bank (the central bank), representative from Institute of Chartered Accountants of Nepal, representative from Federation of Nepalese

Chambers of Commerce and Industries, and one member appointed by the Government on the recommendation of SEBON from amongst the experts pertaining to management of securities market, development of capital market, financial or economic sector.

As per the Section 3 of Securities Exchange Act, 2040, the governing Board of SEBON was composed of one full time Chairman appointed by Government of Nepal, representatives one each from Ministry of Finance, Ministry of Law, Justice and Parliamentary Affairs, Ministry of Industries, Commerce and Supplies, Nepal Rastra Bank, Federation of Nepalese Chambers of Commerce and Industries and Association of Chartered Accountants of Nepal.

There are two departments, six divisions and ten sections in the organization of SEBON. Under the Corporate Finance and Administration Department, there are three divisions namely Corporate Finance and Reports Review Division, Accounts and Administration Division and HRD and Education Division. There are also three divisions under the Securities Market Regulation Department, which are Legal and Enforcement Division, Market Regulation and Compliance Division and Market Analysis and Planning Development Division.

The major sources of financing of SEBON are the government grant, transaction commission from the stock exchange and registration of corporate securities. Other financing sources include registration and renewal of stock exchange and market intermediaries and the income from mobilization of its revolving fund.

Of all the economic and financial markets, the stock market probably has greatest glamour and is perhaps least understood. Some observers consider it as a legalized place for gambling and many investors considers that stock market investing as a game in which the sole purpose is picking winners.

## **1.2 SIGNIFICNACE OF THE STUDY**

Public companies obtain funds from the public investors through financial market. The long run objective of every firm is to maximize shareholder wealth position

whereas the investors invest their money with the hope of getting good return in the future.

In the Nepalese context, there is a lack of wider investment opportunities, which provide good return. So, there has still been a huge amount of unutilized saving funds with public. But most of the public investors i.e. existing and potential are not well knowledgeable about the real financial strength and weakness of the public companies in which they are investing or going to invest their funds. Further they cannot well analyze and interpret the real financial position of a company on the basis of available data and information to reach the right conclusion.

The capital structure decision is a significant managerial decision. It influences the shareholder's return and risk. Consequently, the market value of the share is affected by capital structure decision. The company will have to plan its capital structure initially at the time of its promotion and subsequently, whenever funds have to be raised to finance capital structure decision is need.

Development of a nation depends on the development of its economic growth. Insurance business in modern economic age play vital role in different sector of the nation. Insurance provides protection against the loss of goods and properties in exchange for a fixed premium. It is worth noting the premium is a very small amount in comparison to the value of property at risk. Business activities can be carried out without hesitation because insurance provided certainty of payment in case of loss. The main function of insurance companies is to collect small amount of money in the form of premium from various persons and organizations and mobilize such collected funds into various sectors of economy with an organized and institutional manners. It ultimately leads to the economic progress in the country. Thus there is capital formation. Insurance companies invest the capital and utilize it in different productive sectors of the country. It may invest the funds in the securities issued by government and other non-governmental organizations in the country. It also issues shares and debentures to public with the hope of capital gain and dividend. However, in the developing countries like Nepal, the role of insurance companies is still to be realized as an important vehicle of

mobilizing the internal saving through various insurance schemes of life and non-life sectors in the economy.

This study may help investors to think about restructuring their investment portfolio. Similarly potential investors may take better timely investment decision on the basis of the findings of the study.

### **1.3 STATEMENT OF THE PROBLEM**

With the adoption liberal economic policy, the number of business companies is increasing tremendously in Nepal. These companies are providing banking services, insurance services and participating in development works such as manufacturing, processing and other various services. Although the history of capital market in Nepal is short, the concept of capital market is growing rapidly within a short span of time. It is mandatory to enlist public limited companies in Nepal Stock Exchange which creates liquidity on shares of such companies issued in the primary market and provides floor for trading of shares. Altogether there are 125 companies listed in NEPSE.

An efficient capital market mobilizes the savings of individuals or institutional investors as investment in shares, debentures, bonds, mutual funds and other financial instruments which in turn are deployed for productive purpose in various sectors of the economy which have potential to yield a higher return on their investments. Investors purchase the stocks of the companies through the primary market i.e. initial offering or through the secondary market. Most of these investors are not aware of the financial strength of the companies and they do not analyze company's financial indicators before they invest their funds through secondary market.

Here arises the question of efficiency of the Nepalese share market. The high movement of share prices may be the outcome of the efficient market behaviour. An article in Spotlight (2001) states that "our stock market is not efficient enough since all the state company do not make past information available to shareholders. Many listed companies do not produce timely financial statement or annual report to the investors. The dubious and hazardous movement of share prices has no

sound fundamental backing of analysis and relationship to past results revealed in limited calculated dividend yield, net worth and price multiples. The investor concludes that there has been a foul play using inside information. The reaction is based on the assumption of strong form of the market efficiency. The security Exchange Act strictly prohibits the misuse of insider information but the regulating authorities can make no advance notice of how there is the use of inside information". It denotes that every investor should be well aware of the degree of risks in which they are investing or going to invest their saving funds. There are very few practices of analyzing this aspect in the Nepalese context due to lack of adequate knowledge about the securities for investment. Most of the investors are investing their funds haphazardly without considering risk involved in their investments. That's why the major issues might be whether the MPS of listed companies, especially for selected companies, are really representing the financial indicator i.e. NWPS, EPS, DPS etc.

Similarly most of the organizations may be ignoring investor's preference and are also indifferent about secondary market like information dissemination system and transparency in operation. Not only that there is a lack of co-ordination among concerned authorities, market players and other individuals. Similarly, insufficient skilled manpower and development of human resources are also problems in the capital markets. Again low price and low trading volume of the companies have directly related to market value of firm. Thus, the investors whether professional or amateur, should analyze the securities in terms of price and volume before investing on them.

Regarding the share price movement in the market, one approach assumes that market is inefficient in pricing of shares. In which the technical analysis argues that the analysis of the historical prices and trading of stocks provides meaningful information, which provides a picture of future price movements to the investors. It attempts to explain and forecast changes in security prices by studying the market data rather than information about a company or its prospects (V.K. Bhalla, 1997:358). Fundamental analysis theory argues that at any point of time,

there exists an intrinsic value of the stocks, which helps to select the right stock at a time.

On the other hand, efficient market theory argues that market is efficient in pricing the shares. In a situation where stock price movement follows random walks and at every point in time actual prices represent good estimate of its intrinsic values, general investors tend to select any security randomly to form his/her optimum portfolio (Eugene Frederic Famed, 1965:40). As the best investment strategy in such market will be random selection of securities the investment decision is easier. In essence in a random walk market, the security analysis problem of the average investors is greatly simplified.

The basic finance functions must be performed in all types of organizations and in all types of economic systems. What is unique about business organizations in a market economy is that they are directly and measurably subject to the discipline of the financial markets. These markets continuously value business firms' securities, thereby providing measures of the firms' performance. A consequence of this continuous assessment of a firm by the capital markets is the change in its valuation level i.e. stock market price. Thus, the capital markets stimulate efficiency and provide incentives to business managers to improve their performance.

Considering the problems of capital markets and the focus of the study, some research questions can be raised as follows:

1. What is the market price behavior of shares of the sampled insurance companies listed in NEPSE?
2. How is the present Nepalese stock market?
3. Is the stock market efficient in pricing of shares?
4. What are the major financial indicators which have major influence on determining the MPS?
5. Whether the price changes are correlated with its past price movements or not?

6. Is there any specific relationship of MPS with fundamental financial indicators (EPS, NWPS and DPS) or is the trend of MPS running accordance with the financial indicators?
7. Are the price changes a random phenomenon or not?
8. Are the shares of the sampled insurance companies correctly priced?

#### **1.4 OBJECTIVES OF THE STUDY**

The prime objective of the study is to analyze the performance of stock market and the behavior of share price of listed insurance companies. The specific objectives of the study are as follows:

- To analyze the share price behavior of the sampled insurance companies listed in NEPSE
- To provide a glimpse of the present Nepalese stock market.
- To examine the major financial indicators that have major influence on determining the MPS.
- To evaluate return and risk proportion of investments on stock of sampled insurance companies.
- To determine whether the shares of sampled insurance companies are undervalued, overvalued or correctly priced.
- To determine why share price are going to down day by day.

#### **1.5 LIMITATIONS OF THE STUDY**

Due to various reasons this research work cannot cover all the dimensions of Nepalese capital market in detail and cannot penetrate the extreme depth. For the sake of ease this tries to study its subject matter by concentrating on some important variables and ignoring others. That is why this research is also not free from limitations. The major limitations of the study are presented below:

- This study is conducted for the partial fulfillment of the requirement for the Master in Business Studies (MBS). So, it is limited due to the time constraint,

purpose and other necessities. Therefore, it is not a comprehensive study due to certain chapters.

- The core of this study is based on the secondary information of sampled companies due to lack of time, resources and money matters. Hence any incorrectness in the key information like NEPSE index gathered from the secondary sources might affect the accuracy of the outcome of the study.
- The study has been designed to concentrate on the insurance sectors, which is a part of total capital market. So the conclusion cannot be generalized on the total capital market.
- This research study is mainly based on secondary data, which have been collected from books, financial statement and report of the Security Board of Nepal (SEBON), Nepal Stock Exchange (NEPSE) and Beema Samiti, selected companies' annual reports, company's website and other publications.
- For the purpose of study only common stocks or ordinary stocks are taken.
- The study covers the information of only five fiscal years' data.
- Foreign information and rules affecting the share market are not taken into consideration in this study.
- There might be various techniques and methods to perform the study on stock price movement, but the study is focused only on the run test, correlation and regression analysis, risk and return analysis, sensitivity analysis and some ratios analysis.

## **1.6 CHAPTER PLAN / SCHEME OF THE STUDY**

The whole study is divided into five different chapters as follows.

Chapter I - Introduction

Chapter II - Literature Review

Chapter III - Research Methodology

Chapter IV - Data Presentation and Analysis

Chapter V - Summary, Conclusion and Recommendations

The first chapter covers the introduction that contains general background, statement of problems, objectives of the study, limitation of the study.

The second chapter focuses on review of literature. It contains the conceptual framework and past research literature on stock market behavior and different factors of stock market.

The third chapter deals with the research methodology to be adopted for the study consisting research design, population and sample, sources of data, test methodology.

The fourth chapter deals with presentation, analysis, and interpretation of data. It consists share trading analysis, price analysis and major findings of the research.

The fifth or last chapter covers the summary, conclusion and recommendations of the study.

Bibliography, appendixes are also there in this study.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

#### **2.1 INTRODUCTION**

Review of literature is done by researcher after the selection of topic to develop concepts and ideas about the selected topic by reviewing all the relevant materials. It deals with a literature survey of the existing volumes of similar or related subjects. Generally, review of literature means reviewing research studies or other relevant propositions in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted. It is an integral and mandatory process in research works.

A review of literature is a classification and evaluation of what accredited scholars and researchers have written on a topic, organized according to a guiding concept such as a research objective, thesis or the issue to be addressed. Scholarly journals always cite their sources in the form of footnotes or bibliographies. Authors are scholars in the field or someone who has done research in the field. Scholarly language is that of the discipline covered and assumes some scholarly background on the part of the reader. The main purpose of the review of literature is to report on original research or experimentation in order to make such information available to the rest of the scholarly world. In another word, a literature review is an account of what has been published on a topic by accredited scholars and researchers. Literature review thoroughly summarizes the recognized facts and information in academic literature about a given subject.

Review of literature is basically stocktaking of available literature in the field of research. The textual contains would help the researcher to support the area of research in order to explore the relevant and true facts for the reporting purpose. While conducting the research, previous studies cannot be ignored, as that information would help to check the chance of duplication in the present study.

Thus, one can find what research studies have been conducted and what remains to go with.

Therefore, this chapter contains the development of insurance and types of insurance, review of books, related journals and articles, review of legal documents relating to insurance in Nepal, and related thesis. This chapter also describes theoretically the behavior of share prices which includes the fundamental analysis, technical analysis and efficient market theory and confined to review of those related literature carried out previously in the foreign context as well as in the Nepalese context.

## **2.2 CONCEPTUAL FRAMEWORK**

### **2.2.1 Historical Development of Insurance**

Today's modern form of insurance is not the effort of fortnight. It has crossed a long series of time to develop insurance from ancient practices to modern insurance practices. From the very beginning of society, men have been following the way to share loss and profit, suffering and prosperity mutually with one another. The concept of insurance is originated very early in Greece. There is a word "Yogakshem" in Rigveda, which means security. About three thousands years ago, racial insurance was in existence in the Arya community of India. But before four century BC there was the use of Bottomward banks under the marine insurance in Greece. Existence of life annuity was found during the period of Roman Emperor. At first, Church of England used to make religious guild. Later on forming the merchant guild, started to give protections to the members further, later on crafts guild began to work as subsidiary of the merchants' guild. In this way, the concept of insurance is evolved. The development of modern formal insurance can be described in the following phases.

#### ***First phase: Emergence of Marine Insurance***

After the emergence of the concept of insurance, it was most commonly used for marine insurance. So, marine insurance is the first modern form of insurance in the history of insurance. In 1300 AD the first insurance contract, called "Polizza" was

made in Italy. Later another word "policy" was developed from "Polizza". The concept of marine insurance was commonly used in Lombard of Italy and in Venice in 14<sup>th</sup> century. In fact the Lombard of Northern Italy had main role in bringing the international extension of marine insurance in England. Later the Jewish of Lombard were banished, then they settled in different countries of Europe. The name of street, "Lombard Street" of London was named after the name Lombard. At that time this street was called the central point of the marine insurance.

The significant role of Lioyd's institution for the development of insurance cannot be ignored. The underwriters who took the marine risk used to carry out the work of marine insurance, meeting personally in the coffee house of Edberd Lioyd in the tower of street of England. Slowly the coffee house was successful to introduce itself as a centre of marine insurance. The Lioyd's institutions established in 1771, is the first institution to make formal marine insurance. Till now, this institution is the one of the most popular insurance company in the world.

### ***Second phase: Development of life insurance***

After the development of marine insurance people used the concept of the insurance to provide security to their live. To talk about the modern life insurance, by an associate 16 persons, the first life insurance policy of the world was issued in the name of a person named "William Gybbons" in 1583 AD. It is recorded that insurance policy was issued for one year. One astronomy named "Admand Heley" submitted a 'Mortal Table' in 1693 AD to the royal security. This mortal table is useful tool for calculating insured mount. But the first time, life insurance institutions insured amount technology on the basis of data.

In 1744 AD passing the life insurance Act created the foundation of the modern insurance. There after different laws enacted remove the defect that came to it on the basis of experience. With the cause of the difficulties that came to the business, many companies were closed and some of them went and mixing or merging with

insurance company. There is no controversy that the Life Insurance Act 1870 was passed to control of the life insurance business for protection of the customers. Before the beginning of the 19<sup>th</sup> century many life insurance were that already established in the world. We find that the life insurance business in our neighboring country India had started with the establishment of the Mutual Association. In 1971, both the life and the non life insurance were nationalized in India; as a result, the Life Insurance Corporation for life insurance and General Insurance Company Ltd. for non-life insurance were established. During the reign of Elizabeth I, the life insurance used to effect for only one year. After one year, if it was not renewed, the insurance automatically used to be cancelled. But the job of effecting long term insurance, started from 18<sup>th</sup> century has been increased continuously.

### ***Third phase: Emergence of Fire Insurance***

In the history of insurance, the fire insurance comes after the life insurance. However, there is some controversy about it. In the opinion of some people, the concept of the fire insurance had come after the marine insurance and then only after about two hundred years, the idea of the life insurance was communicated. The function of the fire insurance was done in 14<sup>th</sup> century. The beginning of the fire insurance for the first time can be found in the municipality of the Hamburg in Germany in about 13<sup>th</sup> century. It is said that after the birth of life insurance the fire insurance was developed.

In 1666 AD after the fierce fire incident, many buildings were turned into ash in England. It is known from the history of insurance that many people were in difficulties. So the fire insurance was introduced with the main objective of the providing the financial protection to the people to save from the risk and the ruin. In 1680 AD Dr. Nicholas Barbon has started the fire business related with the fire insurance in England. The office of Barbon was called the fire office. Later named as Phoenix. In 1782, Phoenix Insurance company was established with the development of the fire insurance today many people, industry and businessmen are breathing the air of the safety.

#### ***Fourth phase: Practice of Miscellaneous Insurance***

After the fire insurance, many other types of insurance have come in use. Thus, by such insurance policies man is trying to be protected from many types of risks. Under the miscellaneous insurance, fidelity guarantee insurance started from 1848, personal accident insurance from 1880, liability insurance from 1875, public liability insurance from 1877, burglar and house breaking insurance from 1903, motor insurance from 1911, and aviation insurance came in practice. Similarly in other insurance, the vocal can consider castle insurance, rain insurance, earthquake insurance, the vocal of the male singer and female singer, model beauty as miscellaneous insurance.

#### **2.2.2 Development of Insurance in Nepal**

The modern insurance business is relatively new in Nepal. The insurance business was initiated by Indian Insurance Companies from the late 1930 in Nepal. The Indian Insurance Companies were enjoying monopoly over the insurance business and had a well development business network in Nepal. Later in 1948 (2004 BS), the first Nepalese insurance company, 'Nepal Mal Chalani Ra Beema company Limited' was established by Nepal Bank Limited. This pioneering insurance company has changed its name into Nepal Insurance and Transport Company Limited in 1959 (2016 BS). At that time the company conducted the transportation services along with non-life insurance. The company was renamed as 'Nepal Insurance Company Limited' since 2048 BS till now.

There was not any insurance company to carry out life insurance business until 2024, then the government realized the necessity for the establishment of insurance company to execute life insurance business. As a result the Government established 'Rastriya Beema Sansthan (RBS) Private Limited in 1968 (2024 B.S) under the company act. Later the Government enacted Rastriya Bima Sansthan act 2025 and changed it into Rastriya Beema Sansthan as government enterprise. Since then it provides life and non-life insurance services all over the country. In this way, this is the first life insurance company, which is providing life and general insurance services throughout the country. When the government embarked on financial liberalization program with attitude towards liberal entity of private corporate bodies, since then there has been some progress in the establishment of insurance companies in Nepal.

At present 18 insurance companies are operating in Nepal. Among them two are composite companies transacting life as well as non-life insurance business. Three are life insurance companies and thirteen are non-life insurance companies. They are as follows:

#### **Insurance Companies Providing Both Life and Non-Life Insurance Services:**

1. Rastriya Beema Sansthan
2. National Life and General Insurance Company Limited

**Insurance Companies Providing Only Life Insurance Services:**

3. Nepal Life Insurance Company Limited
4. American Life Insurance Company Limited
5. Life Insurance Corporation (Nepal) Limited
6. Prime life insurance company Limited

**Insurance Companies Providing Only Non-Life Insurance Services:**

7. Nepal Insurance Company Limited
8. Himalayan General Insurance Company Limited
9. United Insurance Company (Nepal) Limited
10. Everest Insurance Company Limited
11. Premier Insurance Company (Nepal) Limited
12. Neco Insurance Company Limited
13. Alliance Insurance Company Limited
14. Sagarmatha Insurance Company Limited
15. NB Insurance Company Limited
16. Prudential Insurance Company Limited
17. The Oriental Insurance Company Limited
18. National Insurance Company Limited
19. Shikhar Insurance Company Limited

These insurance companies are functioning as per the norms and values of Insurance act 1992, and Insurance Rules 1993. These companies perform the works of fund creation, underwriting insurance of life and non-life property for the best security against the specified or non-specified risk; third party insurance.

### **2.2.3 Types of Insurance**

Insurance has been the most effective and strongest to save peoples' property. It makes the security for the payment of the insured amount to those who have made life and non-life insurance. Nowadays, insurance has become the pillar of

alertness, courage and eagerness to develop the life and living standard of the common people, industrialists and traders. Nowadays, various types of insurance are developed, which can be classified in following ways:

### **Life Insurance**

Life insurance provides a protection for two major contingencies. A man insures his life either to make provision for leaving a certain sum of his dependents when he dies, which may happen he is able to say and accumulated sufficient amount. Life insurance has several business and financial advantage. In life insurance it is provided that the insured interest amount is to become payable in the happening of death or in some cases on the attainment of certain age, whichever is earlier. Only the men having insurance interest in the proposed life can obtain a policy on it. The concept o the life insurance is based on pooling the risks of many to a group. Accumulating a fund by contribution from the members of the group and paying from this fund the losses of those who suffer loss.

Life insurance is a plan of compulsory saving and there will be all round development of nation from premium paid for that and the life insurance plan is helping to control the inflation. Because there are the factor of protection and investment in life insurance, it has gained much more popularity. Under this insurance, if the insured remains alive, he himself gets a payment of insured amount, if he is dead, his wished person, if it is not wished or the wished person is dead, the nearest person get payment under the policy as per law (Bhandari, D. R. 2001:355-362).

### **Non-life Insurance**

Insurance, other than human life and social insurance are called non-life or general insurance. The subject matter affected under it is in nature of property. The insurance company provides indemnity to the insured. Such compensation should be based on the actual value. This type of insurance include marine, fire and miscellaneous types of insurance.

#### **a. Marine Insurance**

Ships sailing on are exposed to various types of risks. They are collided against one another, spring a leak, caught by fire, captured by enemies and seized by pirates. The ship and cargo may be lost in such a case and tremendous loss may be caused to its owners. Such risks if not covered will greatly discourage the international trade, which is mostly sea borne. That is why the marine insurance is considered to be the land mind of modern international trade, which is indispensable auxiliary.

#### **b. Fire Insurance**

Fire insurance done against the risk of fire is known as fire insurance. Fire insurance policy may be taken on residential houses or on factories and business premises. Under fire insurance policy, if any property loses by fire the insured amount would pay as indemnity. The property should be in its full market value, the claim under the fire insurance policy is determined on the basis of present value of the property.

### **c. Social Insurance**

In modern age, social insurance has an important place; the objective of this insurance is to provide the maximum social benefit to the society. This type of insurance is specially useful for the worker class and the owners of the factories. These sectors possess high risk because the workers work in the mill and factories, from it, the workers, officials and owners also suffer many losses. Social insurance provides the economic protection both to the employees and owners. The main examples of social insurance are workmen's compensation insurance, sickness insurance, pension insurance, maternity insurance, and unemployment insurance etc. Having regarded to the importance of this insurance, in every developed country, this insurance has been generally made compulsory. This insurance was started from England. The burden of expenses of government and the owner of the factories have to bear the most of the portion of premium.

### **d. Personal Insurance**

Under this personal insurance, the insurance is made to the subject related to the person's life. There is possibility of risk associated to death, accidents and diseases. The insurance, which is affected against such risks with the objective of getting financial protection, is called personal insurance. Life insurance, personal accidents insurance and health insurance etc. are the example of personal insurance.

### **e. Property Insurance**

Under this insurance, insurance of the different nature property is affected to compensate the property damaged or lost. This insurance company gives the compensation to the insured. The insurance company gives only actual compensation to an insured on the basis of fact and event. The examples of property insurance are fire, marine, crop, cattle and burglary insurance etc.

### **f. Liability Insurance**

Under this insurance, compensation is given to third person for loss or damage caused by negligence or other reason of the party. The examples of liability insurance are motor insurance, public liability insurance etc.

### **g. Guarantee Insurance**

Under this guarantee insurance, the insurance company gives the guarantee of faithfulness or the honesty of any employee or any other person and it accepts the liability of compensation of financial loss to the insured with the cause to dishonesty and fraud. The examples of guarantee insurance are credit right, fidelity guarantee insurance etc. If any event is found within the policy, then the insured has right to get compensation.

### **h. Miscellaneous Insurance**

Miscellaneous insurance business includes the various types of insurance business such as aviation insurance, motor insurance, cash transit insurance, workmen's complementation insurance, burglary and house breaking insurance, public liability insurance, cattle insurance, medical aid scheme and so on.

## **2.2.4 Theoretical Analysis of the Study**

The over half a century debate in the fundamental community regarding the pricing of securities has intensified over the last decade. As early as the 1970s, the theory of market efficiency became the accepted model within most academic circles. The theory suggested that security of stock prices seemed to furnish little

or no predicative power over future price fluctuations. Furthermore, Jensen (1968) demonstrated that the prices of securities appeared to absorb new information so quickly and efficiently that randomly selected portfolios showed returns comparable to, if not in excess of, the returns generated by portfolios managed by professional managers. Much of the earlier work by Kendall (1953), Osborne (1959), Alexander (1961), and Moore (1964) indicate that there was practically no correlation between stock returns over time.

In this present context, the investment sector is getting flourished in recent years as other economic sectors. Today most of the developing countries are boosting their economic development through the contribution of this investment sector. Business cycle theorists felt that tracing the evolution of several economic variables over time would clarify and predict the progress of the economy through boom and bust periods.

Security analysis is one of the steps preformed in the investment process. It involves examining several individual securities (or group of securities) within the broad categories of financial assets. One reason to examine securities is to identify those that seem miss-priced. In the case of behavior of stock market prices, there are mainly two approaches i.e. classical approach and efficient market theory approach. Classical approach considers the market as inefficient whereas the efficient market theory argues that there exists the efficient market.

#### **2.2.4.1 Common Stock**

The main elements of the capital structures are ordinary shares, preference shares and debenture. Among them, the most important form is equity share, ordinary share or common stock. Common stock is a security that represents ownership in a corporation. Holders of common stock exercise control by electing a board of directors and voting on corporate policy. Common stockholders are on the bottom of the priority ladder for ownership structure. Common stock is the first security of a corporation to be issued and in the event of liquidation or bankruptcy, common shareholders have rights to a company's assets only after the creditors,

bondholders, preferred shareholders and other debtholders have been paid in full (<http://www.investopedia.com>, August 13, 2006).

Common stock is, well, common. When people talk about stocks they are usually referring to this type. In fact, the majority of stock issued is in this form. Common shares represent ownership in a company and a claim (dividends) on a portion of profits. Investors get one vote per share to elect the board members, who oversee the major decisions made by management. Over the long term, common stock, by means of capital growth, yields higher returns than almost every other investment. This higher return comes at a cost since common stocks entail the most risk. The common stock holders invest in the firm with the expectation of return in the future. They have the lowest-priority claim on earnings and assets of all securities issued. So, the chance of a common stock holder getting anything back from a bankrupt firm is minimal. But common stock has unlimited potential for dividend payments and price appreciation. When investors buy common stock, they can obtain certificates as proof of their parts as owners of the firm; Stock certificate states the number of shares purchased, the new owner and the number of shares bought are noted in the stock purchased their par value and usually the transfer agent. When stock is recorded in the transfer agent (Jack Clark Francis & W. Richard Taylor, 1991:50).

#### **2.2.4.2 Securities Market**

Security market exists in order to bring together buyers and sellers of securities. Stock market means the market where the securities are traded. In such market, buyers and sellers are mechanisms created to facilitate the exchange of securities reducing the risks of investing. In another word, security market is nothing more than a super-sophisticated farmers' market linking buyers and sellers of securities. It can be distinguished as:

- ) Primary and Secondary Market
- ) Money and Capital Market

#### **Primary Market**

Primary markets denote the market mechanism for the original sale of securities by an issuer to the public. The volume of new issues in the primary market, particularly of common stock, is directly related to market conditions. When the market is rising, the number of new issues being offered to public rises and when the market is falling, the number declines (Surya Chandra Shrestha, 2002:3).

It is the market in which securities are sold at the time of their initial issuance. In other words, a market for newly issued securities is called primary market. Corporations and governmental bodies issue new securities in primary market. These securities can be offered by method of public flotation and private placement. The term primary market can also be defined as the market in which corporations create new securities.

Securities available for the first time are offered through the primary securities market. The issuer may be a brand new company or one that has been in business for many years. The securities offered might be a new type for the issuer or additional amounts of a security-used frequently in the past. The key is that these securities absorb new funds for the coffers of the issuer (Donald, E. Fisher & Ronald J. Gordon, 2000:19).

All securities available for the first time whether in the money or capital markets are initially offered through the primary market. This is the only market in which the corporate or government issuer is directly involved in the transaction and receives direct benefit from the issue. That is, the company actually receives the proceeds from the sale of securities (Lawrence J. Gitman, 2000:33-34).

Primary market is also known as New Issue Market (NIM) or IPO market because initial public offerings are done through this market. In this market, the securities can be sold either at par, or premium or discount. But in case of Nepal, Company Act, 2053 has restricted to sell the securities at discount except premium or par. In case of Nepal, NEPSE has issued license to the interest organizations to perform the job of issue manager by operating primary market. SEBON, in order to

regulate the primary market has issued issue management guidelines. Merchant Bankers manager issue in India and in US it is done by Investment Bankers.

## **Secondary Market**

A secondary market is the markets in which securities are traded that have been issued at some previous points of time. In other words, where existing or already outstanding securities are traded among investors is referred to as the secondary or more popularly, the stock market. Thus, secondary market deals with previously issued shares mainly traded through stock exchange, over the counter market or direct dealing.

Secondary market is the market place where secondhand securities are traded. It means securities once purchased through primary market are traded in secondary market. Both the primary and secondary markets are complementary to each other. In the absence of one market other market cannot flourish. Secondary market comprises stock exchange and Over-The-Counter Market, popularly known as OTC Market. NEPSE is only the secondary market in Nepal.

Thus, Secondary market in simple term includes markets in which existing, already outstanding securities are traded between investors. It is the market that creates the price and allow for liquidity. If secondary market did not exist, the investors would have no place to sell their assets without liquidity many people would not invest at all. The corporations whose securities are being traded are not involved in secondary market transaction and, thus, do not receive any funds from such a sale (Eugene F. Brigham, Louis C. Gapenski & Michael C. Ehrhardt, 2001:115). The function of the secondary market is to provide liquidity for the securities purchased in the primary market.

## **Money Market**

Money Market is also called short term financial market which is the set of supplying short term debt or working capital needed for industries, business or incorporated etc. Money market typically involves financial assets that have a life span of one year or less. Money market instruments include short term marketable, liquid, and low-risk securities. Money market instruments sometimes are also called cash equivalents, or just cash. Money market brings together the supplier and the demander of short term liquid fund. It is created by means of a financial relationship between suppliers and demander of short-term funds.

## **Capital Market**

Capital Markets are the markets where the transaction of long-term securities issued by the government or a corporation is made. The funds collected in this market are raised and traded by long-term financial instruments such as equities and bonds. Capital markets typically involve financial assets that have life spans of greater than one year.

### **2.2.4.3 Financial Intermediaries**

Financial intermediaries are also known as financial institutions. They are organizations that issue financial claims against themselves and they use the proceeds from to purchase primarily the financial assets of others. Financial institutions actively participate in the money market and the capital market, as both suppliers and demander of funds. Financial intermediaries include savings and loan associations, saving banks, credit unions, insurance companies, mutual funds, pension funds etc.

#### **2.2.4.4 Market Price of Shares**

Market price of shares as the output of the demand and supply interaction is the most influencing factor in determining the price of the stock (Ackerman, 1980:10). In relation to the interacting forces of demand and supply i.e. Market Price is determined at given time and the prices and volumes of its past transaction are meaningful indication of probable relationship of future supply and demand pressure. And such relationship is the most important element in determining the probable direction of the price movements. If the demand exceeds the supply, the price will rise and if the supply exceeds the demand the price will fall. Therefore, stock prices change according to supply and demand.

#### **2.2.4.5 Buying and Selling of Stock**

Various people are likely to be involved, when a stock is sold and bought. Although it is possible for two investors to trade with each other directly, usually the brokers, dealers and markets provide the service (William F. Sharpe, Alexander & Bailey, 1996:21). When buying or selling the common stock, the investor places an order involving a round lot, an odd lot, or both. Generally, round lot means that the order is for 1000 shares or multiple of 100 shares. An odd lot orders generally are for 1 to 99 shares.

#### **2.2.4.6 Market Size**

Relative's market capitalization and the number of listed companies can measure stock market size. The market capitalization ratio is determined by dividing the value of all shares listed on a national exchange by the host country's Gross domestic product (World Bank Policy Research Bulletin, March/April 1995).

#### **2.2.4.7 Market Liquidity**

Liquidity-or-the ability to buy and sell securities is indicated by the two measures. One is the total value of share traded on the stock exchange divided by GDP. The second measure of liquidity is the turnover ratio, the value of total shares traded divided by market capitalization.

#### **2.2.4.8 Market Capitalization**

Market capitalization is the market value of listed shares. In other words, it is the product of closing market price and the number of listed shares of companies.

#### **2.2.4.9 Volatility**

Volatility is indicated by 12 month rolling standard deviation estimate based on the market returns. Although volatility is not necessarily a sign of more or less stock market development, lower volatility generally reflects a more developed stock market.

#### **2.2.4.10 Stock Valuation**

Financial managers use different analytical techniques for valuing common stock. The stockholder expects regular earnings in the form of dividends and capital gain by upward movement of the stock price. To maximize the stock price stock valuation model can be used as important tools. Mainly three basic models are used to value stock (Richard Pike and Neale, 1996:76).

**Table 3**  
**Stock Valuation Model**

S. No.	Model	Valuation Model
1	NAVM	$NW=TA-(CL+LTD)$
2	DVM	$P_o = \sum_{t=1}^n \frac{D_t}{(1 + Ke)^t}$
3	EVM	$P_o = P/E \text{ ratio} \times \text{EPS}$

Source: Richard Pike and Neale, 1996: 76.

Where,

- NAVM = Net Asset Value Model
- DVM = Dividend Value Model
- EVM = Earning Valuation Model
- NW = Net Worth
- TA = Total Asset
- CL = Current Liabilities
- LTD = Long Term Debt
- $P_o$  = Value of the stock today
- $D_o$  = Dividend Expected in nth year
- Ke = Cost of Equity Capital
- T = 1,2,3...n yr.
- P/E = Price Earning Ratio
- EPS = Earning Per Share

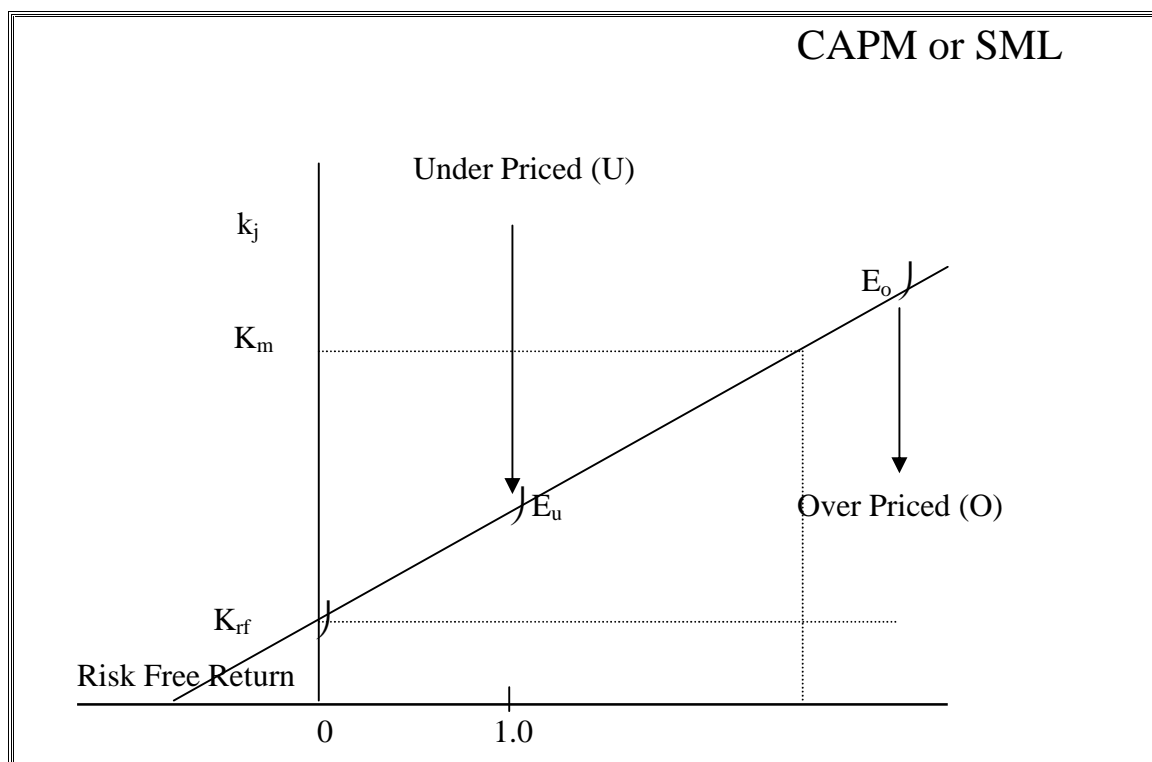
#### 2.2.4.11 Capital Assets Pricing Model (CAPM) or (SML)

Sharpe & Litner developed, 'The capital assets pricing Model' (CAPM). This model provides the intellectual basis for a number of the current practices in the investment industry. Although many of these practices are based on various extensions and modifications of the CAPM, a sound understanding of the original version is necessary in order to understand them, CAPM is based on the following assumptions (John Litner, 1990:13-37).

1. Investors evaluate portfolios by looking at the expected returns and standard deviations of the portfolio over a one-period horizon.
2. Investors are risk averse, so when given a choice between two otherwise identical portfolios, they will choose the one with the higher expected return.
3. Investors are never satisfied, so when given a choice between two otherwise identical portfolios, they will choose the one with lower standard deviation.
4. Individual assets are infinitely divisible meaning that an investor can buy a fraction of a share if he or she so desires.
5. There is a risk-free rate, at which an investor may either lend (that is invest) money or borrow money.
6. Taxes and transactions costs are irrelevant.
3. All investors have the same one period horizon.
4. The risk-free rate is the same on period horizon.
5. Information is freely and instantly available to all investors.
6. Investors have 'homogeneous expectation' meaning they have the same perception in regard to the expected returns, standard deviations, and covariance of securities.

**Figure 2**

**The Capital Assets Pricing Model**



Source: Jack Clark Francis and W. Taylor Richard, 1991:276.

Hence, the CAPM or SML is relationship in which the expected rate of return of the individual asset is a linear function of that asset's systematic risk as represented by beta ( $\beta$ ), symbolically. Accordingly to Sharpe & Litner (CAPM), study: the greater the beta of a security, the greater the risk and the greater the expected return required. The lower the beta, the lower will be the risk.

#### 2.2.4.12 Capital Market Line (CML)

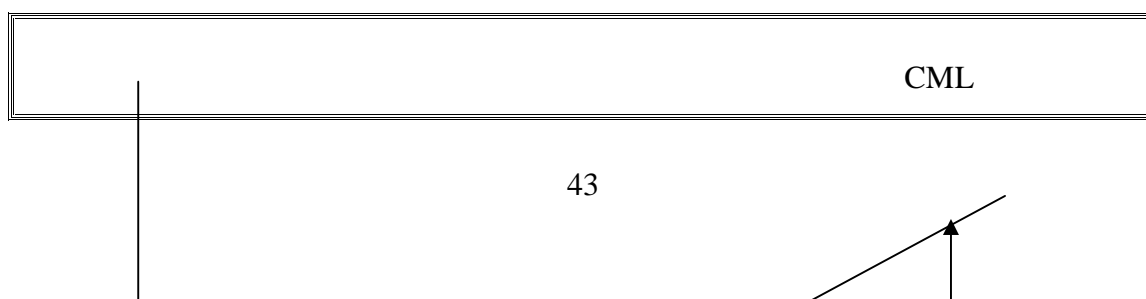
If borrowing and lending opportunities are included in the chart analysis, a linear set of investment opportunities is appeared called capital market line (CML) emerges. It is the locus of the portfolios that wealth seeking risk-averse investors will find more desirable than any other portfolios. CML illustrates the positive relationship between risk and average return. So, it is always be positive sloped because investors are risk averse i.e. sleepless.

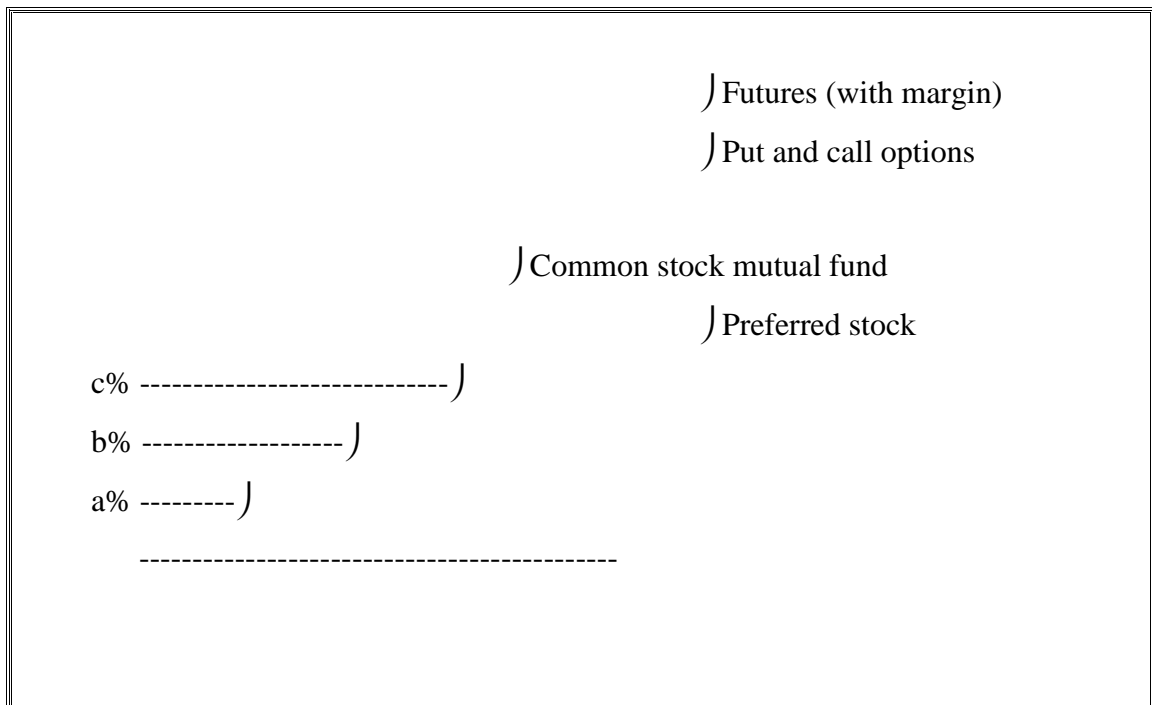
The main focus of investment graphed in risk-return space which has the maximum expected rate of return in their risk class or the maximum risk at whatever rate of return is selected. The efficient investments are called efficient portfolios because individual assets are dominated and will not be able to attain the efficient frontier (William F. Sharpe, Alexander & Bailey, 1996:19). So, if it is constructed, it will be found convex towards expected rate of return axis in risk rate space.

From the Fig. 3, it is noted that CML dominates every individual asset. The portfolios having risk reducing power is needed to reach a positive in risk-return space that is on or near the CML. CML is assumed to be the market equilibrium situation and is the locus of the most desirable, or most dominant, investment portfolios. CML concentrates how to form a portfolio that is efficient enough to lay on the CML.

**Figure-3**

#### **The capital Market Line (CML) and other investment opportunities**





Source: Jack Clark Francis and W. Taylor Richard, 1991:19.

### 2.2.5 Classical Approach on Theory of Stock Price Behavior

In broad sense, there exist three theories concerning stock price behavior. These theories explain share price fluctuation in the stock market. Market efficiency is the premise for all of the theories. The theories are:

- a) Fundamental Analysis Theory
- b) Technical Analysis Theory
- c) Efficient Market Theories

#### 2.2.5.1 FUNDAMENTAL ANALYSIS

Fundamental analysis tries to identify the real or true value of financial assets. The real value of any kind of financial assets is the present value of the future cash flow given by the assets or expected by the holder. The fundamental analyst attempts to forecast the timing and size of these cash flows, and then converts them into their equivalent present value by using an appropriate discount rate. Once the real value is calculated it is, thereby, compared to the current market price per share to identify whether the security is under-priced or over-priced. If the real value is lower than the current market price, the share is overpriced or overvalued and is an indication to the fundamentalists to sell. Similarly, if the real

value is higher than the current market price, the share is underpriced or undervalued and it indicates to the fundamentalists to buy. These unusual cases of mis-pricing will be corrected in the future. The price of an over-priced security declines to meet the real value and the under-priced security's price increases to meet the real price. The person utilizing the technique is called a fundamentalist or a fundamental analyst.

"Fundamental analysis uses different models like Top-Down versus Bottom-Up forecasting, probabilistic forecasting, econometric models, financial statement analysis etc. to estimate the value of security" (Sharpe, Alexander & Bailey, 2001:850-853). Therefore the fundamental analyst reaches an investment decision on the basis of these analytical tools.

Though fundamental analysis approach is used by many security analysts or prospective investors to make a judgment of the stock's value with a risk-return framework based upon earning power and the economic environment, it is hard and time consuming work. As stated by Raghu Palat, Some of the limitations of fundamental analysis approach are as follows (Raghu, 1991:168):

- © The approach though sound and based on basic financial figures does suffer from drawbacks and to make this approach work effectively one must be aware of them.
- © It tends to ignore market behavior and assumes that the market will act rationally. The market seldom does. Prices flare or drop on the flimsiest of reasons.
- © The entire fundamental approach is based on a rational scientific analysis of data. The market is rarely rational.
- © The information and analysis itself may be incorrect.
- © Many companies, with the help of creative/innovative accounting and accounting cosmetics disguise real earnings.
- © The fundamentalists' estimate of intrinsic value may be incorrect. This is not only possible but more probable than not as he has to often forecast growth, profit and other factors without having in his grasp all the facts.

- © The fundamentalists may not fully understand the economy or the industry as there are several external factors.
- © There is also the possibility always that the market may not move in the manner a fundamentalist expects and conversely towards the intrinsic value.
- © It is also difficult to determine corporate action.

In short, the fundamental approach works exceedingly well in determining the intrinsic value of a company. It is not such an effective tool in determining future price movements and hence it is not very dependable for short-term profits. "By nature the fundamentalist is conservative in approach and is generally unwilling to take a quick loss he would rather adopt a buy and hold policy" (Yahasway, 1992:155). Therefore fundamental analysis allows the analyst to forecast holding-period yield and riskiness of achieving that yield, but these figures alone do not necessarily prompt a buy or sell action.

### **2.2.5.2 TECHNICAL ANALYSIS**

Technical analysis of the security prices involves the study of market price in an attempt to predict future price movement. This analysis, first, examines the past trends in the price and compares them to the recent emerging trends. This matching of emerging trends or patterns with the past ones is done in the belief that these trends or patterns repeat themselves. By identifying the emerging trends, the analyst hopes to predict accurately the future price movements. Past figures and trends are used to predict the future.

The person utilizing this approach is called a technician or a technical analyst and technical analysts focus most of their attention on charts of security market prices and on related summary statistics about security transactions. Therefore, technical analysts, are, sometimes, called chartists. Most technical analysts prepare and study charts of various financial variables in order to make forecasts about security prices.

"The technician believes the forces of supply and demand are reflected in patterns of price and volume of trading. By examination of these patterns, he predicts whether prices are moving higher or lower, and even by how much" (Fischer and Jordan, 2000:510). Therefore, the patterns or trend in prices is the basis of technical analysis. Various charts are prepared to determine trends and to determine whether prices are likely to rise or fall. Technicians tend to look backward. "The technician usually attempts to predict short-term price movements and thus makes recommendations concerning the timing of purchases and sales of either specific stock or groups of stocks (such as industries) or stocks in general.

According to Edwards and Magee the basic assumptions underlying technical analysis are as under (Edward and Magee, 1958:86);

- © Market value is determined solely by interaction of supply and demand.
- © Supply and demand are governed by many rational and irrational factors.
- © In disregard of minor fluctuations in the stock market, share price tend to move in trends, which persist for an appreciable length of time.
- © Changes in trend are caused by shifts in supply and demand.
- © Shifts in supply and demand, no matter why they occur can be detected sooner or later in charts of market action

© Some chart patterns tend to repeat themselves.

Various studies evidenced that technical analysis is useful in enabling investors to beat the market. Technical analysis, however, attempts to predict future stock prices by analyzing past behavior of stock prices. In general, tomorrow's stock price is influenced by today's price. The direction of price change is important as the relevant size of change. With the application of various tools, the technicians attempt to correctly catch changes in trend and take advantage of them.

It is sometimes said that fundamental analysis is designed to answer the question "What?" and technical analysis to answer the question "When?" (Sharpe, Alexander and Bailey, 2001:844)

**Technical tools:**

a) **The Dow Theory:** This tool is originated by Charles Dow (1900), founder of the Dow Jones & Company, Inc. and editor of The Wall Street Journal, is one of oldest and most famous technical method of analyzing security prices. The aim of the Dow Theory is to identify long-term trends in stock market prices. "According to this theory it is believed that the market is always considered as having three movements, all going at the same time. The first is narrow movement from day to day. The second is the sort swing, running from two weeks to a month or more; the third is the main movement, cover rising at least 4 years duration." So, we can say that there are three forces simultaneously affecting the stock prices, tertiary or minor trends. The primary price movements are held to constitute the bearish or bullish trends, whereas the secondary movements are regarded as passing phases. Tertiary price movements are daily price fluctuations to which Dow attributes to no significance or ignores the role of this trend.

The Dow Theory employs two indicators called Dow Jones Industrial Average (DJIA) and Dow Jones Transportation Average (DJTA). The DJIA is a key indicator of underlying trends, while the DJTA usually serves as check to confirm or reject that signal (Zvi Bodie, Alex Kane & Alan J. Marcus, 2002:344).

The Dow Theory is built upon the assertion that stock prices tend to move together. If the DJIA is rising then the DJTA should also be rising. Such a

simultaneous price movements suggests a strong bull market. Conversely, a decline in both the averages suggests a strong bear market. However if the averages are moving in opposite direction, the stock market is uncertain regarding to direction of future stock prices.

The forecasting result of Dow Theory is less accurate. It might work only when a long, wide, upward or downward movement is registered in the market. It is mostly unsuitable as a market predictor when the market trend frequently reverses itself in the short or the intermediate-term. This theory also fails to explain a consistent pattern of the stock price movements.

b) **Barron's Confidence index:** In literal sense, the confidence index is defined as the ratio of high grade bond yields divided by low grade bond yields. The ratio is supposed to reveal how willing investors are to take investment risks. Barron's confidence index is constructed by using Barron's index of yields on high-grade bonds and low-grade bonds.

The confidence index is usually, but not always, a leading indication. Like most of other technical indicators, the confidence index may sometimes issues erroneous signals and should therefore not be used without confirming evidence from other indicators (Jack C. Francis, 1991:531).

c) **Odd lot theory:** this theory concerns the purchase and sales of securities by small investors. These investors do transaction of less than 100 shares. Some technicians take the ratio of these odd lot purchases to odd lot sales as an indicator of the direction of future prices. An increase in the index suggests relatively more buying; a decrease indicates relatively more selling. During most of the market cycle, odd lotters are selling the advance and buying the declines.

Odd lotters try to do the right thing most of the time; that is, they tend to buy stocks as the market retreats and sell stocks as the market advances. However, technicians feel that odd lotter is inclined to do the wrong thing at critical turns in the market (Donald E. Fisher & Ronald J. Jordan, 1995:515).

### **2.2.5.3 Efficient Market Theory**

The term efficiency may be defined in various ways allocate efficiency, operational efficiency and information's efficiency. When the finance literature speaks of market efficiency it is generally speaking exclusively about informational efficiency in pricing the stocks. A market is said to be informational efficient if the current market price instantaneously and fully reflects all relevant available information. The market value of a particular share may be under or over valued. An efficient market is one where shares are always correctly priced and where it is not possible to outperform the market consistently.

Thus efficient market theory contends that in a free and perfect competitive market, stock prices always reflect all the available information and adjust instantaneously every influx of new information. In an efficient market, only price changes that would occur are those, which result from new information. "An initial and very important premise of an efficient market is that there are large number of knowledgeable and profit maximizing independent buyers and sellers, new information is generated randomly and the investors adjust the information rapidly" (Reilly, 1986:166). Therefore if market is efficient, it uses all available information to it in setting price. The measure of efficiency evolved from the notion of perfect competition, which assumes free and instantly available information, rational investors with no taxes or transaction cost.

The requirements for a securities market to be an efficient market are:

- ⊙ Prices must be efficient so that new inventions and better products will cause a firm's securities price to rise and cause investors to want to supply capital to the firm (i.e., buy its stock).
- ⊙ Information must be discussed freely and quickly across the national so all investors can react to new information;
- ⊙ Transactions cost such as sales commissions on securities are ignored.
- ⊙ Taxes are assumed to have no noticeable effect on investment policy.
- ⊙ Every investor is allowed to borrow or lend at the same rate.

- © Investors must be rational and able to recognize efficient assets so that they will want to invest money where it is needed most i.e. in the assets with relatively high returns (Bhalla, 1983:309).

This constitutes the world of the efficient market theory or more popularly the capital assets pricing model.

As efficient market is concerned with the pricing mechanism of securities market, it has two dimensions of price adjustment. One is the type of information reacting to and another is the speed and quality of adjustment of security to the information. As any random infusion of information instantaneously and correctly adjusted in prices, there will be no subsequent dependencies or lags that are profitable. Pricing not only should be instantaneous, but also should discount accuracy of information so that the prices fluctuate closely around its intrinsic value. So Keane rightly pointed-out, "It would be clearly an add interpretation of efficiency if a doubling in price the price of a share were regarded as an efficient reaction to new information, simply because the movement was instantaneous, if the information in fact warranted a substantial reduction in price" (Kene, 1983:9). Agreeing with this, Francis and Taylor noted "Market efficiency refers to the ability of financial assets to quickly adjust and reflect all information that is relevant to value in its price" (Francis, 1986:4). Therefore, it assumes, that any given time, the market correctly prices all securities. The result, or so the theory advocates, is that securities cannot be overpriced or under priced for a long enough period to profit there from.

#### *i) Levels of market efficiency*

There are three levels of market efficiency depending upon types of information set impounded into the price. In other words, the forms of markets are determined on the basis of how publicly available information is reflected in the market price of shares. The statements that price reflect all available information represents the highest order of market efficiency. As Fama suggested, it is useful to distinguish three level of market efficiency.

- © Weak-form efficiency: If the pricing into the stock market has reflected all information found in the record of past prices and volume it is considered as

weak form efficiency and participation of technical analysis approach in the market become futile.

- © Semi-strong-form efficiency: If current prices of stocks reflect not only all information found in the record of past prices and volume but also other publicly available information the market is semi strongly efficient. In that the market even fundamental analysis of published accounting information has no value, because it would have been discounted by participants accurately and instantaneously when they are disclosed.
- © Strong-form efficiency: The market where stock prices fully reflect all the available relevant information public as well as private, it is considered that the market held strong form of efficiency. In this market insider information cannot beat the market because no single participant has monopolistic access to that kind of information.

These three levels of efficiency described above are not indifferent to each other but they are serially higher order in degrees of market efficiency. If the market is semi-strongly efficient, it must be efficient in weak sense also because the past price data is one form of published information, which must have been impounded in the price. If the market is not efficient in a weak sense, the past price information could be used to predict the future prices to exploit abnormal profit. It implies that information contained in past prices has not been reflected fully into the current prices. Similarly for the market to be strongly efficient it must also be efficient at the semi-strong and weak levels, otherwise prices are not reflecting all relevant information.

### ***ii) Random Walk Theory***

“The weak form of efficient market hypothesis stipulates that historical price and volume data for securities contain no information which can be used to earn a trading profit above what could be attained with a naive buy-and-hold investment strategy” (Francis, 1986:543). According to Kene, "the market is efficient in weak sense if share prices fully reflect the information implied by all prior price movements. A Price movement in effects is totally independent of previous movements, implying the absence of any price patterns with prophetic significance" (Kene, 1983:10). The weak form of Efficient Market Hypothesis

(EMH) is popularly known as the random walk theory. Random walk theory describes whether past price can predict future price. Fama argued; "random walk theory implies the future path of price level of a security is no more predictable than the path of series of cumulated random numbers. The series of price changes has no memory; that is, the past can not be used to predict the future in any meaningful way" (Fama, 1965:34). It means, that the current size and direction of price change are independent and unbiased outcome of previous price changes. Put it differently, prices appeared to follow a random walk, implying that successive price changed is independent of one another.

Random walk model says that previous price changes or changes in return are useless in predicting future price or return changes. It means if we attempt to predict future price in absolute term using only historical price change information, we will not be successful i.e., successive price changes are independent. This independence implies that prices at any time will on the average reflect the intrinsic value of the security. If a stock's price deviates from its intrinsic value because among other things, different investors evaluate the available information differently or have different insights into future prospects of firm, professional investors and astute non professional will seize upon the short-term or random deviations from the intrinsic value and through their active buying and selling of the stock in question will force the price back to its equilibrium position. Finally, the efficient market theory holds that since price reflects all available information and since information arrives in a random fashion, there is little to be gained by any type of analysis whether fundamental or technical. It assumes that every piece of information has been collected and processed by thousands of investor and this information (both old and new) is correctly reflected in the price. Returns cannot be increased by studying historical data, either fundamental or technical, since past data will have no effect on future prices" (Fischer and Jordan, 2000:553).

Though the subject of market efficiency has been much concerned area of the study for the academicians and researchers in recent times, "the advocates of the efficient market theory are matched by an equally eloquent opposing camp which argues that the stock market is neither competitive nor efficient. The critics

contend that one or more of the following factors cast their shadow over the efficiency and competitiveness of the stock market" (Chandra, 1994:589).

- © Information inadequacy: Information is neither freely available nor rapidly transmitted to all the participants in the stock market. In addition, there is a calculated attempt by many companies to circulate "misinformation".
- © Limited information processing capabilities: Human information processing capabilities are sharply limited. As Nobel Laureate Herbert Simon observed: "Every human organism lives in an environment which generates millions of new bits of information every second, but the bottleneck of perceptual apparatus certainly does not admit more than a thousand bits per second and possible much less."
- © Irrational behaviors: In theory, it is generally assumed that investor rationality will ensure a close correspondence between market prices and intrinsic value. In practice, this may not be true. As J.M. Keynes argued: In point of fact all sorts of consideration enter into the market valuation which are in no way relevant to the prospective yield. A similar observation was made by L.C. Gupta: "our findings suggest that the markets evaluation process work haphazardly almost like a blind man firing a gun. The market seems to function largely on a 'hit -or - miss 'basis rather than on the basis of informed beliefs about the long -term prospects of individual enterprises" (Gupta, 1981:20).
- © Monopolistic influence: In theory, the market is regarded as highly competitive. No single buyer or seller is supposed to have undue influence over price. In practice, powerful institutions and big operators wield great influence over the market. The monopolistic power enjoyed by them diminishes the competitiveness of the market.

Finally, due to these challenges posed by the critics of efficient market theory, there are many factors to point the finger at its reality validity and authenticity. This appears to be truer like relatively less developed capital market of Nepal. Nepalese capital market is yet to be efficient in terms of information as well as operations.

If the random walk hypothesis holds, the weak form of efficient market hypothesis must hold (though not vice-versa). Thus, evidence supporting the random walk model is evidence supporting weak form of efficiency (Edwin J. Elton & Martin J. Gruber, 1991:404). If prices follow a random walk, price changes overtime are random (independent). The price change for today is unrelated to the price change on previous days. Any new information arrived randomly in the market results in the random changes in the prices. Random walk theory that involves random selection of securities is represented as the modern approach to investment decision.

## **2.3 REVIEW OF PREVIOUS STUDIES**

The objective of review of previous studies is to gain knowledge about what the previous researchers have identified and recommended the solution to the existing problems in the field of duties. The gist of reviewed studies is presented below:

### **2.3.1 Review of Related Studies in Foreign Context**

All of the empirical works on efficient markets can be considered within the context of the general expected return or “fair game” model; in particular, the expected profits to the speculators should be zero. The pioneer work in this field is due to French mathematician Louis Bachelor (1900) who used the data of commodity price during the period of 1894-1898. He concluded that commodity speculation in France was “fair game” that has no expected profits for buyers and sellers. Unfortunately, his insights were so far ahead of the time that was largely unnoticed for a long period until his paper was rediscovered and eventually translated into English and published in 1964.

Additional evidence that security prices follow a random walk was found by Holbrook in 1934. He extensively analyzed commodity prices and noted that speculative price patterns might be shown to be random comparing with artificially generated series of price. According to him, “it has several times been noted that time series commodity possess in many respects the characteristics of series of cumulated random numbers. The separate items in such time series are by no means random in character, but the changes between successive items tend to be largely random” (Halbrook Working, 1934:11-24).

In 1953, Kendall examined the behavior of weekly changes in nineteen indices of British Industrial share prices and in spot prices for cotton (New York) and wheat (Chicago). He found no relationship between share price changes in the current week and the previous week. After extensive analysis of serial correlations, he suggested that "the series looks like a wandering one, almost as if once a week the demon chance or drew a random number from a population of fixed dispersion and added it to the current price to determine the next week's price" (Maurice G. Kendall, 1953:11-25).

In 1959, H. V. Roberts compared Dow Jones Industrial index with simulated price index generated on the basis of series of random numbers for 1956. He found considerable similarity in the graphic of these two series and it was difficult to distinguish between the series of random numbers and the stock market index. Thus, concluded that random movement of the past price s index cannot be used to forecast future share prices. 64 Another study conducted by Osborn, one of the distinguished physicists, ignorant about the stock market at that time watched the numbers representing stock prices to see whether they conformed to certain law governing the motion of physical objects. He found the movement of stock prices similar to that of the movement of small particles suspended in a chemical solution so called "Brownian Motion". Although, Osborne attempted to give the empirical Justification for his theory, most of his data were cross –sectional and could not provide an adequate test. Though his point of view is different, the findings are consistent with Robert's work, 1959 (M.F.M. Osborne, 1959:145-173).

Alexandar (1961) tested the filter, rule technique on the closing prices of two indices, the Dow Jones industrials from 1897 to 1959 and Standard and Poor's industrials from 1929 to 1959 and reported that in general, filters of all different sized and all different periods yield substantial profits, significantly greater than that of simple buy and hold policy. Finally he concluded that the independence assumption is not validated as a description of reality by his data. But alter in 1964, he corrected the shortcomings of his previous study were the failure to realize that dividends were cost rather than benefit, Alexander found that his filler rules produced very large rates of return, particularly for small filters. However,

when transaction costs are considered, the abnormal returns disappear for all filter rules (Sidney S. Alexander, 1961:7-26).

In 1962, A. B. Moore examined weekly price changes of 29 randomly selected stocks for 1951-58 and found average serial correlation coefficient of  $-0.06$ , this value is extremely low, indication that data on weekly changes are valueless in prediction future changes. The interpretation of this test is that a low coefficient estimate suggests that previous price changes do not provide any reliable information in estimating future price changes (Paul H. Cootner, 1964: 412).

Granger and Morgenstern (1962) published article about the random walk hypothesis of stock market behavior applying spectral methods of analysis to the weekly, monthly end volume series from series New York stock market using Dow Jones, Standard & poor and other various indices as well as price series of individual stocks. Especially there exists no linear relationship of independence between lagged price changes (C. Granger & Morgenstern O, 1962:24-45).

In 1965, Samuelson though lacked theoretical discussions in his paper, but his findings supports the independence hypothesis of random walk theory in stock prices. He concluded that if a market has Zero transaction costs, if all available information are free to all interested parties and if all market participants either potential and existing have the same time horizons and expectations about prices, the market will be efficient and prices will fluctuate randomly (Paul A. Samuelson, 1965: 41-49).

In 1965, Fama analyzed the movement of stock market price changes of all the stocks that make up Dow Jones Industrial index for the period end of 1952-1962 and investigated the daily proportional price changes of those 30 industrial stocks and auto correlation were estimated for a variety of lags ranges from 1 to 10 days. In his study, he found that the auto correlation coefficients for daily changes are small the average being 0.03, near to zero. Out of thirty, eleven auto correlation coefficients were significantly different from Zero and lagged price changes show some degree of dependence. He further analyzed the data by run tests by total number of runs, number of runs by signs, and distribution of runs by length. He

found slight tendency for this to occur, but again the results were sufficient to accept the random walk hypothesis (Eugence F. Fama, 1965:34-105).

King in 1966 also examined the behavior of 63 securities from six industries of New York exchange, from 1927 to 1960. This study also concludes that there exists low degree of co-efficient estimates of serial corer relation, i. e. 0.018 which is close to zero. This helped him in concluding that stock market prices follows random walk model (Benjamn F. King, 1966:136-190).

Brealy (1970) examined the various stocks using similar methodology to that used by Fama in 1965 also supported the random walk model and concluded that successive price changed in stock market are independent (Richard Brealy, 1970). Cootner (1964) tested the randomness of the series by using serial correlation on he logarithms of daily price changes of 45 companies stocks from New York stock Exchange. In his study he found the low serial correlation coefficients of  $-0.046$ , which are insufficient to predict the future price changes (Paul H. Cootner, 1964).

In 1966, Fama & Blume used the filter technique to overcome the shortcomings of Alexander's mechanical rules. They tested the profitability of 24 filters ranging from 0.5% to 50% to buy and hold return of each of the stock of the Dow Jones. Ignoring transaction costs, only two out of thirty is superior to buy and hold policy, when commissions are taken into consideration only four out of thirty have positive returns and not comparable with buy and hold return (Eugene F. Fama & Blume M.E., 1966:226-241). Therefore, according to their demonstration, it seems that filter technique cannot provide returns larger than those under a naïve buy and hold policy.

In 1971, Niarchos studied price series of 15 individual stocks from Athens stock Exchange for the period from 1957-1968. He found the serial correlation coefficients for individual stock as 0.036, close to zero. So, he concluded that the price fluctuations were random walk and past price has no meaningful information to predict future prices (N.A. Niarchos, 1971).

Dryden (1970) concludes that the share price movements were not random. However in his later study, he used serial correlation and runs analysis to examine the daily closing price of 14 individual stocks of U. K. market and supported that the independence hypothesis of successive price change (Miles M. Dryden, 1970:369-389). Similarly, Kemp and Remp's study (1971) was also against the random walk theory. They derived the conclusion that share price movements were conspicuously non random over the period considered (Alexander G. Kemp & Reid Remp, 1971:28-51).

Fama, Fisher, Jensen and Roll examined the effect of stock splits on security prices. A number of prior studies had suggested that stock splits increase the value of the firm. This was disturbing to many because stock splits simply involve changing the percentage ownership of any shareholder or the asset or earning of the company. Fama and other scholars argued that stock splits might be associated with other more fundamental change and the effects the researcher were attributing to stock splits might be better attributed to these other phenomena (Eugene F. Fama, Lawrence Fisher, Michael Jensen & Richard Roll, 1969:1-21).

While talking about Indian context, Rao (1988) conducted the study on the weekend prices of the eight blue-chip stocks for five years from July 1982 to June 1987. He applied serial correlation analysis, runs tests, and filter rule technique. He result form all the tests supported the random walk hypothesis (N.K. Rao, 1989:203-218).

Any financial paper has stock quotes that will look something like the image below:

52W high	52W low	Stock	Ticker	Div	Yield %	P/E	Vol 00s	High	Low	Close	Net chg
45.39	19.75	ResMed	RMD			52.5	3831	42.00	39.51	41.50	-1.90
11.63	3.55	Revlon A	REV				162	6.09	5.90	6.09	+0.12
77.25	55.13	RioTinto	RTP	2.30	3.2		168	72.75	71.84	72.74	+0.03
31.31	16.63	RitchieBr	RBA			20.9	15	24.49	24.29	24.49	-0.01
8.44	1.75	RiteAid	RAD				31028	4.50	4.20	4.31	+0.21
38.63	18.81	RobtHalf	RHI			26.5	6517	27.15	26.50	26.50	+0.14
51.25	27.69	Rockwell	ROK	1.02	2.1	14.5	6412	47.99	47.00	47.54	+0.24

Column 1    Column 2    Column 3    Column 4    Column 5    Column 6    Column 7    Column 8    Column 9    Column 10    Column 11    Column 12

Source: <http://www.investopedia.com>, July 2006

**Columns 1 & 2: 52-Week Hi and Low** - These are the highest and lowest prices at which a stock has traded over the previous 52 weeks (one year). This typically does not include the previous day's trading.

**Column 3: Company Name & Type of Stock** - This column lists the name of the company. If there are no special symbols or letters following the name, it is common stock. Different symbols imply different classes of shares. For example, "pf" means the shares are preferred stock.

**Column 4: Ticker Symbol** - This is the unique alphabetic name which identifies the stock. If we watch financial TV, we have seen the ticker tape move across the screen, quoting the latest prices alongside this symbol. If we are looking for stock quotes online, we always search for a company by the ticker symbol.

**Column 5: Dividend Per Share** - This indicates the annual dividend payment per share. If this space is blank, the company does not currently pay out dividends.

**Column 6: Dividend Yield** - The percentage return on the dividend. Calculated as annual dividends per share divided by price per share.

**Column 7: Price/Earning Ratio** - This is calculated by dividing the current stock price by earnings per share from the last four quarters. For more detail on how to interpret this, see our P/E Ratio tutorial.

**Column 8: Trading Volume** - This figure shows the total number of shares traded for the day, listed in hundreds. To get the actual number traded, add "00" to the end of the number listed.

**Column 9 & 10: Day High & Low** - This indicates the price range at which the stock has traded at throughout the day. In other words, these are the maximum and the minimum prices that people have paid for the stock.

**Column 11: Close** - The close is the last trading price recorded when the market closed on the day. If the closing price is up or down more than 5% than the previous day's close, the entire listing for that stock is bold-faced. We are not guaranteed to get this price if we buy the stock the next day because the price is constantly changing (even after the exchange is closed for the day). The close is merely an indicator of past performance and except in extreme circumstances serves as a ballpark of what we should expect to pay.

**Column 12: Net Change** - This is the dollar value change in the stock price from the previous day's closing price. When we hear about a stock being "up for the day," it means the net change was positive.

Thus, on the basis of above mentioned review of previous research works, it can be concluded that stock market price shows random movement and the security prices appear to be serially independent. So, investors cannot develop any profitable trading strategy using the information of past series.

### **2.3.2 Review in Nepalese Context**

As stock market is in infancy stage in Nepalese context, there are limited books, journals and research studies concerning stock market and its pricing behaviour in proportion to capital markets. Whatever, the studies have been performed, are only concentrated on the test influence of certain financial variables on the stock prices. So, the available articles books, previous research works, which are related to stock market are consulted and reviewed.

Mr. Sadakar Timilsina (1997) has conducted research on "Dividend and Stock Price". The study was carried out by the data for 16 enterprises from 1990 to 1994. The objectives of this study were as follows:

- © To test the difference between dividends per share and stock prices
- © To determine the impact of dividend policy on stock price.

- © To identify whether it is possible to increase the market value of the stock changing dividend policy or payout ratio.

To explain the price behavior, the study used simultaneous equation model as developed by Friend and Puckett (1964). The main findings of his study were as follows:

- © The difference between dividend per share and stock prices is positive in the sample companies.
- © Dividend per share affects the share prices variedly in different sectors.
- © Changing the dividend policy or dividend per share might help to increase the market price of share.
- © The difference between stock prices and retained earnings per share is not prominent.
- © The difference between stock prices and lagged earnings ratio is negative.
- © Though there were above-mentioned studies in the context of Nepal, it has overcome necessary to find out whether their findings are still valid.

Timilsina's study was based on 45 observations. The number of companies included in the sample was only 16, which is quite low. Studies on dividends conducted in the context of Nepal are based on secondary data only. No study has been conducted on dividends by using primary data as yet. There is a need to conduct a survey of financial executives in order to find out more qualitative facts on dividends which can not be determined through the use of secondary data. This is the first attempt that studies dividends based on questionnaire survey. Moreover, the earlier studies on dividends have become old and need to be updated and validated because of the rapid changes taking place in financial market of Nepal” (Timilsina, 1997: 80-92).

Mr. Bharat Prasad Bhatta (1997) has also conducted research on the topic “dynamics of stock market in Nepal”. The objectives of the research were as follows:

- © To analyze the trend of the Nepalese stock market.

- © To diagnose and compare sectoral financial status of the stocks in Nepalese stock market.
- © To analyze the market share prices of the Nepalese stock market.
- © To recommend for the improvement of stock market in Nepal.

The main conclusion of his research was:

The stock market and economic activities move in similar direction. They influence each other. The development of the former is reflected in the latter. The stock market raises and mobilizes the invest-able resources to finance the long-term large projects in the economy. The stock market, therefore, can be regarded as a heart of economy.

The investors are interested to invest their resources in the shares of corporate sector through the stock market in the Nepalese economy. It is necessary to develop the entrepreneurship and encourage the entrepreneurs to start the productive venture as soon as possible. Management capability of the entrepreneurs is a key for better performance of the firms. Government should launch programs to enhance management capability of the entrepreneurs, which may contribute to raise the return from the investment.

Development of manufacturing sector is the backbone of an economy, which, in turn, assists to foster banking, finance and insurance sectors. Unfortunately, the manufacturing sector doesn't have a good performance in Nepalese economy. Almost all firms in this sector have a sustained loss.

The secondary aspect of the stock market is not also functioning well in Nepal. There is almost no liquidity in the stock market for shares except that of banking and some finance and insurance sectors.

Although it has become late to take steps to overcome such problems of the Nepalese stock market in order to make it active and supportive, the stock market has good prospect for the resource mobilization to finance the productive enterprises in Nepalese economy” (Bhatta, 1997:56-57).

Mr. Surya Chandra Shrestha (1999) has conducted research on “Stock Price Behavior in Nepal”. This study aims to examine the efficiency of the stock market in Nepal.

The specific objectives of this study were:

- © To examine the serial correlation of the successive daily price changes of the individual stocks.
- © To determine whether the sequence of price changes is consistent with changes of the series of random numbers expected under the independent Bernoulli process.
- © To determine the efficiency of the stock market through the theoretical model of efficient market hypothesis in the Nepalese stock market.

The main findings of his study were:

The serial correlation coefficients of the daily price changes for 1 and 2 lag days, and runs of the series of daily price changes lead to conclude that the successive price changes are not independent random variable for the 30 sample stocks listed in the Nepal stock exchange Ltd. (NEPSE). Therefore, the random walk theory is not a suitable description for the stock market price behavior in Nepal.

The dependence in the series of price changes observed imply that the price changes in the future market will not be independent from the price changes of the previous days. It implies that the information of the past price changes is helpful in predicting future price changes in a way that the speculation through technical analysis can make higher expected profit than they would be under naïve buy-and-hold policy (i.e. average market return). Therefore, opportunities are available to sophisticated (both institutional and individual) investors to earn higher return in the market. The existence and participation of the sophisticated investors have not been realized from the findings of this study. It is realized that mostly the naïve investors have dominated in the market that can cause prices to diverge significantly from intrinsic values because the very existences of the sophisticated traders cause to erase the opportunities of persistence in prices which establish independence of successive price changes” (Shrestha, 1999:70-80).

Mr. Mukti Aryal (1995) has conducted a research on “The General Behavior of Stock Market Price”. The prime objective of the study was to find the laws of price fluctuation in the stock market. However, the specific objectives of the study were as follows:

- © To discuss theoretically the movements of stock market prices as predicated by the random walk model.
- © To develop the empirical probability distribution of successive price changes of an individual common stock and a stock market as a whole.
- © To examine whether the successive price change of stocks market are independent to each other or not.

The main findings of the study were:

The general behavior of twenty-one-security prices on Nepal stock exchange is remarkably far from that, mainly the assumption of independence as predicated by random walk model of security (speculative) price behavior. Thus, the model of such kind has been refuted at least for Nepal stock market context as a first approximation even on a rough way for early days of stock market operation. Here this rejection of hypotheses makes clear that This knowledge of past now becomes useful in predicting the future movements of stock market prices, than investors, on the floor of exchange for securities can make higher expected profits in the future based solely on those historical price series under certain systematic trading scheme (i.e. Market average return) of the general market for securities. Therefore, anomaly of weak form tests of efficient market hypothesis has an important implication bearing interpreting behavior of security price variations in the past and in performing future research in this field. If broadly speaking the implications with respect to conclusions derived by the study are of two natures: statistical and economic.

Statistically, the characteristic feature of stock market movement with respect to distribution of price change implies that the general shape is platykurtic character has been demonstrated previously, due to higher values of standard deviations for individual price changes. Higher standard deviations are results of frequent large price fluctuation. According to this device of measuring risk, individual stock and aggregate market can be interpreted as highly risky opportunity for investment.

The economic reason for higher values of standard deviation implies that the inherent instability of market, change in economic environment.

Government actions, companies developments that causes abrupt price changes, ultimately the value of standard deviations for individual price changes has been higher consequently platykurtic character of distribution observed i.e. too few relative frequencies are contained near to mean of the price changes in the central bell and all the relative frequencies are concentrated within higher limits of standard deviations from the mean of, the price changes.

Finally, with respect to distribution of price changes, from the investor point of view, the sole interest is in the shape of distribution, that is the only information needs to make meaningful investment decisions” (Aryal, 1995:100-105).

Mr. Khagendra Prasad Ojha (2000) has conducted a research on “Financial Performances and Common Stock Pricing”. The main objectives of his research were:

- © To study and examine the difference of financial performances and stock prices.
- © To examine the relationship of dividends and stock price.
- © To explore the signaling effects in on stock price.

The main findings of his study were:

- © Nepalese stock market is in infancy stage. In general it is very new and just started to develop.
- © Corporate firm with long history have a relatively stable profitability parameters than the firms established after the economic liberalization of 1990.
- © Older firms have been issuing bonus shares more times than the new one.
- © Dividend per share is relatively more stable than the dividend payout ratio. That’s why payout ratio and dividend yields have been highly fluctuating.
- © Due to lack of proper investment opportunity most of the investors have directed their saving towards the secondary stock market.
- © People have a misconception that the issuance of bonus shares and right shares, which actually decrease the net worth per share and resultantly ought to

decrease the market price of stock also, do not decrease the price and this makes them to invest even at a too high price with the expectation of getting the same to increase their overall wealth.

- © There is significant positive correlation between the dividends paid and stocks prices of banking and manufacturing industries. All other industries have not a perfect correlation between the dividends paid and stock prices.

There is a positive correlation between the net worth per share and stock price; there is no perfect correlation between the net worth per share and common stock price” (Ojha, 2008:75-82).

Thus, various studies have been conducted by different scholars in the field of share price behavior. But while considering those studies, it seems that Nepalese stock market is still in developing stage and it is facing various challenges. Further more it also shows that there are very few research works conducted about the market price behaviour on the stock market. As the share price is the crucial phenomenon in the stock market and large numbers of investors are attracted in this investment, updating of previous studies is very important. The study of the daily price fluctuation of the shares is required to find out whether to buy or sell the stocks for the investors.

Most of the above stated studies have used technical methods and statistical methods like correlation coefficient, regression, NEPSE trend etc for the analysis purpose. More than that few studies are concerned about the financial indicators like EPS, DPS and NWPS which are the most influencing factors for the MPS. Actually, the ratio of dividend per share to market price per share is positively correlated. Hence, this study tries to analyze the relationship of these factors with the pricing behaviour of the stock of selected companies as well as it also tries to show the influence of the important events happened in the country on market price of the stock. In the same time risk and return of the sampled insurance companies are also examined to analyze the individual returns patterns and risk involved.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

Research means to search or study about a phenomenon. The word research is composed by 're' and 'search' where re means repeatedly or again and again, and search means to investigate or find. Thus to search again and again is research. Generally, research is an effort to search new fact, knowledge, and principle in scientific manner. Any systematic research study requires a proper methodology to achieve the set objectives. Research is a careful investigate or inquiry into any subject matter, which is an attempt to discover to find out proposed information or relationship that would be useful for further application. Research methodology is a systematic way of finding solution to a research problem i.e. systematic collection, recollection, recording, analysis, interpretation, and reporting of information. This chapter deals with the research methodology by which the collected data are analyzed to get the results. In other words it describes the methods and processes applied in the entire aspect of the study. This chapter provides the methodology followed to achieve the objectives stated in this research work. Detail research methods are described in the following headings. It refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view. In other words, research methodology describes the method and process to be followed during the research work (Kothari C.R., 1990:10). This chapter focuses on the research methodology used for the study of market price behaviour of shares of selected insurance companies of Nepal.

This chapter focuses and deals with the following aspects of methodology:

- ) Research design
- ) Population and sample
- ) Sources of data
- ) Data analyzing methods

### **3.2 RESEARCH DESIGN**

Research design is the conceptual structure, plan or strategy of investigation within which research is conducted. Before making a research, the researcher needs to plan which help as a path in order to achieving goal. Research design helps researcher to enable him to keep track of his action and to know whether he was moving in the right direction to achieve his goal. This study covers quantitative methodology in a greater extent and also uses the descriptive part based on both technical aspect and logical aspect. This study is carried out to get the empirical result of the stock price movements. This research also tries to perform a well-designed quantitative research in a very clear and direct way using both financial and statistical tools as required by the study. All the data used in this study are secondary in nature. Though the research tried to concentrate on quite a specified subject area, it could not ignore some other relevant areas of study, which may give further support to the research. Moreover some subject matters are so interrelated that ignoring one may halt the whole research. Thus, this study is much diversified within the topic of market efficiency and Nepalese investors' behavior. It was historical data to develop generalization. It follows descriptive and analytical designs in the sense that it tries to find some fact about the Nepalese stock market and the Nepalese investors.

### **3.3 POPULATION AND SAMPLE**

The large group about which the generalization is made is called the population under study. Because of the large group size, it is fairly difficult to collect detail information from each member of population. Rather than collecting detail information from each number, the small portion is chosen as representation of the population is called the sample. Altogether eighteen insurance companies operating in Nepal are considered to be the total population of the study. Due to lack of time and resource factor, it is not possible to study all of them. Hence, the eight insurance companies have been taken as sample which are listed and doing shares transaction in NEPSE from population. The sample selections for this study are:

- ) National Life and General Insurance Company Ltd.
- ) Himalayan General Insurance Company Ltd.
- ) United Insurance Company Nepal Ltd.
- ) Everest Insurance Company Ltd.
- ) Premier Insurance Company Ltd.
- ) Neco Insurance Company Ltd.
- ) Alliance Insurance Company Ltd.
- ) Sagarmatha Insurance Company Ltd.

This study will try to explore the objectives set in the previous section and it is also expected that this study will help in analyzing the stock market scenario. This study is aimed at producing tested affect of historical information on future price movements of the insurance companies' stocks.

### **3.4 SOURCES OF DATA**

Once the purpose of statistical investigation has been defined, the next step is to collect the data, which are relevant for analysis in a meaningful manner. Thus collection of data is considered as an integral part of the research activity. The sources of information are generally classified as primary and secondary. Data collected by the researcher or through agent for the first time from related field and possessing original character are known as primary source or data. On other hand, data collected by someone else, used already and are made available to others in the form of published statistics are known as secondary data. Once primary data have been used, it loses its primary characteristics (originality) and becomes secondary.

In this study the main source for the data collection was the central office of Nepal Stock Exchange (NEPSE), Securities Board Office, Beema Samiti and economic survey published by Ministry of Finance. The main source of data is annual report of the SEBON. Besides annual reports, various bulletin, journal, articles and other publications published by different financial institutions and other useful resources are also taken in to consideration. The research is mainly based on secondary data. Primary data are collected through questionnaire and direct interview of the concerned person in the office. The Secondary data are collected through the annual report of the SEBON, different text books and reference books from library, periodicals, newspaper cuttings, company's' magazines, guidelines, unpublished thesis, previous research work etc. Besides this, other significant information are obtained from internet and various websites such as; [www.nepalstock.com](http://www.nepalstock.com), [www.sebonp.com](http://www.sebonp.com), [www.bsib.org.np](http://www.bsib.org.np), [www.beema.com.np](http://www.beema.com.np) etc.

### **3.5 DATA ANALYSING METHODS**

After the collection of data, an analysis of the data and the interpretation of the results are necessary because data collected from various sources might be in raw

form. So, they cannot be used directly. Further, they need to be verified and simplified for the purpose of analysis. The obtained data should be classified and tabulated in the required format according to the nature of data and requirement of the study. Statistical and financial tools are used to analyze and interpret those data. After analyzing the collected data they are presented in bar diagram or pie diagram. Major findings of the study are based on the analysis and interpretation of data. Hence, analysis of data and their findings are the main body or heart of the study.

### **3.5.1 FINANCIAL TOOLS**

Financial tools are used for the analysis and interpretation of financial data. These tools can be used to get precise knowledge of a business, which are fruitful in exploring the strength and weakness of the financial aspects and strategies. Under the financial tools following ratios have been calculated:

#### **a) *Earning Per Share (EPS)***

EPS ratio is used to measure the profitability of a firm from the owner's viewpoint. The market value of shares of a company is dependent on the earnings of the company. EPS also measures the return of each equity shareholder. It can be calculated by dividing the net profit after tax by the total number of the common shares outstanding. It reveals the earning power of each share over the period basically in one year. It is calculated as under:

$$\text{EPS} = \frac{\text{Net profit after tax}}{\text{Number of common shares outstanding}}$$

#### **b) *Dividend Per Share (DPS)***

Dividend refers the percentage of earnings paid in cash to its stockholders. "As long as there are investment projects with returns exceeding those that are required, it will use retained earnings and the amount of senior firm has retained earnings left over after financing all acceptable investment opportunities, these earnings then would be distributed to stockholders in the form of cash dividends, if not there would no dividends" (Van Horne, 1990:328). People make investment in stock because they will get dividend in return. Therefore, the price they are willing to pay will depend on their expectations of dividends. DPS is the net distributed profit belonging to the shareholders divided by the number of ordinary shares

outstanding. It measures the financial performance of the company. It is calculated as under:

$$\text{DPS} = \frac{\text{Amount paid to equity shareholders}}{\text{Number of ordinary shares outstanding}}$$

c) **Price Earning Ratio (P/E Ratio)**

Price earning ratio reflects the price, which is currently paid by the market for each rupee of earnings, which is currently reported earnings per share. The P/E ratio could be calculated by dividing the market value per share by earnings per share. It is calculated as:

$$\text{P/E Ratio} = \frac{\text{Market price per share}}{\text{Earnings per share}}$$

d) **Market Book Value Ratio**

This ratio indicates such types of price, which the market is paying for the value that is reported from the net worth of insurance companies. In other words, we can say that it is the price that the outsiders are paying for each rupee shown to the balance sheet of the company. This ratio is calculated by dividing the market value per share by the book value per share as under:

$$\text{Market Book Value Ratio} = \frac{\text{Market price per share}}{\text{Book value per share}}$$

e) **Expected rate of return**

The expected rate of return is computed in the base of the expected cash receipts over the holding period and the expected ending or selling price (J Fred Weston & Brigham, 1990:146). The expected return on an investment is the mean value of the summation of the possibility distribution of its possible returns (John. M. Chenny and Edward A. Moses, 1992:34). It can be expressed as an equation.

$$E(r_t) = \sum_{t=1}^n p_t r_t$$

Where,

$p_t$  = Probability of the return for that event

$r_t$  = Possible returns of each event

$n$  = number of observations or returns

$t$  = Different

In case of single holding period, the expected rate of return can be computed by cash dividends paid during the together with an appreciation in market price, or capital gain realized at the end of the year.

$$\text{Single Period Return ( } r \text{ )} = \frac{\text{Dividend } \Gamma (\text{Ending Price } Z \text{ Beginning Price)}}{\text{Beginning Price}}$$

Here, ending price and beginning price indicates the cost of investment and the return realizes from that investment at the end of holding period. The nature of investment should be in revenue type of expenditure. The investors expect a regular payment of dividends over the Holding period with less chance of risk and price variations. The high expected rate of return is appreciated by investor s to invest such type of business and vice versa. Therefore, the investor decisions are larger influenced by the nature of investors.

f) **Required rate of return**

Required rate of return is computed as the risk free rate of return plus the risk premium based on beta of the particular stock using the Capital Asset Pricing Model (CAPM) equation. CAPM model is developed by Sharpe & Litner which provides the intellectual basis for a number of the current practices in the investment industry. Under the assumption of CAPM, investors are not compensated for total risk rather they are compensated in the market for facing the systematic risk. Total risk contains two parts diversifiable or unsystematic risk and undiversifiable or systematic risk.

The required rate of return of an asset is given by (William E. Sharpe, Alexander & Bailey, 1996:261-263);

$$R_j = R_f + \{E(R_m) - R_f\} \beta_j$$

Where,

$R_j$  = required rate of return on the  $j_{th}$  stock

$R_f$  = risk free rate of return (The Yield on short-term government's Treasury bond is often used as a proxy for the risk free rate)

$E(R_m) - R_f$  = market risk premium i.e. the additional return over the risk free rate of return required to compensate an average investor for assuming on average amount of risk.

$\beta_j$  = beta coefficient of stock j.

g) **Market Return  $\{E(R_m)\}$**

Market return is the average return of the stocks of all companies in an industry. For this research purpose, market return has been calculated by dividing the difference of this year's market index and previous year's market index. Hence,

$$E(R_m) = \frac{\text{This year's market index} - \text{Last year's market index}}{\text{Last year's market index}}$$

h) **Risk**

Total risk of stock consists two parts of risks; one is systematic (market risk) and another is unsystematic (unique risk) and commonly denoted by standard deviation ( $\sigma$ ). Statistically, systematic risk and unsystematic risk can be measured by coefficient of determination or beta coefficient and by subtracting the systematic risk through 1 respectively. Less standard deviation and beta coefficient indicate less risk and vice versa. So, these are applied to each sample insurance company for testing and categorizing the form of stock relation to risk. Beta coefficient is computed by;

$$\beta_j = \frac{\text{Covariance}(R_j, R_m)}{\sigma_m^2}$$

Where,

$\beta_j$  = beta coefficient of stock j.

Covariance ( $R_j, R_m$ ) = Covariance of the returns of stock j and market.

$\sigma_m^2$  = variance of the market.

i) **Run Test**

A run can be defined as a sequence of consecutive price change of the same sign followed and preceded by price change of other sign. There exist three types of price changes in a series i. e. positive (+), negative (-) and zero (0). Runs test is a

non-parametric test, which can also be used to examine the independence of a series as a check of results generated by serial correlation tests. Runs test is performed to examine whether the actual number of runs confirmed to the expected number of runs under the independent Bernoulli process. If the observed runs and the expected runs are not significantly different from each other, then it is concluded that the independence assumption of the successive price changes is maintained. Runs test can also be used in order to verify the results generated by serial-correlation test.

### 3.5.2 STATISTICAL TOOLS

The statistical tools used in this study are as follows:

#### a) Mean

An average is the statistical measure of central tendency; it represents the entire series by a single value, which can be substituted for each and every value in the series without causing any change in the total magnitude of the series. So, means is known as a set of observation is the sum of all the observations divided by the total number of observations. It can be computed as under:

$$\text{Mean } \bar{X} = \frac{\text{Sum of observations } \sum f_i x_i}{\text{Number of observations (N)}}$$

#### b) Standard Deviation

Standard deviation, usually denoted by the letter  $\sigma$  (small sigma) of the Greek alphabet, which was first suggested by Karl Pearson as a measure of dispersion in 1893. It is the quantitative measure of total risk of assets. It provides more information about the risk of the asset. It is an improvement over the mean deviation and is free from the defects of other measures of dispersion. It measures the dispersion of returns around the mean. The standard deviation of a distribution is the square root of the variance of returns around the mean. The greater the amount of dispersion greater the standard deviation. A small standard deviation means high degree of uniformity of the observations or homogeneity of a series and vice versa. The following formula is applied to calculate the standard deviation, using historical returns:

$$\exists_j = \sqrt{\frac{\sum R_j - Z^2 R_j^2}{n}}$$

Where,

$\exists_j$  = standard deviation of stock j

$R_j$  = realized rate of return at a time.

$Z$   
 $R_j$  = expected realized rate of return or mean return.

n = number of observations in sample.

Symbolically,

$$R_j = \frac{(P_t - P_{(t-1)}) + D_t}{P_{(t-1)}}$$

Where,

$p_t$  = current market price of share

$P_{(t-1)}$  = previous market price of share

$D_t$  = dividend in cash or stock (if any)

### c) Coefficient of Variation

The relative measure of dispersion based on the standard deviation is known as the coefficient of standard deviation. The coefficient of dispersion based on standard deviation multiplies by 100 is known as the coefficient of variation (CV). It is suitable for comparing the variability, homogeneity or uniformity of two or more distributions. A distribution having less CV is said to be less variability or more uniformity homogeneity, consistency etc. and vice versa. The risk per unit of expected return can be measured by coefficient of variation, which is computed as follows:

$$CV_j = \frac{\exists_j}{\bar{X}} \times 100$$

Where,

$CV_j$  = coefficient of variation.

$\exists_j$  = standard deviation of stock j

$\bar{X}$  = Mean

#### **d) Coefficient of Correlation (r)**

The correlation is a statistical tool, which studies the relationship between two variables and correlation analysis involves various methods and techniques used for studying and measuring the extent of the relationship between the two variables. Two variables are said to be correlated if the change in one variable results in a corresponding change in the other vales. It measures the direction of relationships between two sets of figures. The correlation coefficient can be either in positive or negative and can have the value between -1 to +1. If both the variables are changing the same direction, then positive correlation exists. Where as when the variation in two variables take place in opposite direction, the correlation is said to be negative. In this study the correlation is calculated to examine the positive or negative degree relationship between earning per share and dividend, net worth and dividend, total earning and dividend, market price of stock and dividend and earning per hare and market price per share. It is calculated by following formula:

$$R = \frac{n\phi XY \sum \phi X\phi Y}{\sqrt{n\phi x^2 \sum \phi X\phi X} \sqrt{n\phi Y^2 \sum \phi Y\phi Y}}$$

The value of the correlation coefficient 'r' lies between -1 to +1 that is  $-1 \leq r \leq 1$ . If  $r=1$ ; there is perfect positive relationship and if  $r=-1$ ; there is perfect negative relationship or if  $r=0$ ; there is no relation at all.

#### **e) Regression Analysis**

The term 'regression' literally means 'stepping back towards the average'. The concept of regression was first given by the English biometrician Sir Francis Galton (1822-1911) in reports of his research on heredity. He described a tendency of adult offspring having either short or taller parents to revert back towards the average height of general population. The regression analysis is used to estimate the likely value of one variable

form the known value of the other variable i.e. in regression analysis we establish a kind of average irreversible functional relationship between two variables. In other words, regression analysis is a mathematical measure of the average relationship between two or more variables in terms of original units of data. There are two types of variables in regression analysis; dependent variable and independent variable. The variable whose value is influenced or is to be predicted is called dependent variable whereas the variable which influences the value or is used for prediction is called independent variable. The dependent variable is also known as regressed or explained variable while the independent variable is called as regressor or predictor or explanatory variable (Sthapit, Azay Bikram et.al., 2003).

Here unknown variable will be MPS and DPS and known Variables will be other financial indicators. Regression analysis is the process of predicting the value of one variable, on the basis of known values of other variables. Thus the regression analysis studies the statistical relationship between the variables. The main objective of regression analysis is to predict or estimate the value of dependent variable corresponding to a given value of independent variables. The analysis used to describe the average relationship between two variables is known as simple linear regression analysis. Simple regression analysis has been used in this study to determine the effects of aforementioned independent variable on dependent variable, i.e. dividend per share, earning per share and net worth per share.

In simple linear regression, a mathematical regression equation is developed to describe the functional relationship that exists between the two variables. Regression lines expressed in terms of algebraic relations are known as regression equations. There are two lines of regression, so there are two equations of regression.

The regression equations of y on x, which is used to describe the variation in the value of y of given change in the value of x.

The regression equation of y on x be

$$y = a + bx$$

Where,

y = dependent variable

a = regression constant

b = slope of regression liner or regression coefficient of y on x

x = independent variable

This model has been applied for analyzing the six years data form 1999/00 to 2004/05. Similarly the following regression model has been used to find out whether the dividend per share, earning per share and net worth per share of the insurance companies is related to market price per share of the companies.

In this equation, y represents the dependent variable i.e. market price per share and x represents independent variable such as dividend per share or earning per share or net worth per share in the case of the regression analysis of MPS on DPS, MPS on EPS and MPS on NWPS respectively.

The regression equation of x on y, which is used to describe the variation in the value of x of given change in the value of y, such line is drawn to find out the value of stocks by using two normal equations which are as follows:

$$\sum y = Na + b \sum x \quad \dots (i)$$

$$\sum xy = a \sum x + b \sum x^2 \quad \dots (ii)$$

Where,

a and b are unknown

N = Number of observations in the sample

## **CHAPTER IV**

### **Data presentation and analysis**

#### **4.1 INTRODUCTION**

This chapter deals with data presentation, analysis and interpretation following the research methodology presented in the third chapter. Data presentation and analysis are the central steps of the study. The main purpose of this chapter is to analyze and elucidate the collected data to achieve the objective of the study following the conversion of unprocessed data to an understandable presentation. The chapter deals with the main body of the study.

Data presentation is the interpretation of the study. Data analysis summarizes the collected data and its interpretation presents the major findings of the study. Analysis is not complete without interpretation and interpretation cannot proceed without analysis. In this course of analysis, data gathered from various sources have been inserted in the tabular form and shown in diagram form. The data have been analyzed by using financial and statistical tools. The results of the computation have also been summarized in appropriated tables. The samples of computation of each model have been included in annexes. The first section of this chapter presents the glimpse of stock market trading. The second section shows the descriptive analysis of the sampled insurance companies. The third section considers the risk and return analysis and evaluate the under or over priced of the sampled stocks. The forth section examine the relationship of MPS with financial indicators of the sampled stocks and the last section highlights the empirical findings of the analysis.

#### **4.2 A GLIMPSE OF STOCK MARKET TRADING**

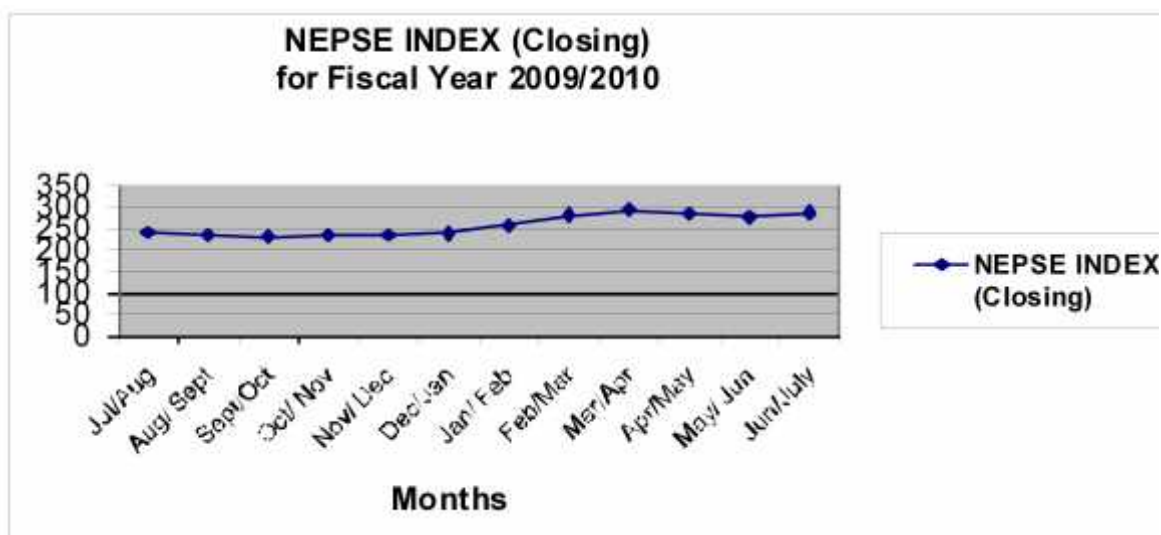
The main purpose of this section is to simply provide quantitative information of stock market functioning. The organized stock market is a recent phenomenon in Nepal. In the beginning of organized open cry- out system, there was a brisk in stock market activities. Share prices increase tremendously and the turnover volume was also high. The increase share price could not last for long and soon the prices began to fall.

#### 4.2.1 BEHAVIOUR OF NEPSE INDEX

Market index has always been of great importance in the world of security analysis and portfolio management. This index is used as a benchmark by the individual and institutional investor to evaluate the performance of their own or institutional portfolio. Market indices are used to determine the relationship between historical price movements and economic variables and to determine the systemic risk for individual securities and portfolios. The index can also be used as measuring tool whether the performance of stock market is good or not. This clearly focuses on the price of stocks that is increasing or decreasing in the market. Higher the index means the better performance of stock market and vice versa.

The table presented in the appendix-II reveals that by the end of this fiscal year, NEPSE index increased by 59.13 point close at 286.67 points. NEPSE index at the end of the last fiscal year was 227.54 points. During this fiscal year the highest point of NEPSE index was 293.26 recorded in the month March/June, while the lowest point was 231.31 recorded on Sep/Oct. The monthly trend of NEPSE index is presented in the figure shown below.

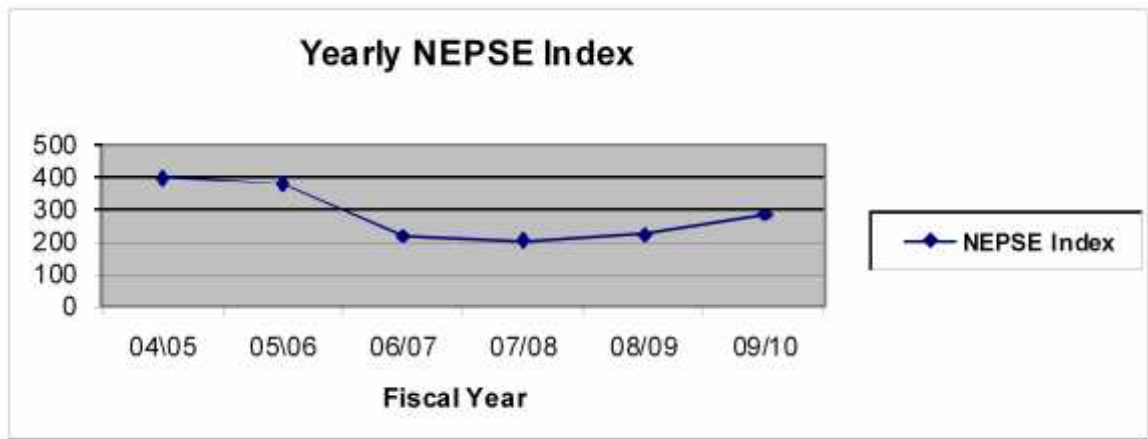
**Figure 4**



#### NEPSE Index and Annual Return

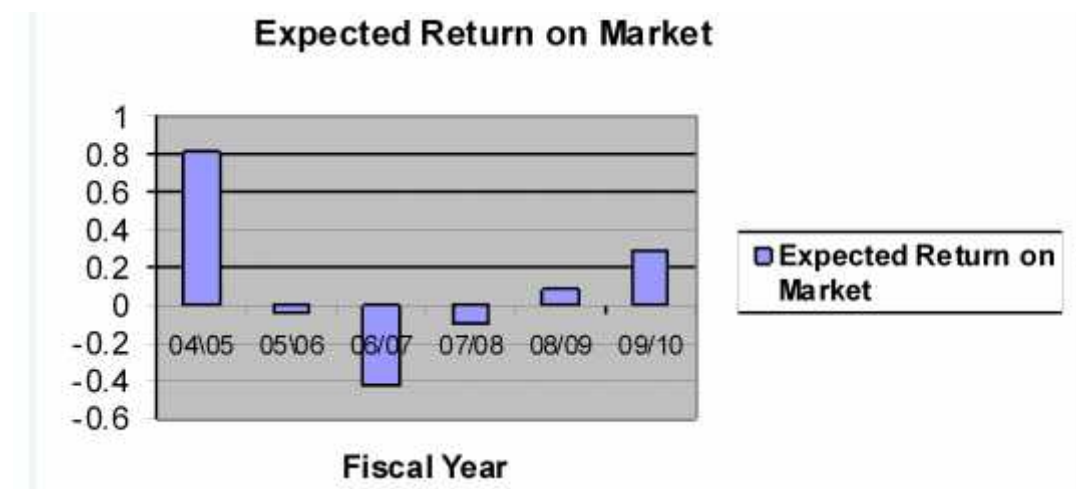
Expected Return on Market ( $R_m$ ) = the market return is the return on the market portfolio of all traded securities. Year ended the NEPSE index is used as the market return into account.

**Figure 5**



The table presented in the appendix-III shows that by the end of fiscal year, the price index of the listed securities (NEPSE Index) remained at 199.90 points, which is lower by 19.45 points than that of the last fiscal years' index 219.35 points. In this research fiscal year, the highest index of 397.17 was noted on year 04/05 and the lowest index of 199.90 was noted on year 07/08.

**Figure 6**

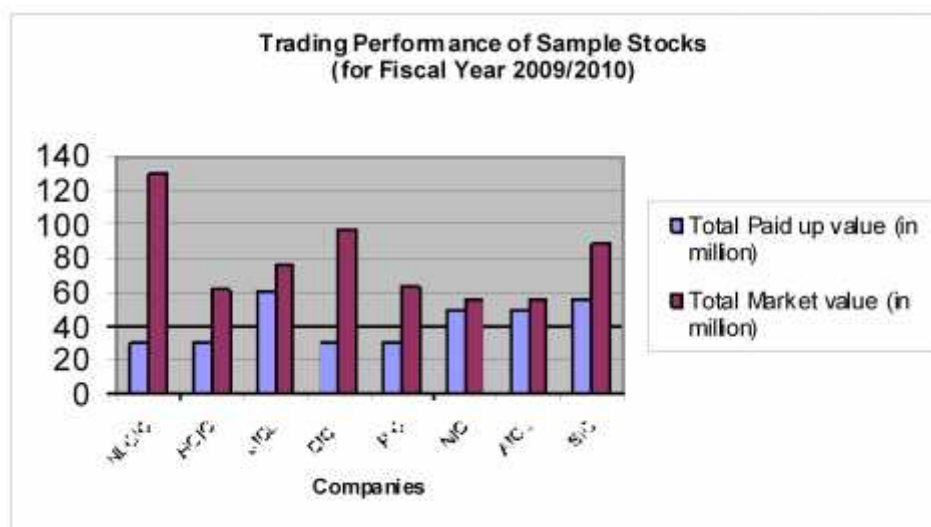


#### 4.2.2 TRADING PERFORMANCE OF SAMPLE STOCKS

The table in appendix-I gives different quantitative information about the stock market functioning during the fiscal year 2009/2010 for companies taken as

sample. In the table the first column shows the name of the insurance companies. In the second column of the table the number of outstanding shares has been demonstrated. In third column, closing price of securities has been given. Column 4, 5, 6 and 7 contains the paid up value, number of actions, shares traded in units and traded amount respectively. Within the samples, highest number of transaction has been secured by SIC, which is 172 but highest number of shares traded by UICL is 32.5 thousand. But the highest traded amount among the samples belongs to ECL with Rs. 6.86 millions by trading 25.37 thousand shares. Column 8, presents total paid-up values of common stocks. Multiplying the outstanding equity with paid-up values derives each entry in this column. The highest total paid-up capital is Rs.79.00 million by NICL. Multiplying the outstanding equity and closing price of share of each company derives column 9, which contains total market value. The highest total market value is Rs.1077.83 million gained by RBS among all whereas the lowest total market value is Rs 55.00 million recorded by NIC and AICL.

**Figure 7**



### **4.3 DESCRIPTIVE ANALYSIS OF INSURANCE COMPANIES:**

#### **4.3.1 NATIONAL LIFE & GENERAL INSURANCE COMPANY LTD.**

National Life and General Insurance Company Limited was incorporated in 1988 A.D under Nepal company Act 1964 with prime objective to meet nations and national insurance requirements in the field of life and non-life sector. NLGIC is

established in technical collaboration with leading syndicate members of 'Lloyds' of London a company, which is owned and managed by risk management and leading re-insurance brokers of U.S.A. The shareholders of the company include industrial promoters, foreign collaborators, institutional investment by Rastriya Banijya Bank and general public with the equity participation of 45%, 10%, 10% and 35% respectively.

NLGIC was listed on NEPSE in 20<sup>th</sup> December 1988. Its branch offices situated at Biratnagar, Birgunj, Bhairawaha, Nepalgunj and sub-branches at Pokhara, Dhangadhi, Rajbiraj, Hetauda, Birtamode, Dharan, Janakpur, Narayangadh, Mahendranagar. It has nine contact offices at Lalitpur, Dang, Banepa, Butwal, Bhojpur, Baglung, Sarlahi, Surkhet and Lahan. The company has authorized capital Rs.150 million and paid up capital Rs.30 million. A market capitalization is Rs.129.30 million and the number of shareholders is 2435 at the end of fiscal year 2009/10.

**Table 4**

**MPS, DPS, EPS, P/E Ratio, MBVR and NWPS of NLGICL**

Year	Closing Price	DPS	EPS	MPS	P/E Ratio	BV	MBVR	NWPS
04/05	570.00	20.00	18.93	570.00	30.11	112.83	5.05	82.36
05/06	600.00	20.00	48.76	600.00	12.30	198.23	3.03	90.02
06/07	460.00	0.00	0.00	460.00	0.00	0.00	0.00	0.00
07/08	460.00	0.00	0.00	460.00	0.00	0.00	0.00	0.00
08/09	270.00	0.00	32.43	270.00	8.33	98.44	2.74	84.62
09/10	431.00	0.00	35.46	431.00	12.16	105.14	4.10	88.39

The above table shows the influence of financial indicators on MPS of National Life and General Insurance Company in last six years. Closing market price of share has been increased in year 04/05 which is indicated higher price than the subsequent years. The MPS of NLGIC is ranging from Rs. 270 to Rs. 600. This insurance company has paid fixed dividend per share of Rs. 20.00 for the year 05/06 and 06/07 only and has not paid any dividend from the year 07/08 to 09/10. Company's EPS ranges from Rs. 18.93 to Rs. 48.76 except in the year 04/05 and 05/06. P/E Ratio, Book Value and Market Book Value Ratio are also nil in the year 06/07 and 07/08. P/E Ratio and MBVR are highest in the year 04/05 i.e. 30.11 times and 5.05 times respectively.

### 4.3.2 HIMALAYAN GENERAL INSURANCE COMPANY

Himalayan General Insurance Company Limited was established in 1988 under the company Act 1964 with an objective of undertaking non-life and re-insurance business in the country and abroad. The company had obtained permission to commence insurance business from insurance board under Insurance Act 1992 and started its business from November 1993. HGIC registered as listed company in stock exchange on 26<sup>th</sup> January 1994. It was established with an objective of undertaking non-life insurance business such as accident insurance, fire, marine, motor, earthquake, explosion, terrorist, public responsibility, contractor risk, health and miscellaneous.

HGIC has three branches offices in Biratnagar, Birgunj and Pokhara. It has altogether 49 employees with 27 officers. The shareholding pattern of the company is 60% shares owned by promoters and 40% by general public. At the end of fiscal year 2009/10, authorized capital, issued capital and paid up capital were Rs.160 million, Rs.60 million and Rs.30 million respectively, the market capitalization is Rs.61.50 million and the number of shareholders are 1359.

**Table 5**

**MPS, DPS, EPS, P/E Ratio, MBVR and NWPS of HGIC**

Year	Closing Price	DPS	EPS	MPS	P/E Ratio	BV	MBVR	NWPS
04/05	276.00	15.00	26.62	276.00	10.37	130.80	2.11	39.24
05/06	285.00	15.00	30.30	285.00	9.40	146.14	1.95	30.30
06/07	225.00	15.00	25.50	225.00	8.82	156.64	1.44	25.50
07/08	190.00	0.00	38.41	190.00	4.95	195.05	0.97	38.41
08/09	175.00	0.00	39.86	175.00	4.39	234.91	0.75	39.86
09/10	205.00	0.00	36.70	205.00	5.59	271.61	0.76	36.70

The above table shows that the closing market price of share has been increased in year 05/06 which is indicated higher price than the subsequent years. The MPS of Himalyan General Insurance Company is ranging from Rs. 175 to Rs. 285. This insurance company has paid fixed dividend per share of Rs. 15.00 from the year 04/05 to 06/07 only and has not paid any dividend from the year 07/08 to 09/10. Company's EPS ranges from Rs. 25.50 to Rs. 39.86. P/E Ratio and Market Book Value Ratio are also fluctuating in the ratio of fluctuating trend of MPS. P/E Ratio

and MBVR are highest in the year 04/05 i.e. 10.37 times and 2.11 times respectively.

### **4.3.3 UNITED INSURANCE COMPANY LTD.**

United Insurance Company (Nepal) Limited started its operation from 1<sup>st</sup> December 1993 after its registration with the Company Registration's Office and approved by Insurance Board. This Company is established with the objective of providing non-life insurance services in the field of fire, marine, vehicle and miscellaneous insurance in the country and abroad. It was listed in the NEPSE in 1<sup>st</sup> August 1994. The shareholding pattern of the company is 51% from leading industrial promoters and commercial houses of Nepal including Nepal Industrial Development Corporation, 40% from general public and 9% from foreign investors of various sectors as well.

It has four branch offices at Kathmandu, Biratnagar, Butwal, Pokhara, and one Liaison office at Kathmandu. The company has authorized capital Rs.150 million, out of which Rs. 60 million have been subscribed. In near future its paid-up capital will be Rs.100 million. Its net profit is Rs.3384836, market capitalization is Rs.76.80 million and the number of shareholders is 3990 at the end of fiscal year 2009/10.

**Table 6**

**MPS, DPS, EPS, P/E Ratio, MBVR and NWPS of UICL**

<b>Year</b>	<b>Closing Price</b>	<b>DPS</b>	<b>EPS</b>	<b>MPS</b>	<b>P/E Ratio</b>	<b>BV</b>	<b>MBVR</b>	<b>NWPS</b>
04/05	245.00	10.00	19.73	245.00	12.42	147.23	1.66	147.23
05/06	228.00	10.00	15.65	228.00	14.57	155.62	1.47	155.62
06/07	190.00	10.00	15.69	190.00	12.11	183.33	1.04	183.33
07/08	138.00	10.00	5.97	138.00	23.12	153.25	0.90	153.25
08/09	105.00	10.00	7.24	105.00	14.50	149.37	0.70	175.25
09/10	128.00	0.00	10.16	128.00	12.60	165.74	0.77	181.23

The above table shows that the closing market price of share is the highest in the year 04/05 i.e. Rs. 245. The MPS of United Insurance Company is ranging from Rs. 105 to Rs. 245. This insurance company has paid fixed dividend per share of Rs. 10.00 over the five year except the year 09/10. This Company is adopting

stable dividend policy in terms of dividend amount. This is because UICL is paying same amount of dividend each year even when its EPS is fluctuating. Company's EPS ranges from Rs. 5.97 to Rs. 19.73. P/E Ratio and Market Book Value Ratio are also fluctuating in the ratio of fluctuating trend of MPS. P/E Ratio is highest in the year 06/07 i.e. 23.12 times and MBVR is highest in the year 04/05 i.e. 1.66 times.

#### **4.3.4 EVEREST INSURANCE COMPANY LTD.**

Everest Insurance Company Ltd. (EIC) started writing Insurance Business in July 1994 after receiving an Insurance License from Beema Samiti (Insurance Board) after privatization of Insurance Sector in Nepal. EIC has been promoted by leading industrial and business houses of Nepal. The company has 40% of its total capital with the General Public, which numbers around 6500 Shareholders. EIC was the first company to declare dividend among the newly established Insurance Companies. Within a very short period since its establishment, EIC has been successful in developing relationship with the best securities throughout the world. The major objective of the company is to carry out life insurance and non-life insurance business in the country. The company is yet to get permission to operate life insurance business from insurance board and till now it is licensed to underwrite all kinds of non-life insurance business.

The primary focus of EIC has been to develop the shortage of technical manpower and also to create mass awareness in the general public about the need of Insurance. EIC has received considerable amount of success in its primary objectives. It has today established itself among the Leading Insurance Companies in Nepal. It was listed on NEPSE in 3<sup>rd</sup> April 1995. This Company is promoted by well-known business houses and professionals of diversified interest and the shareholders of EIC are 60 percent from promoters and 40 percent from general public.

EIC has six branches at Kathmandu, Biratnagar, Birgunj, Butwal, Dharan and Pokhara. The total numbers of shareholders till fiscal year 2009/10 are 3850. The company has authorized capital Rs.100 million, issued capital Rs.30 million and paid-up capital Rs.30 million, net profit Rs.18522285 and the market capitalization is Rs.97.50 million at the end of fiscal year 2009/10.

**Table 7**

**MPS, DPS, EPS, P/E Ratio, MBVR and NWPS of EICL**

Year	Closing Price	DPS	EPS	MPS	P/E Ratio	BV	MBVR	NWPS
04/05	455.00	20.00	42.89	455.00	10.61	172.07	2.64	285.38
05/06	440.00	20.00	61.05	440.00	7.21	213.10	2.06	302.78
06/07	610.00	20.00	65.20	610.00	9.35	200.00	3.05	375.98
07/08	610.00	10.00	61.74	610.00	9.88	200.00	3.05	416.93
08/09	350.00	0.00	57.22	350.00	6.17	192.34	1.82	470.82
09/10	325.00	0.00	16.87	325.00	19.27	148.00	2.20	259.65

The above table shows that the highest closing market price of share is Rs. 610, which is stable in two year 06/07 and 07/08 continuously. Then it has been decreased in subsequent years. The MPS of Everest Insurance Company is ranging from Rs. 325 to Rs. 610. This insurance company has paid fixed dividend per share of Rs. 20.00 from the year 04/05 and 06/07 only and paid Rs. 10.00 in the year 07/08 and has not paid any dividend in the year 08/09 and 09/10. Company's EPS ranges from Rs. 25.50 to Rs. 39.86. P/E Ratio and Market Book Value Ratio are also fluctuating in the ratio of fluctuating trend of MPS. P/E Ratio and MBVR are highest in the year 04/05 i.e. 10.37 times and 2.11 times respectively.

**4.3.5 PREMIER INSURANCE COMPANY (NEPAL)**

Premier Insurance company (Nepal) Limited was incorporated on 12th May 1994 under the company Act 1964. Premier Insurance Company (Nepal) Limited has emerged as a renowned general insurance company of the second generation. The company has earned a reputation in the local and international life and non-life insurance and reinsurance sectors as well for its professionalism and services. The shareholding pattern of the company is 60 percent by the promoters and 40 percent by the general public. It was listed on stock exchange in 3<sup>rd</sup> May 1995. The company's dedication to provide better customer service also reflects through its associations with leading insurance and reinsurance securities of the world rated, highly for claim payment capabilities by reputed agencies like Standard & Poor

(S&P). Today Premier has the best and the most secure reinsurance arrangements to cover all types of claim settlements.

As part of the company's efforts to serve people countrywide it has established four regional offices. The Birgunj office covers southern part of the country. The Narayangadh and Pokhara offices cover the western part of the country while the Biratnagar office covers the eastern region of Nepal. Thus, the company has now seven branches with two sub branches such as Birgunj, Biratnagar, Narayangadh, Pokhara, Butwal, Birtamod sub branch and Janakpur sub branch. New offices in other parts of the country are yet again scheduled to be opened soon. Altogether 52 staffs are employed in this company. The company has authorized capital Rs.100 million issued capital Rs.60 million, paid up capital Rs.30 million, number of shareholders are 6617 and market capitalization is Rs.63.00 million at the end of fiscal year 2009/10.

**Table 8**

**MPS, DPS, EPS, P/E Ratio, MBVR and NWPS of PICL**

Year	Closing Price	DPS	EPS	MPS	P/E Ratio	BV	MBVR	NWPS
04/05	250.00	10.00	19.69	250.00	12.70	136.27	1.84	136.27
05/06	220.00	13.00	27.35	220.00	8.04	186.62	1.18	150.03
06/07	170.00	10.53	28.73	170.00	5.92	213.76	0.80	213.77
07/08	192.00	0.00	19.88	192.00	9.65	231.25	0.83	231.23
08/09	210.00	0.00	25.12	210.00	8.36	267.89	0.78	339.25
09/10	210.00	0.00	46.68	210.00	4.50	320.93	0.65	357.28

The above table shows that the highest closing market price of share is Rs. 250 in the year 04/05. The MPS of Premier Insurance Company is ranging from Rs. 170 to Rs. 250. This insurance company has paid dividend per share of different amount from the year 04/05 to 05/06 only in the range of Rs. 10.00 to Rs. 13.00 and has not paid any dividend from the year 07/08 to 09/10. Company's EPS ranges from Rs. 19.69 to Rs. 46.68. P/E Ratio and Market Book Value Ratio are also fluctuating in the ratio of fluctuating trend of MPS. P/E Ratio and MBVR are highest in the year 04/05 i.e. 12.70 times and 1.84 times respectively.

#### **4.3.6 NECO INSURANCE COMPANY**

NECO Insurance Company Ltd. was incorporated as a public limited company on 16th December 1994 under the company Act 1964, and Insurance Act 1993. The company started its general insurance business on 30<sup>th</sup> May 1996 when the company was provided the license by Beema Samiti (Insurance Board) to transact all types of non-life (general) insurance in Nepal. NECO is promoted by the largest bank Rastriya Banijya Bank (a Government Undertaking Commercial Bank), Fund Management Committee (a concern established by Agricultural Development Bank), NECO AV Pvt. Ltd. and some other entrepreneurs in the year 1994. NECO is one of the important players in the insurance market of Nepal. NECO offers a wider range of general insurance products to cater the needs of its clients ranging from the traditional to the latest high tech type of insurance like Aviation and Engineering. NECO Insurance has been known in the market as being innovative and having a well-established relationship with the various reinsurance markets in the world. The major objective of the company is to operate insurance business throughout the country. Rastriya Banijya Bank has invested 20% and company promoters, Fund Management Company limited, NECO AV Pvt. Ltd., and general public have invested 21%, 10%, 9%, and 40% respectively in its capital. It was listed on the Nepal Stock Exchange in 30th March, 1998.

It has around 53 agents working in two branch offices at Biratnagar and Butwal and five sub-branches at Birgunj, Chitwan, Birtamode, Narayangadh, Nepalgunj and Pokhara and one regional office at Hetauda. Almost 67 staffs are employed in this Company. The total numbers of shareholders till F.Y. 2009/10 are 4115. The company has authorized capital Rs.200 million, issued capital Rs.50 million and paid-up capital Rs.50 million, net profit Rs.6055273 and the market capitalization is Rs.55 million at the end of fiscal year 2009/10.

**Table 9****MPS, DPS, EPS, P/E Ratio, MBVR and NWPS of NECOICL**

Year	Closing Price	DPS	EPS	MPS	P/E Ratio	BV	MBVR	NWPS
04/05	270.00	10.00	19.61	270.00	13.77	121.64	2.22	121.64
05/06	181.00	10.00	23.27	181.00	7.78	134.54	1.35	134.54
06/07	182.00	10.00	19.14	182.00	9.51	177.94	1.02	177.94
07/08	130.00	0.00	12.11	130.00	10.73	185.04	0.70	185.04
08/09	112.00	0.00	16.33	112.00	6.86	173.05	0.65	182.34
09/10	110.00	0.00	13.54	110.00	8.12	195.20	0.56	195.26

The above table shows that the highest closing market price of share is Rs. 270 in the year 04/05. The trend of closing market price of NECO is in decreasing trend in subsequent periods. The MPS of NECO is ranging from Rs. 110 to Rs. 270. This insurance company has paid fixed dividend per share of Rs. 10.00 from the year 04/05 and 06/07 only and has not paid any dividend from the year 07/08 to 09/10. Company's EPS ranges from Rs. 12.11 to Rs. 23.27. P/E Ratio and Market Book Value Ratio are also fluctuating in the ratio of fluctuating trend of MPS. P/E Ratio and MBVR are highest in the year 04/05 i.e. 13.77 times and 2.22 times respectively.

**4.3.7 ALLIANCE INSURANCE COMPANY LTD.**

Alliance Insurance Company Limited was incorporated 1996 A.D with an objective of providing general insurance services in the field of fire, marine, vehicle and miscellaneous insurance in the country. It was listed in the Nepal Stock Exchange in 14<sup>th</sup> April 2000. The shareholders of the company is 51% form company promoters, 15% form employee provident fund, 4% from people's finance Co. Ltd and 40% from public sector.

The company has authorized capital Rs.150 million, issued capital Rs.50 million, and paid-up capital Rs.50 million, net profit Rs.6156904; market capitalization is Rs.55.00 million and the no. of shareholders are 1560 at the end of fiscal year 2004/05.

**Table 10****MPS, DPS, EPS, P/E Ratio, MBVR and NWPS of AICL**

Year	Closing Price	DPS	EPS	MPS	P/E Ratio	BV	MBVR	NWPS
04/05	175.00	5.01	8.04	175.00	21.77	109.83	1.59	109.83
05/06	162.00	5.00	10.77	162.00	15.04	115.60	1.40	115.60
06/07	115.00	7.00	14.81	115.00	7.76	163.88	0.70	163.88
07/08	110.00	0.00	12.31	110.00	8.94	169.16	0.65	169.16
08/09	103.00	7.50	13.52	103.00	7.62	137.25	0.75	171.33
09/10	110.00	7.90	13.94	110.00	7.89	158.44	0.69	185.72

The above table shows that the closing market price of share has been decreased every year except the year 09/10 and the highest closing price is Rs. 175 in the year 04/05. The MPS of Alliance Insurance Company is ranging from Rs. 103 to Rs. 175. This insurance company has paid dividend per share of different amount every year except the year 07/08 in the range of 5.00 to 7.90. Company's EPS ranges from Rs. 8.04 to Rs. 14.81. P/E Ratio and Market Book Value Ratio are also fluctuating in the ratio of fluctuating trend of MPS. P/E Ratio and MBVR are highest in the year 04/05 i.e. 21.77 times and 1.59 times respectively.

**4.3.8 SAGARMATHA INSURANCE COMPANY**

Sagarmatha Insurance Company Limited was incorporated 1995 A.D (2051 B.S) with an objective of providing non-life insurance services in the field of fire, marine, vehicle and miscellaneous insurance in the country. It was listed in the Nepal Stock Exchange in 15<sup>th</sup> March 2001. The shareholders of the company are 60% from “A” group promoters, 20% form foreign insurance company and 20% form general public. The company has authorized capital Rs.120 million, issued capital Rs.51 million, and paid-up capital Rs.56.10 million, net profit Rs.10404690; market capitalization is Rs.88.64 million and the number of shareholders is 4650 at the end of financial year 2009/10.

**Table 11**

**MPS, DPS, EPS, P/E Ratio, MBVR and NWPS of SICL**

Year	Closing Price	DPS	EPS	MPS	P/E Ratio	BV	MBVS	NWPS
04/05	170.00	5.00	9.12	170.00	18.64	126.25	1.35	113.75
05/06	236.00	7.00	14.24	236.00	16.57	137.94	1.71	118.25
06/07	170.00	8.00	18.66	170.00	9.11	158.50	1.07	158.25
07/08	150.00	10.00	20.40	150.00	7.35	174.03	0.86	174.00
08/09	131.00	0.00	21.43	131.00	6.11	214.54	0.61	242.80
09/10	158.00	0.00	22.05	158.00	7.17	238.94	0.66	263.72

The above table shows that the highest closing market price of share is Rs. 236 in the 05/06. The MPS of Sagarmatha Insurance Company is ranging from Rs. 131 to Rs. 236. This insurance company has paid dividend per share of different amount from the year 04/05 to 07/08 in the range of Rs. 5.00 to Rs. 10.00 only and has not paid any dividend in the year 08/09 and 09/10. Company's EPS ranges from Rs. 9.12 to Rs. 22.05. P/E Ratio and Market Book Value Ratio are also fluctuating in the ratio of fluctuating trend of MPS. P/E Ratio is highest in the year 04/05 i.e. 18.64 times and MBVR is highest in the year 05/06 i.e. 1.71 times.

#### **4.4 RISK AND RETURN ANALYSIS**

Risk measures the degree of volatility in the market price movements of individual securities. The higher the magnitude of fluctuations, higher will be degree of risk. Though it is difficult to measure risk, some statistical tools like standard deviation, coefficient of variation and beta coefficient are used to measure the risk involved in individual security. All these are calculated by using the formula described in research methodology chapter.

##### **4.4.1 STANDARD DEVIATION**

Standard deviation is a strong statistical device to measure the total risk involved in an investment, which consists of both market risk and diversifiable risk. Moreover it denotes the volatility of the expected rate of return. The calculated value of expected realized return and standard deviation of eight different insurance companies are presented in the following table:

**Table 12**  
**Standard Deviation of Sampled Insurance Companies**

<b>Stocks</b>	<b>Expected Realized Return (%)</b>	<b>Standard Deviation (%)</b>	<b>Ranking of riskiness based on Standard Deviation</b>
National Life and General Insurance	9.18%	36.53%	6
Himalayan General Insurance Co.	22.91%	64.59%	2
United Insurance Company Nepal	11.46%	42.38%	4
Everest Insurance Co.	28.90%	71.78%	1
Premier Insurance Co.	17.60%	41.69%	5
Neco Insurance Co.	8.21%	43.58%	3
Alliance Insurance Co.	-1.26%	12.74%	8
Sagarmatha Insurance Co.	3.89%	22.31%	7

Based on the assumption of the standard deviation, investment in the common stocks of Everest Insurance Company are more risky followed by Himalayan General Insurance Company. Stock of Alliance Insurance Company could be considered as less risky than the other seven insurance companies, being the standard deviation lower than other. The common stock of Everest Insurance Company has 71.78% of risk, which is the highest among the sample companies indicating that the expected return can deviate by 71.78% in case of common stock investment compared to the other seven sampled insurance companies taken for study. The above calculations are shown in the Appendix – A(I), A(II), A(III), A(IV), A(V), A(VI), A(VII) and A(VIII) respectively.

#### **4.4.2 COEFFICIENT OF VARIATION**

The standard deviation may not be appropriate measure of risk when the realized rates of returns are not same in all of the companies taken under consideration. Hence also the average realized rates of return are not same for the entire sample. Therefore, it is recommended to use the coefficient of variation to measure the risk involved in individual insurance company. The coefficient of variation measures the risk per unit of return. The coefficients of variation of the realized rates of return of the sampled insurance companies are shown in the following table:

**Table 13****Coefficient of Variation of Sampled Insurance Companies**

<b>STOCKS</b>	<b>COEFFICIENT OF VARIATION</b>
National Life and General Insurance Co.	3.9793
Himalayan General Insurance Co.	2.8193
United Insurance Company Nepal	3.6981
Everest Insurance Co.	2.4837
Premier Insurance Co.	2.3688
NECO Insurance Co.	5.3082
Alliance Insurance Co.	-10.1111
Sagarmatha Insurance Co.	5.7352

On the basis of coefficient of variation common stock of NECO Insurance Company seems to be most risky. The common stock of Alliance Insurance Company seems to be less risky in comparison with the insurance companies. The above calculation has been derived from the Appendix – A(I), A(II), A(III), A(IV), A(V), A(VI), A(VII) and A(VIII) respectively.

**4.4.3 BETA COEFFICIENT**

Standard deviation measures the total risk of an investment and the coefficient of variation measures the risk per unit of return. But the beta coefficient measures the market sensitivity or systematic risk of an investment. As we know, systematic risk is that portion of risk which is directly associated with market phenomenon and cannot be reduced by diversification. The beta coefficient of an individual stock provides the clear picture about the tendency of movement of the stock with market. It measures the stock volatility relative to that of the average stock. An average stock is that which trends to move up or down with the general market as measured by some index. Here, capital NEPSE index is taken into consideration to measure the movements of the general market regarding the stocks of listed insurance companies. Higher beta indicates the greater reaction by individual common stock with the given movement in the market status. The following table shows the degree of riskiness of each stock of entire sample in relation to the general market.

**Table 14****Beta Coefficients of Sampled Insurance Companies**

<b>Stocks</b>	<b>Beta Coefficient</b>	<b>Ranking of riskiness based on Beta Coefficient</b>
National Life and General Insurance Co.	0.6800	6
Himalayan General Insurance Co.	1.3768	1
United Insurance Company (Nepal)	0.9966	3
Everest Insurance Co.	1.1857	2
Premier Insurance Co.	0.9648	4
Neco Insurance Co.	0.9048	5
Alliance Insurance Co.	0.2885	7
Sagarmatha Insurance Co.	0.1594	8

By analyzing the above table, we note that HGIC and EIC are more sensitive to the market than the other six sampled insurance companies because the coefficients of variation of these companies are more than one.

The stocks of UIC, PIC, NECO, NLGIC, AIC and SIC have beta coefficient less than one and can be concluded defensive stocks. Following these HGIC with 1.3768 and EIC with 1.1857 as their coefficient of beta. For example in the case of HGIC, the calculated beta coefficient imply that one percent variation in the market rate of return leads to 1.3768 variations in their realized rate of return. Hence highly sensitive stocks make quick response to the market change. The above calculation has been derived from Appendix – A(I), A(II), A(III), A(IV), A(V), A(VI), A(VII) and A(VIII) respectively.

**4.4.4 PRICE ANALYSIS:**

In this section the pricing of the shares of the sample companies were analyzed and interpreted. The result derived from the calculation by using Security Market Line equation was presented in the below Table, studying the period of 04/05 to 09/10.

**Table 15****Valuation of Stocks of Sampled Insurance Companies**

<b>Stocks</b>	<b>Required Rate of Return</b>	<b>Expected Rate of return</b>	<b>Status of the Company</b>
National Life and General Insurance	8.97%	9.18%	Under priced
Himalayan General Insurance Co.	13.08%	22.91%	Under priced
United Insurance Company Nepal	10.84%	11.46%	Under priced
Everest Insurance Co.	11.96%	28.90%	Under priced
Premier Insurance Co.	10.65%	17.60%	Under priced
Neco Insurance Co.	8.97%	8.21%	Over priced
Alliance Insurance Co.	6.66%	-1.26%	Over priced
Sagarmatha Insurance Co.	5.90%	3.89%	Over priced

From the above table, it is found that five insurance companies taken as samples were found under priced and rest three are found overpriced. This shows that the markets of the sampled insurance companies are very much inefficient. The detailed calculation of the values of shares is presented in the Appendix – A(I), A(II), A(III), A(IV), A(V), A(VI), A(VII) and A(VIII) respectively.

#### **4.5 RELATIONSHIP OF MPS WITH FINANCIAL INDICATORS**

The relationship of MPS with various financial indicators like EPS, DPS and NWPS is evaluated through two methods. The first one is calculation of correlation coefficient between EPS and MPS, DPS and MPS and NWPS and MPS. Similarly the second is to derive multiple regression equation of EPS, DPS and NWPS on MPS.

##### **4.5.1 The Correlation Coefficient**

Correlation coefficient is the best statistical tools to measure the degree of relationship between two variables. Two variables are said to be correlated when the movement in one is accompanied in the other. It showed the positive relation, negative relation and no relation between two variables. For this research purpose, the six years (2004-2010) related data are first gathered and tabulated and then correlation coefficient of MPS with other financial indicators like EPS, DPS and NWPS is calculated for the selected insurance companies. The following table

summarizes the correlation coefficient of MPS with EPS, DPS and NWPS of sampled insurance companies:

**Table 16**

**Correlation Analysis between MPS and Financial Indicators**

<b>Stocks</b>	<b>EPS</b>	<b>DPS</b>	<b>NWPS</b>
National Life and General Insurance Co.	0.0874	0.7932	0.0473
Himalayan General Insurance Co.	-0.7722	0.8680	-0.3505
United Insurance Company (Nepal)	0.9243	0.3796	-0.5539
Everest Insurance Co.	0.6649	0.6038	0.2760
Premier Insurance Co.	-0.1668	0.1841	-0.3088
Neco Insurance Co.	0.6382	0.8406	-0.8764
Alliance Insurance Co.	-0.8943	-0.1172	-0.9707
Sagarmatha Insurance Co.	-0.5328	0.3819	-0.6605

The above table shows the correlation coefficient of MPS with EPS, DPS and NWPS of sampled insurance companies. According to this, the MPS of NLGIC and EIC with their respective EPS, DPS and NWPS are positively correlated. In case of HGIC, its MPS has strong positive relation with its DPS whereas it has negative relation with EPS and NWPS. Similarly, the MPS of UIC is positively influenced by its EPS and DPS and negatively influenced by its NWPS. As per the calculation, EPS and NWPS of PIC have negative influence in the movement of stock price whereas DPS has positive influence on it. The relation of MPS of NECO with its EPS and DPS are significantly positive but with its NWPS is highly negative. Regarding AIC, all three indicators EPS, DPS and NWPS have high degree of negative relationship with its MPS. Likewise, EPS and NWPS of SIC have negative relationship with its MPS and DPS has moderate degree of positive relationship with its MPS. Thus, the above calculation summarizes that the EPS of UIC has the highest positive relationship with its MPS, DPS of HGIC has highest positive relationship with its MPS and even in the case of NWPS; EIC has highest positive relationship between NWPS and MPS. Similarly, all three indicators EPS, DPS and NWPS of AIC have highest degree of negative correlation with its MPS as compared to the corresponding indicators of rest of the insurance companies. Then, EPS and NWPS of NLGIC and DPS of PIC have least degree of positive relation with their respective MPS whereas EPS and NWPS of PIC have again the least degree of relationship with its MPS and it is also found

that there is only one signal of negative correlation between DPS and MPS which is indicated by the AIC in the column of DPS.

#### 4.5.2 Regression analysis

The regression analysis is a statistical tool, which is commonly used to determine the statistical relationship between two or more variables and to make prediction of one variable on the basis of the other variables. The regression analysis can either be simple regression or multiple regressions. When we take only one independent variable and forecast the value of the dependent variable, such type of analysis is known as simple regression analysis. If the analysis is performed by the using two or more independent variables is known as multiple regression analysis. Due to the lack of time management and the limited sources only the calculation of simple regression analysis is shown in this study. The simple regression analysis is performed for individual sample companies. Here the relevant data are used to predict how one variable is related to other variable to know the impact of the stock price behaviour of sampled insurance companies. This analysis measures the effect of change in independent variable to dependent variable. Here MPS is dependent variable and EPS, DPS and NWPS are independent variables. There must be either positive or negative relationship between dependent and independent variable.

**Table 17**  
**Simple Regression Analysis of MPS on Financial Indicators**

Regression equation:  $Y = a + bx$

Stocks	EPS		DPS		NWPS	
	a	b	a	b	a	b
National Life and General Insurance	466.89	(0.0763)	405.25	8.9875	458.03	0.1240
Himalayan General Insurance Co.	411.18	(5.6288)	190.00	4.8000	322.02	(2.7433)
United Insurance Company (Nepal)	51.77	9.7174	128.00	5.3200	506.30	(2.0120)
Everest Insurance Co.	238.77	4.4508	376.90	7.5518	320.80	0.4097
Premier Insurance Co.	221.27	(0.4515)	204.21	0.7974	229.92	(0.0893)
Neco Insurance Co.	326.61	9.3714	117.33	9.3667	457.58	(1.7662)
Alliance Insurance Co.	265.39	(11.1374)	135.88	(1.2424)	273.59	(0.9465)
Sagarmatha Insurance Co.	236.11	(3.7931)	152.86	3.2614	236.53	(0.3775)

*Note: Y represents MPS and X represents EPS or DPS or NWPS.*

The above table illustrates the output of simple regression analysis of MPS on EPS, DPS or NWPS of respective sampled insurance companies. The above calculation shows that NLGIC, HGIC, PIC, AIC and SIC have negative regression coefficient (b) on EPS except UIC, EIC and NECO. It indicates that one rupee increase or decrease in EPS leads to average increment in MPS by Rs. 9.7174, 4.4508 and 9.371 and decline by Rs. 0.0763, 5.6288, 0.4515, 11.1374 and 3.7931 in all respective companies. UIC has the highest positive regression coefficient on EPS i.e. 9.7174 and AIC has the highest negative regression coefficient on EPS i.e. (11.1374). Similarly, the regression coefficient (b) is positive in all companies except AIC in the case of DPS. It indicates that one rupee increase or decrease in DPS leads to average increment in MPS by Rs. 8.9875, 4.8000, 5.3200, 7.5518, 0.7974, 9.3667 and 3.2614 and decline by Rs. 1.2424 in all respective companies. NECO has the highest positive regression coefficient on DPS i.e. 9.3667 and only AIC has negative regression coefficient on DPS i.e. (1.2424). Even in case of NWPS, all companies have negative regression coefficient (b) except NLGIC and EIC. It indicates that one rupee increase or decrease in NWPS leads to average increment in MPS by Rs. 0.1240, 0.4097 and decline by Rs. 2.7433, 2.0120, 0.0893, 1.7662, 0.9465 and 0.3775 in all respective companies. HGIC has the highest negative regression coefficient on NWPS i.e. (2.7433) and EIC has the highest positive regression coefficient on NWPS i.e. 0.4097.

The constant (a) of all indicators of all sampled insurance companies are positive. The positive constant (a) means that if EPS, DPS or NWPS is zero then the market price of respective stocks will be fall below Rs. 466.89, 411.18, 51.77, 238.77, 221.27, 326.61, 265.39 and 236.11 in case of EPS, Rs. 405.25, 190.00, 128.00, 376.90, 204.21, 117.33, 135.88 and 152.86 in case of DPS and Rs. 458.03, 322.02, 506.30, 320.80, 229.92, 457.58, 273.59 and 236.53 in case of NWPS with accordance to the respective companies.

#### **4.6 RUN TEST**

Share prices might fluctuate randomly but, in addition they sometimes follow trends that filter rules and serial correlation could not detect. That is, price changes

may be random most of the time but occasionally run tests may be used to determine if there are runs in the price changes. A run occurs in a series of numbers whenever the changes in the numbers reverse sign.

#### 4.6.1 ANALYSIS BY THREE DIFFERENT RUNS

There are three different runs namely positive, negative and zero runs. If the price of stock increases then the run is positive and if it declines there will be a negative run and if the price remains same then there will be a zero run.

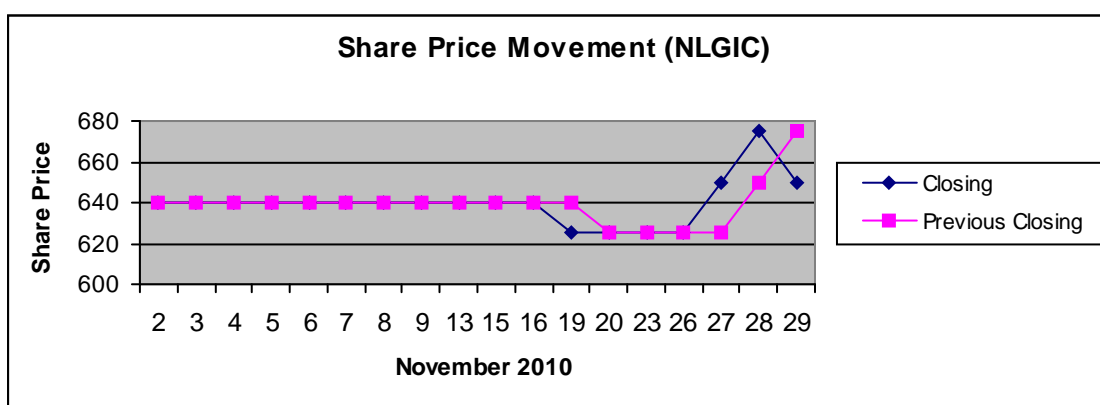
Run test is determine to see how many positive, negative and zero, or total runs may be expected to occur in a series of truly random numbers of size The outcomes are shown in the below tables. Since it is not possible to take whole year's daily share price as a study. Hence, I have taken only November 2010 daily share prices of insurance companies as traded in the NEPSE for a study.

**Table 18**

#### Share Trading for the Month of November- NLGIC

Day	Share Value in Rupees		Change (A-B)	Run Analysis	
	Closing (A)	Previous Closing (B)			
2	640	640	0	Run 1 is a zero run	
3	640	640	0		
4	640	640	0		
5	640	640	0		
6	640	640	0		
7	640	640	0		
8	640	640	0		
9	640	640	0		
13	640	640	0		
15	640	640	0		
16	640	640	0		
19	625	640	-15		Run 2 is negative
20	625	625	0		Run 3 is a zero run
23	625	625	0		
26	625	625	0		
27	650	625	25	Run 4 is positive	
28	675	650	25		
29	650	675	-25	Run 5 is negative	

**Figure 8**



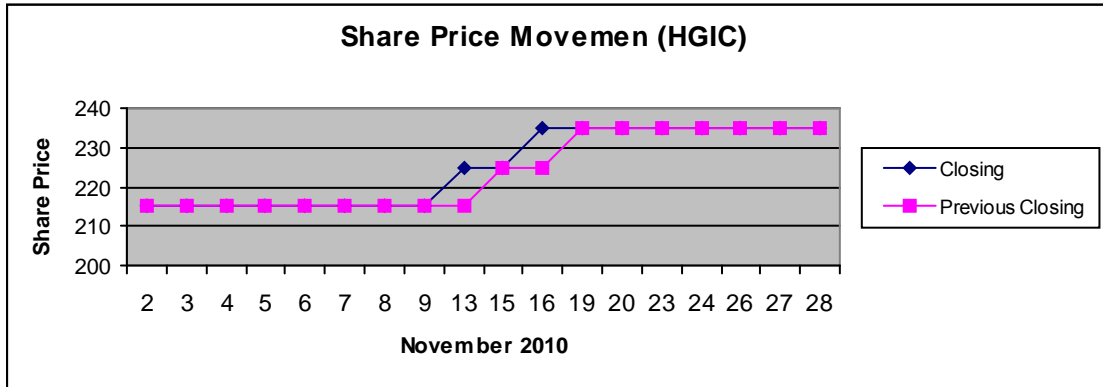
The above table and figure show the different share price of the month of November 2010 as traded in the NEPSE. The share price are fluctuating from each consecutive day and delivering three different runs. The above study shows that there are five different runs for the month of November. It has two zero run, two negative run and one positive run.

**Table 19**

**Share Trading for the Month of November- HGIC**

Day	Share Value in Rupees		Change (A-B)	Run Analysis
	Closing (A)	Previous Closing (B)		
2	215	215	0	Run 1 is a zero run
3	215	215	0	
4	215	215	0	
5	215	215	0	
6	215	215	0	
7	215	215	0	
8	215	215	0	
9	215	215	0	
13	225	215	10	Run 2 is positive
15	225	225	0	Run 3 is a zero run
16	235	225	10	Run 4 is positive
19	235	235	0	Run 5 is a zero run
20	235	235	0	
23	235	235	0	
24	235	235	0	
26	235	235	0	
27	235	235	0	
28	235	235	0	
29	235	235	0	

**Figure 9**



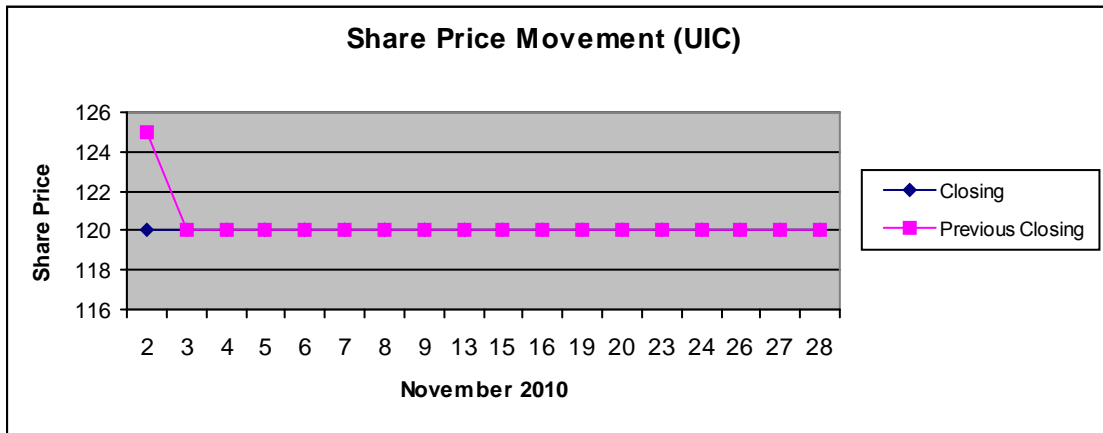
The above table and figure reveal the different share price of the month of November 2010 and show that there are only two runs delivering five runs of three zero runs and two positive runs. However, we can study that the variation of price fluctuation is relatively less.

**Table 20**

**Share Trading for the Month of November- UIC**

Day	Share Value in Rupees		Change (A-B)	Run Analysis
	Closing (A)	Previous Closing (B)		
2	120	125	-5	Run 1 is negative
3	120	120	0	Run 2 is a zero run
4	120	120	0	
5	120	120	0	
6	120	120	0	
7	120	120	0	
8	120	120	0	
9	120	120	0	
13	120	120	0	
15	120	120	0	
16	120	120	0	
19	120	120	0	
20	120	120	0	
23	120	120	0	
24	120	120	0	
26	120	120	0	
27	120	120	0	
28	120	120	0	
29	120	120	0	

**Figure 10**



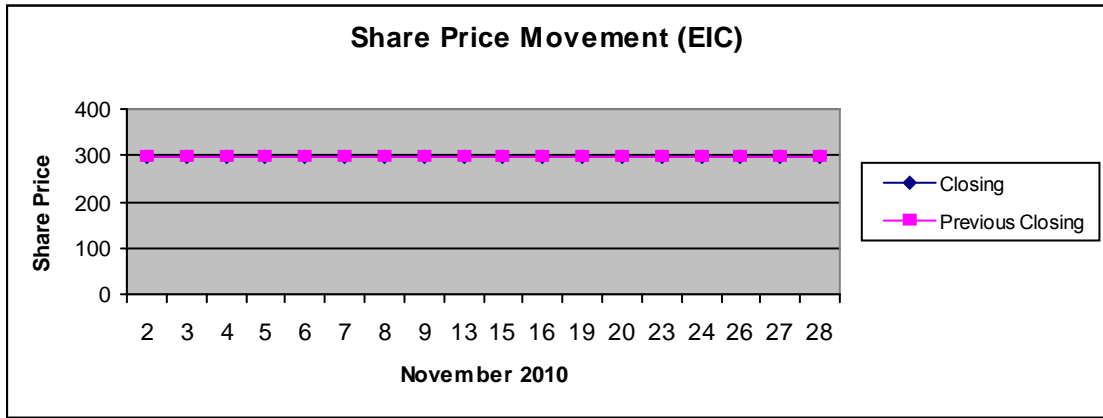
The above table and figure reveal the share price of the month of November 2010 and show that there are only two runs of one zero run and one negative run. The fluctuation in price is relatively less in this month.

**Table 21**

**Share Trading for the Month of November- EIC**

Day	Share Value in Rupees		Change (A-B)	Run Analysis
	Closing (A)	Previous Closing (B)		
2	295	295	0	Run 1 is a zero run
3	295	295	0	
4	295	295	0	
5	295	295	0	
6	295	295	0	
7	295	295	0	
8	295	295	0	
9	295	295	0	
13	295	295	0	
15	295	295	0	
16	295	295	0	
19	295	295	0	
20	295	295	0	
23	295	295	0	
24	295	295	0	
26	295	295	0	
27	295	295	0	
28	295	295	0	
29	295	295	0	

**Figure 11**



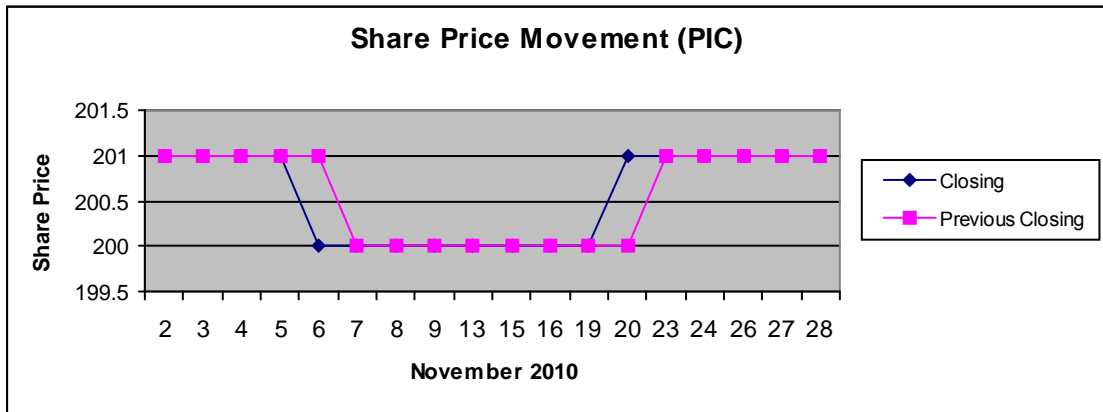
The above table and figure reveal the share price of the month of November 2010 and show that there is only one run of zero run. That means there is consistency in the share price of EIC in the month of November.

**Table 22**

**Share Trading for the Month of November- PIC**

Day	Share Value in Rupees		Change (A-B)	Run Analysis
	Closing (A)	Previous Closing (B)		
2	201	201	0	Run 1 is a zero run
3	201	201	0	
4	201	201	0	
5	201	201	0	
6	200	201	-1	
7	200	200	0	Run 2 is negative
8	200	200	0	Run 3 is a zero run
9	200	200	0	
13	200	200	0	
15	200	200	0	
16	200	200	0	
19	200	200	0	
20	201	200	1	
23	201	201	0	Run 4 is positive
24	201	201	0	
26	201	201	0	
27	201	201	0	
28	201	201	0	
29	201	201	0	

**Figure 12**



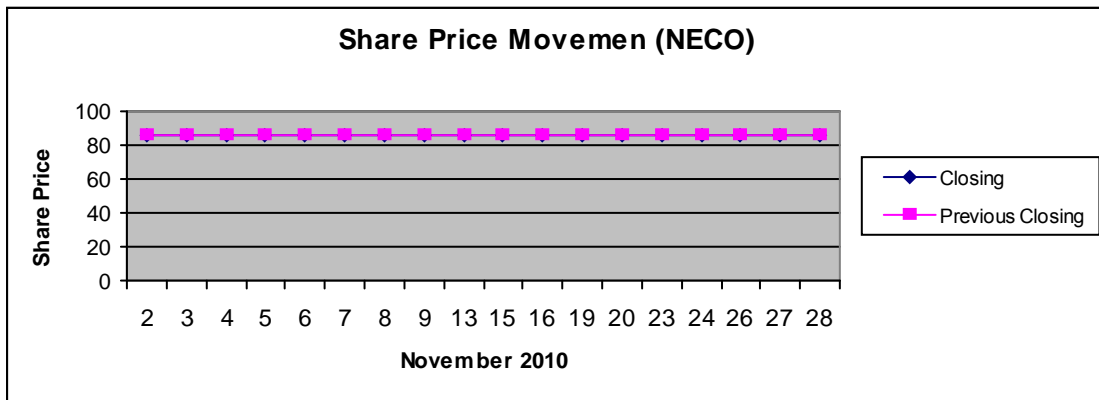
The above table and figure reveal the share price of the month of November 2010 and show that there are three different runs and delivering five runs of three zero runs, one positive run and one negative run. The fluctuation in price is moderately less in this month.

**Table 23**

**Share Trading for the Month of November- NECOIC**

Day	Share Value in Rupees		Change (A-B)	Run Analysis
	Closing (A)	Previous Closing (B)		
2	86	86	0	Run 1 is a zero run
3	86	86	0	
4	86	86	0	
5	86	86	0	
6	86	86	0	
7	86	86	0	
8	86	86	0	
9	86	86	0	
13	86	86	0	
15	86	86	0	
16	86	86	0	
19	86	86	0	
20	86	86	0	
23	86	86	0	
24	86	86	0	
26	86	86	0	
27	86	86	0	
28	86	86	0	
29	86	86	0	

**Figure 13**



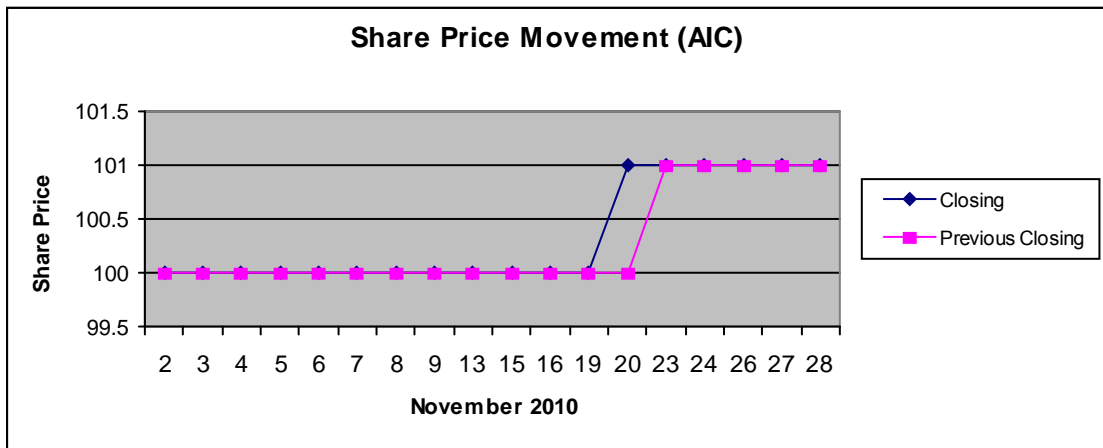
The above table and figure reveal the share price of the month of November 2010 and show that there is only one zero run. The fluctuation in price is relatively less in this month. That means there is consistency in the share price of NECO in the month of November.

**Table 24**

**Share Trading for the Month of November- AIC**

Day	Share Value in Rupees		Change (A-B)	Run Analysis
	Closing (A)	Previous Closing (B)		
2	100	100	0	Run 1 is a zero run
3	100	100	0	
4	100	100	0	
5	100	100	0	
6	100	100	0	
7	100	100	0	
8	100	100	0	
9	100	100	0	
13	100	100	0	
15	100	100	0	
16	100	100	0	
19	100	100	0	
20	101	100	1	
23	101	101	0	Run 3 is a zero run
24	101	101	0	
26	101	101	0	
27	101	101	0	
28	101	101	0	
29	101	101	0	

**Figure 14**

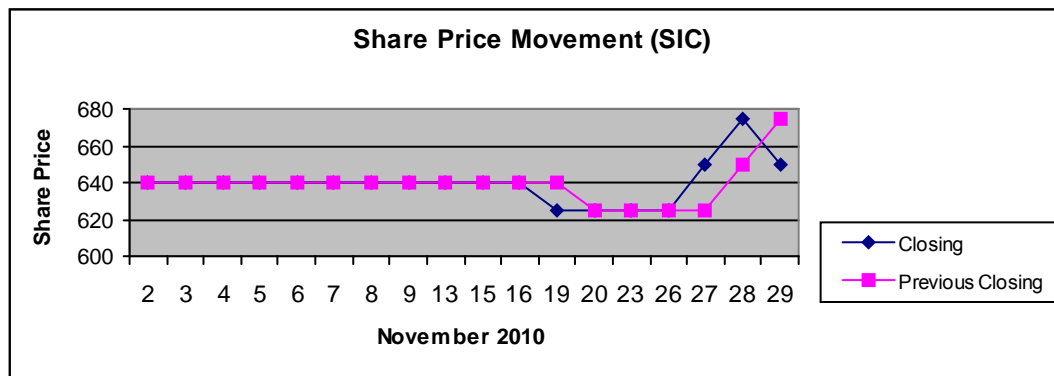


The above table and figure reveal the share price of the month of November 2010 and show that there are two different runs and delivering three runs of two zero runs and one positive run. But there is slightly change in share price in this month.

**Table 25**  
**Share Trading for the Month of November- SIC**

Day	Share Value in Rupees		Change (A-B)	Run Analysis
	Closing (A)	Previous Closing (B)		
2	210	210	0	Run 1 is a zero run
3	210	210	0	
4	210	210	0	
5	210	210	0	
6	210	210	0	
7	210	210	0	
8	210	210	0	
9	210	210	0	
13	210	210	0	
15	210	210	0	
16	200	210	-10	Run 2 is negative
19	200	200	0	Run 3 is a zero run
20	200	200	0	
23	200	200	0	
24	200	200	0	
26	200	200	0	
27	200	200	0	
28	200	200	0	
29	200	200	0	

**Figure 15**



The above table and figure reveal the share price of the month of November 2010 and show that there are two different runs and delivering three runs of two zero runs and one negative run. However, the fluctuation in the price is relatively less.

#### **4.7 MAJOR FINDINGS**

By analyzing the secondary data, the implications derived from the study of stock price behaviour as major findings could be elucidated as follows:

- ♦ The established insurance companies have good track record of their financial position and the newly established insurance companies are penetrating the market. Most of all the insurance companies are operating in profit position although some of them suffered from losses during their initial stages. The investor's attitude towards the shares of these insurance companies seemed to be positive.
- ♦ Most of the insurance companies are not paying dividend regularly and not following stable dividend policy. It means there is high variation in DPS of insurance companies. Good track record of the financial position, market penetration and continuous declaration of dividends encourage the potential investors to buy the shares of insurance companies which leads to blue-chips in the Nepalese stock market. Hence, the companies must also adopt the dividend policy.
- ♦ Because of the persistence in the stock price movements, professional traders either individual or institutional can beat the market. Therefore to make greater profit than naive buy and hold strategy, acute fundamental and other analysis

are required which accurately predict the appearance of the new information in the market that have impact on prices.

- ◆ Common stock of EIC yields the highest realized rate of return of 28.90 % whereas it is negative in the case of AIC. Regarding the total risk, EIC consists of highest 71.78% of total risk, which is risky among the samples. The stock of AIC is recorded as least risky as it contains 12.74% of total risk, which is less than the other sampled insurance companies in terms of standard deviation.
- ◆ The average realized rate of return of all the insurance companies are not the same over the sampled periods. Therefore, the coefficient of variation can be preferred over the standard deviation as measure of risk. On the basis of coefficient variation, NECO's shares can be considered as more riskier whereas AIC's shares can be measured as less riskier. Stocks of HGIC are more aggressive to market changes as revealed by the highest beta coefficient of 1.3768 and the least beta coefficient is yielded by SIC of all.
- ◆ The finding of this study also implies that Nepal Stock Exchange is operated under the dearth of sophisticated financial and market analysts. Activities of such analysts with the skilful mind, talent and ability including statistical knowledge and react about incoming information and their valuable suggestions in building of new regulations help to cut down the dependence in the stock price changes. But, unfortunately such kinds of activities were not found in Nepalese stock market. Thus, investors are not in attention of publicly available information and whimsically they response the information and accept the new price.

## **CHAPTER V**

### **1.1 SUMMARY, CONCLUSION AND RECOMMENDATIONS**

This chapter presents the summary and conclusions derived from analysis of the study. The study was conducted to find out the behavior of stock price of eight sampled insurance companies with respect to the movement of various financial indicators, tentative external events and some other factors. The chapter consists of three sections; the first section provides the summary of the study; the second section draws the conclusion of the study. Finally, the third section proposes recommendations to solve the problems observed on the basis of the findings.

#### **5.1 SUMMARY**

The study is mainly focused on analysis of the share price behaviour of eight sampled insurance companies in Nepal. Before analyzing, the overview of the Nepalese stock market has been sketched. The recent position and performance of market in Nepal has been analyzed. The Nepalese stock market has not been developed remarkably in the economy because of various market imperfections like limited number of buyers and sellers, stringent government policies, negligence in development of corporate sectors etc.

Market price of stock is the main outcome of investor's psychology. The psychology of investors is affected by various factors. Here in Nepalese market, dividend and price appreciation of stock is major factors for the investors to decide about purchasing of shares. Along with DPS and price appreciation, EPS, NWPS, market rumors, political and economic environment etc are the other factors to influence the buying and purchasing behaviour of the investors. Every investor must consider the financial status of organization before making any decision regarding the investment.

The first objective of the study is to find out the relationship of market price of share with various financial indicators like EPS, DPS and NWPS. Among the eight sampled insurance companies, the most positive relationship of MPS with EPS is 0.9243 of UIC and least relationship of MPS with EPS is -0.8943 of AIC. Similarly, in case of DPS, the highest relationship is 0.8680 of HGIC and lowest relationship is -0.1172 of AIC. With regard to the NWPS, MPS of EIC has most positive relationship i.e. 0.2760 and the lowest relationship is -0.9707 of AIC. In average EPS is highly correlated with MPS and NWPS is least correlated with MPS of selected companies.

The next objective of the study is about the identification of the price of stock whether it is overpriced, underpriced or equilibrium priced. For this purpose, different financial as well as statistical tools such as mean, standard deviation, coefficient of variation, beta coefficients etc have been used. To find out the pricing status of stocks; expected rate of return and required rate of return has been compared. Generally, the trend is that the MPS of public quoted companies is above their book value. The market value is determined by the supply and demand functions. However, in an efficient market MPS fully reflects all the historical information publicly available. As per the presentation, the highest required rate of return is 13.08% of HGIC and the lowest is 5.90% of SIC. In case of expected rate of return, EIC has highest return i.e. 28.90% and the lowest is -1.26% of AIC. From the comparison it has been found that the stock of five companies are (NGIC, HGIC, UIC, EIC and PIC) underpriced and rest three (NECO, AIC and SIC) are overpriced during the study period. But none of the sampled companies are found to be equilibrium priced. The main reason for underpriced of the stock valuation is that the price of the stock had reached the highest point during the study period but the NEPSE index did not follow the same speed and the rate of Treasury bill issued by NRB also heavily decreased during the study period. It makes the expected rate of return of the sampled companies are high and required rate of return low. Hence, most of the sampled insurance companies' share prices are underpriced during the study period.

The decision for investment largely depends on the information about the performance of the company. In general, most investors prefer to buy shares of those companies whose earnings are very attractive and dividend payout ratio is high. However, rational investors not only analyze earnings but also various information regarding the company's management, dividend policy, market penetration, financial situation, and other internal and external factors before making investment decision. It is also found that some of the investors invest in shares for dividend and price appreciation and most of them are not interested about the other indicators which could affect the price of shares. It also seems from the research that the investors are conscious about the market price of the share they have bought as many investors seek for their share's price daily or weekly. Although they seek for their share price, most of them are not trading their shares in secondary market, which shows that most of the investors are holding their shares for only dividend and they are not using the change in share price for speculative purpose.

## **5.2 CONCLUSION**

The price of shares tends to fluctuate from time to time; as a result the investors can buy shares when the value of shares decreases and hold till the share price increases. The information of the past price changes is helpful in predicting future price changes. Therefore, sufficient opportunities are available to institutional and individual investors to make higher expected profits in future based on those historical price series. The study shows that in average market price of share of the sampled companies are seemed to be influenced by the combined effect among the analyzed financial indicators like EPS, DPS and NWPS. But these indicators are not alone to influence the price of share and there are other external factors such as economic conditions, political conditions and other major events occurred in the country are also responsible for the pricing behaviour of the stock. Among the various financial indicators EPS seems to be most significantly related with the market price of shares. Most of the sampled companies' stock price found to be underpriced because their required rate of return is lower than the expected rate of

return. It happened because of decreasing trend of the risk free rate of return which causes the required rate of return lower and the increasing trend of the price of the sampled companies which makes the expected rate of return high. The study also shows that Nepalese investors are more conscious towards the dividend and price appreciation of the shares they are investing but most of the investors are only using buy and hold strategy as only few of them are trading their shares in secondary market. This shows that there is lack of professionalism among Nepalese investors.

### **5.3 RECOMMENDATIONS**

The findings of this study may provide important information for those who are concerned directly or indirectly with the stock market activities. Thus, the following recommendations can be outlined.

- ) From the study it seems that Nepalese investors have limited knowledge about security market. It lacks of professional investors. Hence, the concerned authority is recommended to make aware about the security market to the general public so that they are interested to invest in security market and the previous investors could change as professional investors.
- ) Most of the stocks of sampled companies are underpriced in the stock market. So, investors are recommended to buy these underpriced stocks by selling their overpriced stocks.
- ) As per the study, investors are trading the stocks without proper analyzing of the financial indicators of concerned companies. Hence, investors are recommended for the empirical study of the financial indicators of those companies before trading the stocks and they must be alert to exploit the opportunities through the short term speculation.
- ) The public investors should not invest directly their savings in shares haphazardly. They should at least analyze or get suggestions from expert about the financial position and the level of risk prior to taking an investment decision.

- ) For the concerned regulatory bodies such as SEBON and NEPSE, it is recommended to implement Computer Assisted Trading System (CATS) as soon as possible to meet the expectations of investors, brokers, other concerned bodies and individuals as the presently implemented Open-out-cry trading system was found to be out-of-date in present context. It will also be helpful for researchers to carry out further more research work on the stock price behaviour to develop an efficient market.
- ) Most of the stock prices are fluctuated in the whimsical trend as observed from the stock market while collecting the data. Hence, it is recommended to the regulated bodies to force effective and energetic provisions to the exchange members and investors are recommended to get the consultancy service from the professional investors while making the investment decision.
- ) Regarding the flow of information about stocks on stock market, same kind of information at the same time has deviated from one source to another as it is the main chain of the study and for the investor to interpret the situation. Hence, again, regulated bodies are recommended to discharge the exact information appropriately and uniformly.
- ) The pace of economic development should be accelerated and the political system should be stable in order to create its positive impact on the stock market development.
- ) The size of stock market is pitifully small in Nepal because of small size of the corporate sector in the economy. Besides, it is the general fact that until there is sophisticated development in the financial institutions, no other sectors could be developed in the full extent. So, government and other related sectors should try to stabilize and modify the rule and regulations concerning to the development of the effective pricing of the shares of such financial institutions as well as other sectors.

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## Appendix – A (I)

### 2.1 National Life & General Insurance COMPANY LIMITED

#### 2.1 Lazimpat, Kathmandu

Year	MPS	D	R <sub>j</sub>	X	X <sup>2</sup>	R <sub>m</sub>	Y	Y <sup>2</sup>	XY
03/04	390.00	20.00	-	-	-	-	-	-	-
04/05	570.00	20.00	0.5128*	0.4210	0.1772	0.8095	0.7009	0.4913	0.2951
05/06	600.00	20.00	0.0877	-0.0041	0.0000	-0.0448	-0.1534	0.0235	0.0006
06/07	460.00	0.00	-0.2333	-0.3251	0.1057	-0.4218	-0.5304	0.2813	0.1724
07/08	460.00	0.00	0.00	-0.0918	0.0084	-0.0887	-0.1973	0.0389	0.0181
08/09	270.00	0.00	-0.4130	-0.5048	0.2548	0.0839	-0.0247	0.0006	0.0125
09/10	431.00	0.00	0.5963	0.5045	0.2545	0.2911	0.1825	0.0333	0.0921
<b>Total</b>			<b>0.5505</b>		<b>0.8007</b>	<b>0.6518</b>	<b>0.0224</b>	<b>0.8689</b>	<b>0.5908</b>

D = Total Dividend, R = Annual Return

X = (R<sub>j</sub>-R<sub>j</sub>), Y = (R<sub>m</sub>-R<sub>m</sub>) Market

Risk Free Rate of Return (R<sub>f</sub>) = 0.0496

$$* R = \frac{\text{Dividend } \Gamma(\text{Ending price } Z \text{ Beginning price})}{\text{Beginning price}}$$

$$= \frac{20 \Gamma(570 Z 390)}{390} = 0.5128$$

$$\text{Mean Return } (\bar{R}_j) = \frac{\phi R_j}{N}$$

$$= \frac{0.5505}{6} = 0.0918$$

$$\text{Standard deviation } (\Xi_j) = \sqrt{\frac{R_j Z R_j}{N}}$$

$$= \sqrt{\frac{0.8007}{6}} = 0.3653$$

$$\text{Variance} = \Xi_j^2 = (0.3653)^2 = 0.1334$$

$$\text{Standard deviation } (\Xi_m) = \sqrt{\frac{R_m Z R_m}{N}}$$

$$= \sqrt{\frac{0.8689}{6}} = 0.3806$$

$$\begin{aligned} \text{Coefficient of Variation (CV)} &= \frac{\frac{\uparrow_j}{Z}}{R_j} \\ &= \frac{0.3653}{0.0918} = 3.9793 \end{aligned}$$

$$\begin{aligned} \text{Covariance (R}_j, R_m) &= \frac{(R_j \cdot Z R_j)(R_m \cdot Z R_m)}{N} \\ &= \frac{0.5908}{6} = 0.0985 \end{aligned}$$

$$\begin{aligned} \text{Beta coefficient (b)} &= \frac{\text{Covariance (R}_j, R_m)}{\frac{\uparrow_m^2}{m}} \\ &= \frac{0.0985}{(0.3806)^2} = 0.6800 \end{aligned}$$

$$\begin{aligned} \text{Required rate of return } E(R_j) &= R_f + (R_m - R_f)b \\ &= 0.0496 + (0.1086 - 0.0496) 0.6800 \\ &= 0.0897 \end{aligned}$$

## Appendix – A (II)

### HIMALAYAN GENERAL INSURANCE CO. LTD.

#### 2.2 Durbarmarg, Kathmandu

Year	MPS	D	R <sub>j</sub>	X	X <sup>2</sup>	R <sub>m</sub>	Y	Y <sup>2</sup>	XY
03/04	116.00	10.00	-	-	-	-	-	-	-
04/05	276.00	15.00	1.5086*	1.2795	1.6371	0.8095	0.7009	0.4913	0.8968
05/06	285.00	15.00	0.0870	-0.1421	0.0202	-0.0448	-0.1534	0.0235	0.0218
06/07	225.00	15.00	-0.1579	-0.3870	0.1498	-0.4218	-0.5304	0.2813	0.2053
07/08	190.00	0.00	-0.1556	-0.3847	0.1480	-0.0887	-0.1973	0.0389	0.0759
08/09	175.00	0.00	-0.0790	-0.3081	0.0949	0.0839	-0.0247	0.0006	0.0076
09/10	205.00	0.00	0.1714	-0.0577	0.0033	0.2911	0.1825	0.0333	-0.0105
<b>Total</b>			<b>1.3745</b>		<b>2.5033</b>	<b>0.6518</b>	<b>0.0224</b>	<b>0.8689</b>	<b>1.1968</b>

$$* \frac{15 \Gamma(276 \cdot Z 115)}{116} = 1.5086$$

$$R_j = 0.2291$$

*Note: Computations are same as above.*

### Appendix – A (III)

#### 3.1 United Insurance Company Limited 3.1 IJ Plaza, Durbarmarg, Kathmandu

Year	MPS	D	R <sub>j</sub>	3.2 X	X <sup>2</sup>	R <sub>m</sub>	Y	Y <sup>2</sup>	XY
03/04	127.00	10.00	-	-	-	-	-	-	-
04/05	245.00	10.00	1.0079*	0.8933	0.7980	0.8095	0.7009	0.4913	0.6261
05/06	228.00	10.00	-0.0286	-0.1432	0.0205	-0.0448	-0.1534	0.0235	0.0220
06/07	190.00	10.00	-0.1228	-0.2374	0.0564	-0.4218	-0.5304	0.2813	0.1259
07/08	138.00	10.00	-0.2211	-0.3357	0.1127	-0.0887	-0.1973	0.0389	0.0662
08/09	105.00	10.00	-0.1667	-0.2813	0.0791	0.0839	-0.0247	0.0006	0.0069
09/10	128.00	0.00	0.2191	0.1045	0.0109	0.2911	0.1825	0.0333	0.0191
<b>Total</b>			<b>0.6878</b>		<b>1.0776</b>	<b>0.6518</b>	<b>0.0224</b>	<b>0.8689</b>	<b>0.8663</b>

$$* \frac{10 \Gamma(245 \text{ Z}127)}{127} = 1.0079$$

$$R = 0.1146$$

*Note: Computations are same as above.*

### Appendix – A (IV)

#### 4.1 Everest Insurance Company Limited 4.1 Kantipath, Kathmandu

Year	MPS	D	R <sub>j</sub>	X	X <sup>2</sup>	R <sub>m</sub>	Y	Y <sup>2</sup>	XY
03/04	170.00	10.00	-	-	-	-	-	-	-
04/05	455.00	20.00	1.7941*	1.5051	2.2653	0.8095	0.7009	0.4913	1.0549
05/06	440.00	20.00	-0.0110	-0.3000	0.0900	-0.0448	-0.1534	0.0235	0.0460
06/07	610.00	20.00	0.4318	0.1428	0.0204	-0.4218	-0.5304	0.2813	-0.0757
07/08	610.00	10.00	0.0164	-0.2726	0.0743	-0.0887	-0.1973	0.0389	0.0538
08/09	350.00	0.00	-0.4262	-0.7152	0.5115	0.0839	-0.0247	0.0006	0.0177
09/10	325.00	0.00	-0.0714	-0.3604	0.1299	0.2911	0.1825	0.0333	-0.0658
<b>Total</b>			<b>1.7337</b>		<b>3.0914</b>	<b>0.6518</b>	<b>0.0224</b>	<b>0.8689</b>	<b>1.0309</b>

$$* \frac{20 \Gamma(455 Z170)}{170} = 1.7941$$

$$R = 0.2890$$

*Note: Computations are same as above.*

## Appendix – A (V)

### PREMIER INSURANCE COMPANY LIMITED (NEPAL)

#### 4.2 Tripureshwor, Kathmandu

Year	MPS	D	R <sub>j</sub>	X	X <sup>2</sup>	R <sub>m</sub>	Y	Y <sup>2</sup>	XY
03/04	125.00	10.00	-	-	-	-	-	-	-
04/05	250.00	10.00	1.0800	0.9040	0.8172	0.8095	0.7009	0.4913	0.6336
05/06	220.00	13.00	-0.0680	-0.2440	0.0595	-0.0448	-0.1534	0.0235	0.0374
06/07	170.00	10.53	-0.1794	-0.3554	0.1263	-0.4218	-0.5304	0.2813	0.1885
07/08	192.00	0.00	0.1294	-0.0466	0.0022	-0.0887	-0.1973	0.0389	0.0092
08/09	210.00	0.00	0.0938	-0.0822	0.0068	0.0839	-0.0247	0.0006	0.0020
09/10	210.00	0.00	0.00	-0.1760	0.0310	0.2911	0.1825	0.0333	-0.0321
<b>Total</b>			1.0558		1.0430	0.6518	<b>0.0224</b>	<b>0.8689</b>	<b>0.8387</b>

$$* \frac{10 \Gamma(250 Z125)}{125}$$

$$R = 0.1760$$

*Note: Computations are same as above.*

## Appendix – A (VI)

### 5.1 NECO Insurance Company Limited

#### Hattisar, Kathmandu

Year	MPS	D	R <sub>j</sub>	X	X <sup>2</sup>	R <sub>m</sub>	Y	Y <sup>2</sup>	XY
03/04	140.00	10.00	-	-	-	-	-	-	-
04/05	270.00	10.00	1.00*	0.9179	0.8425	0.8095	0.7009	0.4913	0.6434
05/06	181.00	10.00	-0.2926	-0.3747	0.1404	-0.0448	-0.1534	0.0235	0.0575
06/07	182.00	10.00	0.0608	-0.0213	0.0005	-0.4218	-0.5304	0.2813	0.0113

07/08	130.00	0.00	-0.2857	-0.3678	0.1353	-0.0887	-0.1973	0.0389	0.0726
08/09	112.00	10.00	-0.0615	-0.1436	0.0206	0.0839	-0.0247	0.0006	0.0035
09/10	110.00	10.00	0.0714	-0.0107	0.0001	0.2911	0.1825	0.0333	-0.0020
<b>Total</b>			<b>0.4924</b>		<b>1.1394</b>	<b>0.6518</b>	<b>0.0224</b>	<b>0.8689</b>	<b>0.7863</b>

$$* \frac{10 \Gamma(270 \text{ Z}140)}{140}$$

$$R = 0.0821$$

*Note: Computations are same as above.*

### Appendix – A (VII)

## 6.1 Alliance Insurance Company Limited

### 7.1 DURBARMARG, KATHMANDU

Year	MPS	D	R <sub>j</sub>	X	X <sup>2</sup>	R <sub>m</sub>	Y	Y <sup>2</sup>	XY
03/04	162.00	0.00	-	-	-	-	-	-	-
04/05	175.00	5.01	0.1112*	0.1238	0.0153	0.8095	0.7009	0.4913	0.0868
05/06	162.00	5.00	-0.0457	-0.0331	0.0011	-0.0448	-0.1534	0.0235	0.0051
06/07	115.00	7.00	-0.2469	-0.2343	0.0549	-0.4218	-0.5304	0.2813	0.1243
07/08	110.00	0.00	-0.0435	-0.0309	0.0010	-0.0887	-0.1973	0.0389	0.0061
08/09	103.00	7.50	0.0046	0.0172	0.0003	0.0839	-0.0247	0.0006	-0.0004
09/10	110.00	7.90	0.1447	0.1573	0.0247	0.2911	0.1825	0.0333	0.0287
<b>Total</b>			<b>-0.0756</b>		<b>0.0973</b>	<b>0.6518</b>	<b>0.0224</b>	<b>0.8689</b>	<b>0.2505</b>

$$* \frac{5.01 \Gamma(175 \text{ Z}162)}{162}$$

$$R = -0.0126$$

*Note: Computations are same as above.*

### Appendix – A (VIII)

## SAGARMATHA INSURANCE COMPANY LIMITED

### 7.1 Kamaladi, Kathmandu

Year	MPS	D	R <sub>j</sub>	X	X <sup>2</sup>	R <sub>m</sub>	Y	Y <sup>2</sup>	XY
03/04	170.00	5.00	-	-	-	-	-	-	-
04/05	170.00	5.00	0.0294*	-0.0095	0.0001	0.8095	0.7009	0.4913	-0.0067
05/06	236.00	7.00	0.4294	0.3905	0.1525	-0.0448	-0.1534	0.0235	-0.0599
06/07	170.00	8.00	-0.2458	-0.2847	0.0811	-0.4218	-0.5304	0.2813	0.1510

07/08	150.00	10.00	-0.0588	-0.0977	0.0095	-0.0887	-0.1973	0.0389	0.0193
08/09	131.00	0.00	-0.1267	-0.1656	0.0274	0.0839	-0.0247	0.0006	0.0041
09/10	158.00	0.00	0.2061	0.1672	0.0280	0.2911	0.1825	0.0333	0.0305
<b>Total</b>			<b>0.2336</b>		<b>0.2986</b>	<b>0.6518</b>	<b>0.0224</b>	<b>0.8689</b>	<b>0.1383</b>

$$* \frac{5 \Gamma(170 Z170)}{170}$$

$$R = 0.0389$$

*Note: Computations are same as above.*

## Appendix – B (I)

<b>Required rate of return in descending order of Insurance Companies</b>	
<b>Insurance Companies</b>	<b>Required rate of return (%)</b>
Himalayan General Insurance Co.	13.08%
Everest Insurance Co.	11.96%
United Insurance Co. (Nepal)	10.84%
Premier Insurance Co.	10.65%
National Life & General Insurance Co.	8.97%
NECO Insurance Co.	8.97%
Alliance Insurance Co.	6.66%
Sagarmatha Insurance Co.	5.90%

<b>Beta in descending order of Insurance Companies</b>	
<b>Insurance Companies</b>	<b>Beta</b>
Himalayan General Insurance Co.	1.3768
Everest Insurance Co.	1.1857
United Insurance Co. (Nepal)	0.9966
Premier Insurance Co.	0.9648
NECO Insurance Co.	0.9048
National Life & General Insurance Co.	0.6800
Alliance Insurance Co.	0.2885
Sagarmatha Insurance Co.	0.1594

<b>Coefficient of Variation in descending order of Insurance Companies</b>	
<b>Insurance Companies</b>	<b>Coefficient of Variation</b>

Sagarmatha Insurance Co.	5.7352
NECO Insurance Co.	5.3082
National Life & General Insurance Co.	3.9793
United Insurance Co. (Nepal)	3.6981
Himalayan General Insurance Co.	2.8193
Everest Insurance Co.	2.4837
Premier Insurance Co.	2.3688
Alliance Insurance Co.	-10.1111

### Appendix – C (I)

<b>Expected rate of return in descending order of Insurance Companies</b>	
<b>Insurance Companies</b>	<b>Expected rate of return (%)</b>
Everest Insurance Co.	28.90%
Himalayan General Insurance Co.	22.91%
Premier Insurance Co.	17.60%
United Insurance Co. (Nepal)	11.46%
National Life & General Insurance Co.	9.18%
NECO Insurance Co.	8.21%
Sagarmatha Insurance Co.	3.89%
Alliance Insurance Co.	-1.26%

<b>Variance &amp; Coefficient of Variation</b>		
<b>Insurance Companies</b>	<b>Variance (%)</b>	<b>Coefficient of variation</b>
National Life & General Insurance Co.	13.34%	3.9793
Himalayan General Insurance Co.	41.72%	2.8193
United Insurance Co. (Nepal)	17.96%	3.6981
Everest Insurance Co.	51.52%	2.4837
Premier Insurance Co.	17.38%	2.3688
NECO Insurance Co.	18.99%	5.3082
Alliance Insurance Co.	1.62%	-10.1111
Sagarmatha Insurance Co.	4.98%	5.7352

### Appendix – D (I)

### 7.1.1.1 Valuation of Stocks of Sampled Insurance Companies

Stocks	7.1.1.1.1	7.1.1.1.2
	Valuation of Stocks	7.1.1.1.3 Norms
National Life & General Insurance Co.	Under priced	Higher than market price
Himalayan General Insurance Co.	Under priced	Higher than market price
United Insurance Co. (Nepal)	Under priced	Higher than market price
Everest Insurance Co.	Under priced	Higher than market price
Premier Insurance Co.	Under priced	Higher than market price
NECO Insurance Co.	Over priced	Lower than market price
Alliance Insurance Co.	Over priced	Lower than market price
Sagarmatha Insurance Co.	Over priced	Lower than market price

### Appendix – E (I)

#### Correlation (r) between MPS and EPS, DPS, NWPS of Sampled Insurance Cos.

Stocks	EPS	DPS	NWPS
National Life and General Insurance Co.	0.0874	0.7932	0.0473
Himalayan General Insurance Co.	-0.7722	0.8680	-0.3505
United Insurance Company (Nepal)	0.9243	0.3796	-0.5539
Everest Insurance Co.	0.6649	0.6038	0.2760
Premier Insurance Co.	-0.1668	0.1841	-0.3088
Neco Insurance Co.	0.6382	0.8406	-0.8764
Alliance Insurance Co.	-0.8943	-0.1172	-0.9707
Sagarmatha Insurance Co.	-0.5328	0.3819	-0.6605

$$R = \frac{n\phi_{XY} - Z\phi_X\phi_Y}{\sqrt{n\phi_X^2 - Z\phi_X}\sqrt{n\phi_Y^2 - Z\phi_Y}}$$