

**A STUDY ON STOCK PRICE BEHAVIOUR OF
ENUMERATED COMMERCIAL BANKS IN NEPAL**

A Thesis

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RECOMMENDATION

This is to certify that the thesis

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**"A Study on Stock Price Behaviour of Enumerated
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has been prepared and approved by this Department in the
prescribed format of Faculty of Management. This thesis is
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DECLARATION

I hereby declare that the thesis entitled "**A Study on Stock Price Behaviour of Enumerated Commercial Banks in Nepal**" submitted to the Kankai Adarsha Awasiya Campus, Faculty of Management, Tribhuvan University is my original work done in the form of partial fulfillment of the requirement for the Master of Business Studies (MBS) under the supervision of Mr. Ganesh Chaudhary, Kankai Adarsha Awasiya Campus, Faculty of Management.

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ABBREVIATIONS

AM	:	Arithmetic Mean
AMEX	:	American Stock Exchange
BOK	:	Bank of Kathmandu
BVPS	:	Book Value Per Share
CATS	:	Computer-Assisted Trading System
CV	:	Coefficient of Variation
DJIA	:	Dow Jones Industrial Average
DPS	:	Dividend Per Share
EBL	:	Everest Bank Ltd.
EMH	:	Efficient Market Hypothesis
EPS	:	Earning Per Share
FY	:	Fiscal Year
HBL	:	Himalayan Bank Ltd.
IT	:	Information Technology
Ltd.	:	Limited
MBS	:	Master of Business Studies
MPS	:	Market Price per Share
NEPSE	:	Nepal Stock Exchange
NIB	:	Nepal Investment Bank
NICB	:	Nepal Industrial and Commercial Bank
NRB	:	Nepal Rastrya Bank
NYSE	:	New York Stock Exchange
OTC	:	Over the Counter Market
RWH	:	Random Walk Hypothesis
SCBL	:	Standard Chartered Bank Ltd.
SD	:	Standard Deviation

SEBON : Security Board of Nepal
SEC : Security Exchange Center
SEMH : Strong Form Efficient Market Hypothesis
SSEMH : Semi-Strong Efficient Market Hypothesis
WEMH : Weak Form Market Hypothesis

CHAPTER I

INTRODUCTION

1.1 Background of the study

In Nepal, the listing of shares in Stock Exchange Center (SEC) and their trading in the stock market is a recent phenomenon. The Nepalese market is characterized by a low trading volume, stock absence of professional brokers, early stage of growth, limited movement of share prices and limited information available to investors (Pradhan R.S., 2003).

Stock market is the place where shares of listed companies are traded or transferred from one hand to another at a fair price through the organized brokerage system. It is a medium through which corporate sector mobilizes funds to finance productive projects by issuing shares in the market. 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.

Development and expansion of capital is essential for the rapid economic development by mobilizing long term capital needed for productive investment.

The main objective of the capital market is to create opportunities for maximum number of people to get benefits from the return obtained by directing economy toward the productive sector by mobilizing the long term sources of financing. Nepal traditionally regarded as a capital shortage country is seriously limited by low per capital income, low

saving rate, poor condition of capital market. The Nepalese capital market is small and it is at an early stage of growth as compared to big and developed capital markets. In order to speed up the development the role of financial sectors is very much crucial, as they can pool scattered savings for capital formation. Various institutions issue financial securities to collect the necessary funds. The investors are interested to invest their savings in these securities. Through the issue of shares these institutions can satisfy their long term funding needs where as investors also get opportunity to invest their idle savings. The transfer of funds from savers to those who wish to invest in capital goods which ultimately contribute to capital formation.

There are basically two types of financial market primary and secondary. Primary market refers to the market for the new issue. Once the securities begin to trade among individuals, businesses, government or financial institutions; they become a part of secondary market. The primarily issued securities are traded in secondary market. Principally stock market refers to the secondary market. An organized stock exchange is an example of secondary market. In Nepal, Nepal Stock Exchange (NEPSE) is the organized stock exchange which provides liquidity to investors who has invested in shares or common stocks.

These markets basically perform four economic activities. First, they provide investment alternatives to investors. Various stocks are available in stock market, among them investors can invest. Investors perform security analysis. Fundamental and technical analyses are some basic option to conduct the security analysis. Second, they determine the prices of assets of the investors. Securities markets provide value and significance to the financial assets. Thirdly, they provide liquidity to

investors. Fourth, financial markets can discipline under-performing management. The prevailing stock price of a company reflects the opinion of all market participants regarding the outlook for the company under the current management.

Although security market is concerned in few locations they refer more to mechanism rather than to place designed to facilitate the exchange of securities. In order to allocate capital efficiently and to maintain higher degree of liquidity in securities, the securities markets should be efficient enough to in pricing the shares solely by economic considerations based on publicly available information. Efficiency in stock market implies that all available relevant information regarding a given stock is instantly reflected in its price. Securities market provides options to all categories of investors and makes the financial markets most competitive in developing countries.

The stock market efficiency has been a concern to both academic and business circles. A market is said to be efficient if all currently available public information is reflected in share prices. Stock market efficiency cannot be tested directly.

Stock markets help expansion of economic activity by providing liquidity to financial assets traded in them. By liquid stock market make investment less risky because they allow savers to buy and sell financial assets they hold clearly and quickly and restructure their portfolios any time according to their risk return performance. Very liquid stock markets may sometime deter economic growth by encouraging investor myopia. New York stock exchange was the first stock market in the history of investment literature.

In Nepal after the restoration of democracy a network of financial institution was created through legislative measures to induce the growth as capital market. Development of vibrant and dynamic capital market is a prerequisite for the development of an efficient economy.

Stock market is perhaps poorly understood among Nepalese investors. Its development remains almost impossible unless the people accept it as a way for 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 investors. As a result, it is natural for the investors to seek investment opportunities in the fields other than securities. Large amount of funds is poured into non productive sectors like house construction, jewelry collection etc. Therefore development of securities market is necessary to divert the funds towards productive sector.

In Nepal there is a lack of wider investment opportunities that provide good return. Commercial banks are seemed successful in raising funds. Most of the public investors are not well knowledgeable about the real financial strength and weakness of the public companies in which they are investing. Further they cannot well analyze and interpret the real financial position of a company on the basis of available data and information to reach at the right conclusion. So there has still been a huge amount of unutilized savings fund with public. Those who have invested are also bearing high risk because of the fluctuating nature of price. By knowing the price behaviour, we can have idea about the market efficiency. This study has been conducted for studying price behaviour of banking sectors securities. The study is mainly focused on the effect of

price trend, volume of stock traded, market behaviour and impact of signaling factor on NEPSE index related to commercial banks.

1.2 Statement of the Problem

The stock market behaviour in smaller and under developed capital market is one of the important areas of the study of finance. Information on stock market behaviour in such smaller and under developed capital markets would help development of realistic theoretical models and assist in the formulation of relevant hypothesis of empirical testing in finance.

The stock market of Nepal is imperfect market. Existing economic imbalance, political instability & ineffective implementation of policies have greatly affected the economy. The Nepalese stock market is characterized by low trading volume, absence of professionalism, early stage of growth, limited movement of share prices and limited information available to investors. The floor price of listed company's share cannot represent their true value. They are under or overvalued.

The number of listed companies has been increasing rapidly without effective performance of the market. Only popular companies provide regular information to the security board. As a result prices are fluctuating this indicates critical position and performance of these companies.

There is a lack of wider investment opportunities that provide good return. Commercial banks are seemed successful in raising funds. Most of the public investors are not well knowledgeable about the real financial strength and weakness of the public companies in which they are investing. Further they cannot well analyze and interpret the real financial

position of a company on the basis of available information to reach at the right conclusion. So there has still been a huge amount of unutilized saving funds with public. Those who have invested are also bearing high risk because of the fluctuating nature of price.

There are many current issues available in the capital market; some of them are listed below:

- 1) SEBON is lacking necessary legislative measure to review reports of the listed companies.
- 2) There is a lack of disclosure of the operating result of listed companies.
- 3) Corporate information is not disclosed on times and has different provision regarding information disclosure.
- 4) Delisting of securities provision is contradictory and impracticable.
- 5) Nepalese securities market is lagging in the use of IT.
- 6) The financial market of Nepal is not linked with foreign markets. There is a kind of restriction of foreign investment in the stock market.

The study is conducted on the basis of secondary data on the topic of share price behaviour of listed commercial banks in Nepal taking 8 banks as sample.

On the basis of these issues the research problems are stated as a form of question. To answer these research questions is the objective to conduct the study. They are as follows:

- 1) What is the price trend of various securities traded in NEPSE?
- 2) What is the volume of securities traded?

-) What is the share price behaviour of the commercial banks listed in Nepal?
-) What is the risk and return associated with the common stock investment of the sampled commercial banks?

1.3 Objectives of the Study

The general objective of the study is to answer the research question i.e. to analyze the share price behaviour of listed commercial banks in Nepal. Some of the specific objectives of the study are as follows:

-) To explore stock price trend and volume of stock traded on the secondary market.
-) To analyze the share price behaviour of listed commercial banks in NEPSE.
-) To examine the risk and return involved in common stock investment of the sampled commercial banks.

1.4 Significance of the Study

Every research work has a unique importance. This study also constitutes some unique and its own significance. The significance of the study is mainly as follows:

-) This study is helpful for the current investors to think about restructuring their investment portfolio and potential investors to take better timely investment decision.
-) This study is also helpful to the stock investment consultants and the market makers of the stock market in Nepal.
-) This study will provide literature to further researchers in this area.
-) This study is assumed to be helpful to the financial manager of corporate firms to know about the behaviors of their share price with respect to change in financial position of the firm.

1.5 Limitation of the Study

Every researcher has to face some limitation while conducting the research work. The following limitation has been pointed out in conducting the study.

-) The study is mainly focused on limited area i.e. commercial banks only.
-) The data collected are mainly secondary from 2001/02 to 2007/08 which is not verified.
-) The study covers only 6 years of data for the risk and return evaluation of sampled commercial banks which may not show actual performance of these banks.

1.6 Organization of the Study

The study is organized as follows:

Chapter I: Introduction

This chapter constitutes subject matter of the study which provides background of the study, statement of problem, objectives of the study, significance of the study and organization of the study itself.

Chapter II: Literature Review

This chapter constitutes conceptual framework and review of related studies.

Chapter III: Research Methodology

This chapter gives information about sources of data, methods of collecting the data and statistics tools used to analyze the data.

Chapter IV: Data Presentation & Analysis

This is the main part of the study. The collected data from primary and secondary source is presented and analyzed.

Chapter V: Summary Conclusion & Recommendation

This chapter presents summary and conclusion of the study and some recommendation and suggestions that are found relevant.

CHAPTER II

LITERATURE REVIEW

This chapter provides some glimpses on the literature that is available in the topic. It covers the review of the existing literature concerning the stock market in Nepal and abroad. In this regard various books, journals & articles concerned to this topic have been reviewed.

The chapter is divided into two sections. The first section of this chapter is devoted to describe theoretically the behaviour of share prices. It includes security markets, stock brokers, stock exchange, trading procedure, fundamental analysis, technical analysis and efficient market theory. The second section of this chapter is confined to review those related literature carried out previously in the foreign context as well as in the Nepalese context. The main objective is to find the research gap in the concerned area.

2.3 Theoretical Reviews

2.3.1 Financial Markets

A financial market generally called security market is place for bringing together buyers and sellers of financial assets in order to facilitate trading. These financial assets are called securities. Usually only a piece of paper represents the investor's rights to certain prospects of property and the conditions under which he or she may exercise those rights. This piece of paper serving as evidence of property rights is called a security. It may be transferred to another investor and if it is, all its rights and conditions are transferred as well. Thus the term security is used to refer to a claim to receive prospective future benefits under certain conditions. Securities are

traded in a security market. Although securities markets are concentrated in few locations, they refer more to mechanism, rather than to place, designed to facilitate the exchange of securities by bringing buyers and sellers of securities together. In other words, people and organizations wanting to borrow money are brought together with those having surplus funds in the securities market. Securities, such as equities, short and long term debt instruments, derivatives etc. are the products that are traded in the markets. Institutions such as investment bankers and securities firms, securities issuing institutions such as government and corporate bodies are participants of the securities markets. Securities markets' major function is to provide line between savings and investment thereby facilitating the creation of new wealth (Baral, 1999).

Nepal stock exchange has defined the securities market in the following ways 'The securities market is the place where a large number of financial securities (shares, bonds, debentures etc.) is traded according to prescribed rules (Investors Guide, 1978).

There are many ways securities markets can be differentiated. One way is primary versus secondary markets. The key difference between primary and secondary markets is whether the securities are being sold by the issuer. The primary market can be subdivided into seasoned and unseasoned new issues. A seasoned new issue refers to the offering of an additional amount of an already existing security to the public, whereas an unseasoned new issue involves the initial offering of a security to the public. Unseasoned new equity issues are often referred to an initial public offerings or IPOS. The primarily issued securities are traded in secondary markets.

Another way of differentiating security markets is the life span of the financial assets. Money markets usually involve securities that expire in one year or less, whereas capital markets usually have securities with life spans greater than one year. For example treasuries bills are traded in money market and treasury bonds are traded in a capital market.

2.3.1.1 Money Market

A money market typically involves financial assets that have a life span of one year or less. They are highly liquid assets. Money market instruments include short term marketable, liquid and low risk securities. They are less risky and provide less return. They are cash equivalents. They bring together the demander and supplier of short term liquid fund. Treasury bills and commercial papers are traded in money market.

Treasury Bills

Treasury Bills involve lending money on a short term basis to the government. Such a loan carries little (if any) risk that payment will not be made as promised. Moreover, although the rate of rate of return varies from period to period, it is known with certainty at the beginning of any single period.

Commercial Paper

Commercial paper represents unsecured, short-term, negotiable promissory notes sold in the money market. If a company is large and well-established it can borrow on a short-term through commercial paper. Commercial paper is issued in multiples of a larger amount, such as Rs. 100,000.

They have maturity period ranging from few days to as many as 270 days. The commercial paper market is consist of dealer market and direct placement market. It means the firm may sell commercial paper through dealers or sell directly into the market. The dealers purchase commercial paper from the issuer and then sell it to ultimate investor.

2.3.1.2 Capital Market

Capital market is concerned with long –term finance. Capital market involves financial assets that have a life span of greater than one year. They are long term high risk securities issued by government and corporations. In capital markets, demand for funds come from agriculture, industry, trade and governments while the supply of fund comes from individual or corporate savings, institutional investor and surplus of government.

The capital market serves as a link between suppliers and users of finance. It is a mechanism for the mobilization of public savings and channelizing them in productive investment. In this way, an important constituent of the capital market is the securities market. It has a wide term embracing the buyers and sellers of securities and all those agencies and institutions, which assist the sale, and resale of corporate securities (Gupta, 1978).

The major securities traded in capital markets are long term bonds, common stocks, preferred stocks etc.

Long Term Bonds

Bonds represent a fairly long term commitment on the part of the issuer (that is the Borrower) to the investor (that is, the lender). This

commitment is to make cash payments each year (the coupon amount) up to some point in time (the maturity date) when single final cash payment (the principal plus a coupon) will be made. The bonds can be issued by government or corporate bodies. The long term government bonds are called treasury bonds. The long term corporate bonds are simply referred to as corporate bonds.

Common Stocks

Common stock is a variable-income security, which represents a commitment by a corporation to pay periodically whatever its board of directors deems appropriate as a cash dividend. Common stocks are a security which does not have a maturity period. Common stock holders are the true owners of the business. Common stock also differs from long term debt and preferred stock in that the market price tends to fluctuate more than the price of bonds and preferred stock, thus causing returns on common stock investments to vary widely over time than returns on long-term debt or preferred stock.

Preferred Stock

Preferred stock is a security which has some features of debt and some features of common stocks. Preferred stock is similar to debt because it has a fixed dividend rate and a fixed maturity period like in the case of bonds. It is similar to common stock because if the firm does not have enough earning to pay for dividend, it can always postpone the payment of preferred dividend. The popularity of preferred stock has declined in recent years to both financiers and investors.

2.3.1.3 Primary Market

The primary markets are the medium through which new financial assets are issued or generated. They are the medium through which the demanders and suppliers of funds meet. In those markets, financial assets are created and exchanged, satisfying the financial needs of both demanders and suppliers of today's fund. The primary securities market includes all transactions that result in the accumulation of financial capital by firms, government or individuals to be used in the consumption or real capital investment. The participants in this process are many and valued, but an important segment, includes the money brokers who acts as a middleman in the process of exchanging securities for fund. These brokers provide invaluable services. Their principal role is to assist in the pooling of the funds by the creation of security forms that will appeal to the ultimate investors (Cheney & Moses, 1992).

Primary markets are distinguished by the flow of funds between the market participants. Instead of trading between investors as in the secondary markets, participants in the primary market buy their assets directly from the source of assets. Once the securities begin to trade among individuals, business, government or financial institutions, savers and investors, they become part of secondary market (Cheney & Moses, 1992).

The primary market of country is dominated by the government securities due to the existence of insignificant new issue market for industrial securities. However commercial banks are seemed quite successful in raising fund through share issuance.

2.3.1.4 Secondary Market

Security market is the market for outstanding securities. The primarily issued securities are traded in secondary markets. Secondary markets provide 'liquidity' for financial assets making them more attractive. Thus secondary market is a place where the securities once sold are purchased and repurchased to provide liquidity to the government securities and securities of other corporate bodies.

Secondary markets are markets for existing assets, which are currently traded between investor. This is the market that creates the price and allows for liquidity. If secondary markets did not exist, investors would have no place to sell their assets. Without liquidity, many people would not invest at all.

Secondary (indirect) securities market allows outstanding securities to be traded from old to new owners. The advantage of secondary market is to provide liquidity or cash and investment opportunities to investor and make certain assets more attractive to buyers and sellers. Secondary market comprises the stock exchange, the over- the- counter market.

Stock exchanges are organized securities exchange. They are physical location where trading of securities are done under a set of rules and regulations. Investors usually buy and sell the securities by using security brokers. The issuer do not get any proceed at all. The over-the-counter (OTC) is not an organization like security exchange but an intangible market for the purchasers and sellers of securities not listed by the organized exchanges. It neither requires membership nor listing of securities for trading. A sophisticated telecommunication network links active traders in this market. The prices at which securities are traded in

'OTC' exchange is determined by competitive bids and negotiations. This performs the function of both Investment Banker and organized Stock Exchange because this is involved in primary selling of new securities and reselling of issued securities.

The over the counter market is broader in scope than stock exchanges. It will be recalled that stock exchanges limit their activities to trading in securities already issued. In contrast, the over – the – counter market handles both securities already issued and new securities being sold to public where as stock exchanges are auction markets, the over the counter market is primarily a negotiated market that is, buyer and seller may higggle over prices before the transaction is completed. Dealers in OTC market buy securities with the hope of being able to resell them at a higher price. This process resembles any merchandising activity in which trader buys goods in the hope of reselling them a higher price (Richard Brealy, 1970).

Securities with following characteristics tend to be traded in the OTC market.

-) Securities of companies with small capitalization.
-) Securities of companies which are owned by a few holders.
-) Securities of government and their subdivisions.
-) Securities which are purchased in large blocks (such as government securities) by banks life insurance companies, and other large investors.
-) Securities not listed in organized exchange.

Secondary market also comprises third and fourth markets. In third market the trading of any securities is done but trading hours are not fixed

like organized stock exchange. Here dealers only provide execution and record keeping services for their clients. In fourth market trade occurs directly among investors. In this market buyers and sellers deal directly with each other. The fourth market participants completely by pass dealers services.

2.3.2 Brokers

A broker is a middleman who matches buying and selling orders. He assists in trading of securities. He provides buying facility for investors who want to purchase the securities and selling facility to investors who want to sell the security. The broker does not take title to the security. A commission is charged by the broker for the assistance provided by him. Brokers can be the member of stock exchange or any individual who assist in buying, selling and dealing securities. A stock broker, as a member of stock exchange and sub-broker as any person who acts on behalf of stock broker as an agent or otherwise assisting the investors in buying, selling on dealing in securities through such brokers (Bhatta, 1997).

A stockbroker is expected to maintain high standards of integrity, promptitude, and fairness in the conduct of his business. He is expected to exercise due to skill, diligence and comply with statutory requirements and not to indulge in manipulations and practices.

) Commissions Broker

The commission brokers are the members of stock exchange. The commission broker executes on the floor of the exchange buying and selling orders placed by his constituents to whom he renders contacts

containing a charge for commission at rates not exceeding the official scale of brokerage.

) **Floor Broker**

Floor brokers may be described as brokers. They are simply members of the exchange not brokers for a member firm. Floor brokers are officially attached to other members. They assist commission broker when there are too many orders flow into the market for commission brokers. They will accept orders from other broker, execute them and receive a part of commission in return. Floor brokers are useful in that they present backlogs of orders, and they allow many firms to operate with fewer exchange memberships than would be needed without their services.

) **Floor Traders**

They are not brokers. They trade securities for themselves. They are prohibited from handling orders to public. They hope to make money by taking advantages of perceived trading imbalances that result in temporary mispricing which allow them to 'buy low and sell high'. They are also called competitive market makers, competitive traders or registered traders. They buy under priced and sell overpriced securities.

) **Dealers**

Dealers buy and sell securities for themselves. They do not take order of customers. They make money by buying securities in low price and selling them in higher price. They own securities in their own name. The benefits of dealers to the market is that their buy and sell actions added up liquidity of the securities.

2.3.3 Buying and Selling Securities

When a security is sold, many people are likely to be involved. Although it is possible for two investors to trade with each other directly, it is more common for brokers, dealers and market makers to perform the transactions. A broker acts as an agent for an investor and is compensated with a commission.

The shares price is determined in the floor by the interaction of market forces i.e. demand and supply. The price is determined by the point of equilibrium between supply and demand. The shifting of this balance results in incessant adjusting of price in search of the ever-changing new equilibrium. Then market price moves upward and downward independently.

There are many reasons that cause the stock price fluctuation. Major of them are economic, non-economic and market factors.

The most important economic factor that influence stock price is dividends. Dividends are strongly influenced by the earning power of the enterprise which in turn is influenced by changing economic trends. In this way the most fundamental factor in stock price fluctuations lies in changes in corporate earnings, which together with interest rates and business cycle trends, contribute to making up the economic factors influencing stock price.

The non economic factors influencing the stock price are changes in political conditions such as war or administrative changes, changes in

weather and other natural conditions and changes in cultural conditions such as technological advances and so forth.

Market factors or internal factors influencing the stock prices may be cited as the third category. These factors consist of the market and supply-demand relations. The tone of the market is a phenomenon of excessive expectations which takes the form of over-estimating the intrinsic value of stock when stock price is high because of business prosperity while underestimating its value at the time of market decline. The relationships of supply-demand are reflected directly in the volume of transactions, but there is also considerable effect from the actions of institutional investors, margin transactions etc. Although margin transactions increase purchase when stock price is going up. Once the prices begin to fall they become a selling factor and accelerate price decline. The practice of margin finance has not been introduced, so far, in Nepal (Sharma, 2003).

The buying and selling of securities takes place in the floor of NEPSE. The transactions are carried out only through licensed brokers and market makers. However, brokers cannot transact shares in their own account. Market makers are not allowed to do transaction on behalf of other investors. In the floor, trading is carried out on 'open cut cry system'. Each broker's representative should be present in the floor and participate through written bids and offers. The trading reports are published after the floor is closed (Sharma, 2003).

The buying and selling of securities (common stocks) involves following five specifications.

- 1) The name of the stock

- 2) Whether the order is to buy or sell shares.
- 3) The size of the order.
- 4) How long the order will be outstanding.
- 5) What type of order will be used.

When buying and selling of common stocks, investors place an order involving a round lot, an odd lot or both. Generally a round lot is for an order of 100 shares or a multiple of 100 shares. Odd lot orders generally are four 1 to 99 shares. Orders for more than 100 shares, but that are not multiple of 100 are a mixture of round and odd lots.

The investor must specify a time limit on his or her order that is, the time within which the broker should attempt to fill the order. For day orders the broker will attempt to fill the order only during the day in which it is entered. If the order is not filled by the end of the day, it is canceled. Week and month orders expire at the end of the respective calendar week or month during which they are entered provided they have not been filled by them. If a time limit is not specified by the investor, the broker will treat the order as day order.

There are several types of orders that investor can place with their brokers. The most common types are market and limit orders, although stop and stop limit orders can also be used.

Investors may purchase securities with cash or may borrow from brokerage firms to buy securities on margin.

2.3.4 Stock Exchange

Organized exchanges, which are central physical locations where trading is done under a set of rules and regulations. The stock exchange provides

an organized market place for the investors to buy and sell securities freely. The market for those securities is an almost perfectly competitive one because a large number of sellers and buyers participate. The shares listed however are not really homogenous like commodity in a perfectly competitive market (Joshi, 2002).

Stock exchange is the most highly centralized and visible institution where already issued securities are brought and sold for investment and speculative purpose. It provides facilities of trading of listed financial securities.

In stock exchange, there is an active bidding and a two-way auction trading takes place. The bargains that struck the fairest price are determined by the basic laws of supply and demand. The stock exchange provides an auction market in which numbers of stock exchange participate to ensure continuity of the price and liquidity to investors (Palat, 1991).

The stock market is the only institution to mobilize substantial portion of public activity and public share volume in other markets. This suggests that individual investor recognized the opportunities in these other markets and pursue them. Also, in some cases, institutional investors are restricted from these markets because the stock is often too small to meet their criteria or legal requirements. The New York Stock Exchange (NYSE), AMEX, The Tokyo Stock Exchange, The Toronto Stock Exchange, Bombay Stock Exchange are some examples of organized stock exchange. In Nepal, Nepal Stock Exchange (NEPSE) is the organized stock exchange which provides liquidity to investors who has invested in shares of various institutions.

The New York Stock Exchange is a corporation. It has a charter and set of rules and regulations that govern its operation and the activities of its members. A stock that is available for trading on the NYSE is known as listed security. A company must apply to the NYSE for its stock to be listed. The initial application is usually informal and confidential. If approved, a formal application is announced publicly and approval of the formal application is almost certain. The general criteria used by NYSE in approving an application include the following:

-) The degree of national interest in the company.
-) The company's relative position and stability in the industry.
-) Whether the company is engaged in an expanding industry, with prospects of at least maintaining company's relative position.

Companies that are approved for listing must agree to pay a nominal annual fee and provide certain information to the public. After listing, if trading interest in a company's stock declines substantially, the NYSE may decide to delist the company so its stock will no longer be available for trading on the exchange. Delisting also occurs when a listed company is acquired by another company or is merged into another company because the originally listed company no longer exists. A company may also ask to have its stock delisted even though it is still eligible for listing.

Not surprisingly, the NYSE dominates in total trading volume of the securities listed on each of the active stock exchanges in the United States, second in importance is the AMEX, which lists shares of some what smaller companies of national interest.

The London Stock Exchange in United Kingdom has attracted trading in many non-U.K. stocks. Thereby enhancing its status as the dominant

European stock market. The reforms introduced in October 1986 have been highly successful.

The Tokyo Stock Exchange has also experienced major reforms. CORES (Computer assisted Order Routing and Execution System) and FORES (Floor Order Routing and Execution System) was introduced as a computer system to facilitate trading in the most active stocks.

The Toronto Stock Exchange began to use CATS (Computer-Assisted Trading System) on a trial basis with 30 stocks in 1997. Two years later CATS was expanded to include 700 stocks and became permanent. The success of CATS led to the inclusion of more and more stocks until all listed stocks were traded on it.

In contrast to the bond market, the stock market is basically a securities market. The aggregate amount of new common stock issued by corporations every year is small compared to the trading on the organized exchanges – Nepal Stock Exchange, New York Stock Exchange, The American Stock Exchange, The Regional Exchanges and the Over – the counter market.

2.3.5 Securities Markets in Nepal

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 remarkable event in the development of securities market can be observed only after enhancement of company act for the first time in 1936. In 1937, the ordinary shares of Biratnagar Jute Mills Ltd. and Nepal Bank Ltd. were issued under the company act 1936. There was a long gap till 1976.

The real trend of new issue was organized only after the establishment and operations of securities marketing center in the year 1976. it was the first institutional establishment for the purpose of developing security market in the country. Initially the securities marketing centre was assigned the task of promoting the secondary market for government securities. But due to the lack of proper mandate and sufficient rules and regulations the centre had not been able to conduct a secondary market for shares.

With the objective of developing a market for stocks, the securities exchange act was enacted in 1983. With the act in place, the securities marketing centre was converted into the Securities Exchange Centre in 1984. Apart from dealing in government securities the SEC was also assigned the additional job of conducting transaction in stocks of private corporate sector. Thus the development of stock market began since 1984. Reforms in the stock market began in 1993. Two tasks of the SEC, trading and regulatory aspects, were separated and assigned to two separate institutions. With the amendment in the Securities Act, the Nepal Stock Exchange Ltd. (NEPSE) was established with the objective to impart free marketability and liquidity to government and corporate securities by facilitating transaction in its trading floor through market intermediaries, such as brokers, market makers and securities dealers. At the same time, The Securities Exchange Board of Nepal (SEBON) was constituted to oversee the regulatory provisions. Presently in Nepal NEPSE is the only one secondary market (organized stock exchange) of the country for security transaction. Other forms of secondary market such as OTC market, the third and fourth market are not initiated till date.

In Nepal, the main impediments have been the following: (i) tax policy that discourages investment in capital market instruments issued by the private sector; (ii) the channeling of most savings to state-owned banks, and government debt; (iii) institutional arrangements, that seem to discourage contractual savings and institutional investment flows into the capital market; and (iv) lack of investors confidence in the stock market since many listed companies do not trade on a regular basis, or hold annual meetings and provide disclosure information to investor on a timely basis. Also there is a need for a strategic plan to link privatization policy to the growth and development of the capital market.

The main regulators of the capital markets and intermediaries providing broker and dealer services to the primary and secondary markets are the securities Board (SEBO), Nepal Rastra Bank (NRB) and the Nepal Stock Exchange (NEPSE), a self-regulatory organization under the Securities Exchange Act, as amended. The NRB is responsible for the supervision of securities market intermediaries (other than brokers) while securities Board is responsible for the supervision of the NEPSE, the registration and supervision of stock brokers and the granting of licenses to finance companies and others acting as issue manager, underwriter, market maker, portfolio manager or stock broker.

Under the current regulatory scheme, the supervision of finance companies and commercial banks activity as underwriter, issue-manger, and market-maker or portfolio manager are supervised by the NRB including the administration of prudential standards, financial reporting, off-site monitoring and on-site inspections for compliance with applicable rules and regulations. Overall supervision of commercial banks and finance companies, including their activities in the markets for treasury

bills and government securities. At the present time, the Securities Board does not participate in NRB's programme to inspect and monitor the financial conditions of finance companies and commercial banks that are licensed to conduct capital market activities.

Nepal Stock Exchange (NEPSE) is a common asset of Nepal's government, Nepal Rastra Bank, Nepal Industrial Development Corporation and licensed members who have invested in it. NEPSE has a trading floor in which transaction of securities take place. NEPSE has 9 directors in its board in accordance with Securities Exchange Act 1983. Six directors are nominated by government two are from licensed members and another one is general manager of NEPSE who acts as the ex-office Director of Board. The chairman of the board is an official of the Ministry of Finance. NEPSE is expected to perform self-regulatory functions, the existing securities law (as amended) and regulations do not clearly define the regulator, supervisory and enforcement functions of the stock exchange and the securities board. Also, the NEPSE does not have the necessary committee structure to carry out basic self-regulatory functions. The bye-laws of the exchange are not adequate for this purpose and there is a need to develop procedural manuals that can provide staff guidance to formalize the self-regulatory process.

2.3.6 Security Analysis

Security analysis is one of the steps performed in the investment process. It involves examining several individual securities (or groups of securities) within the broad categories of financial assets. One reason to examine securities is to identify those that seem mis-priced. In the case of behaviour of stock prices, there are mainly two approaches i.e. classical

approach and efficient market theory approach. Classical approach considers the market as inefficient where as the efficient market theory argues that there exists the efficient market.

2.3.6.1 Classical Approach

This approach includes fundamental analysis and technical analysis theories. Fundamental approach forecasts stock prices on the basis of earnings and dividends of the company whereas technical analysis forecast stock prices on the basis of past price behaviour of the company.

a) Fundamental Analysis

In its simplest form, fundamental analysis begins with the assertion that the true value of any financial assets equals the present value of all cash flows the owners of the assets expects to forecast the timing and size of these cash flows and then converts the cash flows to their equivalent present value using an appropriate discount rate (Godon J. Alexander, William F. Sharpe & Jefery V. Bailey, 2000).

After estimating the true value of stock of a particular firm, it is compared with the current market price of the common stock to determine whether the stock is fairly priced. Stocks whose estimated value or value is less than their current market price are known as overvalued and vice versa. Fundamental analysts believe that any notable cases of miss pricing will be corrected by the market in the near future, meaning that prices of overvalued stocks will show unusual appreciation and prices of undervalued stocks will show unusual depreciation.

Fundamental analysis involves making investment decision based on the examination of the economy, an industry, and company variables that led

to an estimate of value for an investment which is then compared to the prevailing market price of the investment, (Frank K. Raily & Keith C. Brown, 2000)

Fundamental analysts use public information to calculate a fundamental value for a share, and then offer investment advice by comparing the fundamental value with the current market price. Fundamental analysis is not possible if capital markets are semi strong form efficient, since security prices will already fully and fairly reflect all publicly available information (Denzil Waston & Tony Head, 1998).

Fundamental analysis approach involves working to analyze various factors like economic influences, industry factors, firms' financial statement, and pertinent company information such as product demand, earnings, dividends and management in order to calculate an intrinsic-value for the firm's securities. This theory assumes that knowledge about the future of companies is not perfect, some stocks are under priced and others are overpriced. The investor's task is to study certain fundamental factors that may be enable them to select undervalued stocks for purchase and sell overvalued stocks.

The objective of fundamental analysis is to appraise the intrinsic value of a security. The intrinsic value is the true economic work of financial assets. Therefore fundamental analysts work to find new information before other investors, so they can get into a position to profit from price changes they anticipate. Fundamental analysts use different models like top-down versus bottom-up forecasting, probabilistic forecasting, econometric models, financial statement analysis etc. to estimate the value of security in an appropriate manner for making investment

decision. However, fundamental analysis is a never ending process because values changes overtime. Ideally, revision in analysis should occur whenever new information affecting the future benefits to security holder becomes available.

b) Technical Analysis

In its simplest form, technical analysis involves the study of stock market prices in an attempt to predict future price movements. Past prices are examined to identify recurring trends or patterns in price movements. Then more recent stock prices are analyzed to identify emerging trends or patterns that are similar to past ones. This analysis is done in the belief that trends or patterns repeat themselves. By identifying an emerging trend or pattern, the analyst hopes to predict accurately future price movements for a particular stock (Gordon J. Alexander, William F. Sharpe & Jeffery V. Bailey, 2001).

Technical analysis is based on the widely accepted premise that security prices are determined by the supply of and the demand for, securities. The tools of technical analysis are therefore designed to measure certain aspects of supply and demand (Jack C. Francis, 1991).

Technical analysis can be defined as the use of published market data for the analysis of both the aggregate stock market and individual stocks. It is so the technical analysis is based on the assumption that the post information of prices and trading stocks provides some picture of the future prices of stocks. Technicians seek to forecast security prices rather than security value.

Prices and volumes are the primary tools of the technical analyst. Technicians believe that the forces of supply and demand show up in patterns of price and volume. Volume data are used to gauge the general condition in the market and to help assess its trend. The evidence seems to suggest that rising (falling) stock prices are usually associated with rising (falling) volume. If stock price rise but volume activity does not keep pace, technicians would be skeptical about the upward trend. A downside movement from some pattern or holding point, accomplished by heavy volume, would be taken as a bearish sign.

The technician usually attempts to predict short term price movements and this makes recommendations concerning the timing of purchase and sale of either specific stocks or groups of stocks (such as industries) or stock in general. It is sometimes said that fundamental analysis is designed to answer the question "what". And technical analysis to answer the question "when"? More especially the technical analyst seems to be trying to forecast short-run shifts in supply and demand that will affect the market prices of one or more securities.

Typically, technical analysts record historical financial data on charts, study these charts in search of patterns that they find meaningful, and endeavor to use patterns to predict future prices. Some charts are useful to predict movements of market index. Still others are used to predict the action of both individual assets and the market (Francis, 1991).

Thus, the technical analysts believe that changes in the pattern or trend of security prices take place on account of changes in the demand and supply of the securities, and that crucial insight into these patterns can be

obtained by keeping track of price chart. The technical analyst can tell whether the price of a share is on upswing or on the downswing in future.

Technical analysts maintain that the price of a share at any time (present price) is the balance struck by buyers and sellers at a point in time price moments take place on account of changes in buying and selling pressures. This occurs in account of diverse internal and external factors (profits, political environment, predictions and the likes). Prices stabilize when equilibrium between buyers and sellers is achieved. They believe that record a price movement over a period of time in the past, as the whole theory is based on the assumption that history repeats itself. The human nature does not change large and that man is likely to repeat his patterns of past movement will repeat themselves in the future (Raghu Palat, 1991).

Technical analysis is essentially the search for recurrent and predictable patterns in stock prices. Although technicians recognize the value of information regarding future economic prospects of the firm, they believe that such information is not necessary for a successful trading strategy. This is because whatever the fundamental reason for a change in stock price, if the stock price responds slowly enough, the analyst will be able to identify a trend that can be exploited during the adjustment period. The key to successful technical analysis is a sluggish response of stock prices to fundamental supply and demand factors. This pre requisite of course is diametrically opposed to the notion of an efficient market (Zui Bodie, Alex Kane and Alan J. Marcus, 2002).

Technical analysis however may be useful in timing a buy or sell order that may be implied by the forecasts of return and risk. For example, the

technical analysis may reveal that a drop in price is warranted. Postponement of purchase, then if the technical analysis is correct, will raise the forecast holding period yield (HPY). Conversely, a sell order might be postponed because the charts reveal a raise in the price of the security in question (Donald E. Fisher & Ronald J. Jordan, 1995).

The methodology of technical analysis ... rests upon the assumption that history tends to repeat itself in the stock exchange. If a certain pattern of activity has in the past produced certain results nine times out of ten, one can assume a strongly likelihood of the same outcome whenever this pattern appears in the future. It should be emphasized, however that a large part of the methodology technical analysis lacks a strictly logical explanation (Sharpe et al., cit Flix, Rosenfeld, 1975).

The basic assumptions underlying technical analysis are as follows:

- I) Market value is determined by the interaction of supply and demand.
- II) Supply and demand is governed by numerous factors, both rational and irrational.
- III) Security prices tend to move in trends that persist for an appreciable length of time, despite minor fluctuations in the market.
- IV) Changes in a trend are caused by the shifts in supply and demand.
- V) Shifts in supply and demand, no matter why they occur, can be detected sooner or later in charts or market transactions.

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 behaviour 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.

Technical Tools

a) The Dow Theory

This tool originated by Charles Dow, Founder of the Dow Jones company 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 short swing, running from two weeks to a month a more; the third is the main movement, covering at least and year's duration" (Francis, cit., 1900). So, we can say that there are three forces simultaneously affecting these stock prices, basically called primary or major trend, secondary or intermediate trend, and finally tertiary or minor trends. The primary price movements are held to constitute the bearish or bullish trends; where as 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 (DJIA). The DJIA is a key indicator of underlying trends, while the DJIA usually

serves as check to confirm or reject that signal (Zvi Bodie, Alex Kane & Alan J. Marcus, 2002).

The Dow Theory is built upon the assertion that stock prices tend to move together. If the DJIA is rising then the DJIA 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 yield 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).

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 lotter are selling the advance and buying the declines.

2.3.6.2 Efficient Market Theory

An efficient market is defined as a market where there are large numbers of rational profit maximizes actively competing with each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants. In an efficient market, competition among the many intelligent participants leads to a situation where at any point in time, actual prices of individual securities already reflect the effects of information based on both on events that have already occurred and on events which as of row, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic values (Eugene F. Fama, 1970).

An efficient market is one where shares are always correctly priced and where it is not possible to outperform the market consistently except by luck. In an efficient capital market, current market prices fully reflect capital market; current market prices fully reflect available information. Therefore if market is efficient, it uses all available information to it in setting price.

There are several concepts of market efficiency and there are many degrees of efficiency, depending on the market. Markets in general are efficient when: (I) Prices adjust rapidly to new information, (II) There is continuous market, in which each successive trade is made at a price close to the previous price (the faster that the price responds to new information and the smaller the difference in price changes, the more efficient the market.), (III) The market can absorb large amounts of securities without de stabilizing the prices.

In an efficient market, a security's price would correctly reflect the important variables for that security and would represent an unbiased estimate of its investment value. The efficient market hypothesis suggests that the investors cannot expect to outperform the market consistently on a risk-adjusted basis over an extended period of time. This hypothesis is based on the premise that security prices reflect all available information concerning a firm and that security prices change rapidly in response to new information. Market efficiency also implies that as new information becomes available, the market quickly analyzes it, and any necessary price adjustments occur rapidly.

The requirements for a securities market to be efficient are:

- a) A large number of rational, profit-maximizing investors exist who actively participate in the market by analyzing, valuing and trading stocks. These investors are price takers; that is, one participant alone cannot affect the price of security.
- b) Information is generated in a random fashion such that announcements are basically independent of one another.

- c) Information is free of cost and widely available to market participants and approximately the same time.
- d) Investors react quickly and accurately to the new information, causing stock prices to adjust accordingly.

In an efficient market, all prices are correctly stated and there are no bargains in the stock market. Efficiency in this context means the ability of the capital markets to function so that prices of securities react rapidly to information. Such efficiency will produce prices that are appropriate in terms of current knowledge, and investors will be less likely to make unwise investments. A corollary is that investors will also be likely to discover great bargains and thereby earn extra ordinary high rates of return (V.K. Bhalla, 1973).

If a market is efficient, then there is a very important implication for market participants: all investments in that market are zero NPV investments. The reason is not complicated. If prices are neither too low nor too high then the difference between the market value of an investment and its cost is zero; hence, the NPV is zero. As a result, in an efficient market investors get exactly what they pay for when they buy securities and firms receive exactly what their stocks and bonds are worth when they sell them (Stephen A. Ross, Rodolph W. Westerfield & Bradford D. Jordon, 2003).

An efficient market is an assumed perfect market in which there are many small investors, each having the same information and expectation with respect to securities; there are no restriction on investment, no taxes, and no transaction costs; and all investors are rational, view securities

similarly, and are risk-averse, preferring higher returns and lower risk (Lawrence J. Gitman, 2000).

There are three forms of efficient market hypothesis based on types of information used in making market decisions. They are (i) weak-form efficiency, (ii) semi-strong form efficiency and (iii) strong-form efficiency. The difference between these forms relates to what extent information is reflected in the stock prices.

Weak form efficiency suggests that, at a minimum, the current price of a stock reflects the stock's own past prices. In other words, studying past prices in an attempt to identify mispriced securities is futile if the market is weak form efficient. Although this form of efficiency might seem rather mild, it implies that searching for patterns in historical prices that will be useful in identifying mispriced stocks will not work (Stephen A. Ross, Radolph W. Westerfield & Bradford D. Jordan, 2003).

Under the semi-strong form, all publicly available information is presumed to be reflected in securities' prices. This includes information in the stock prices series as well as information in the firm's accounting reports, the reports of competing firms, announced information relating to the state of the economy, and any other publicly available information relevant to the valuation of the firm (Haugen, 2000).

The strong form takes the notion of market efficiency to the ultimate extreme. This form includes private or inside information as well as that which is publicly available. Under this form, those who acquire inside information act on it, buying or selling the stock. Their actions affect the price of the stock, and the price quickly adjusts to reflect the inside information (Haugen, 2000).

The Random Walk Theory

If the price changes could be used to predict future price changes, investors could make easy profits. But in competitive markets easy profits don't last. As investors try to take advantage of the information in past prices, prices adjust immediately until the superior profits from studying past prices will be reflected in today's stock price, not tomorrow's. Patterns in prices will no longer exist and price changes in one period will be independent of changes in the next. In other words the share price will follow a random walk (Richard A. Brealey , Stewart C. Myers, 2000).

Random walk theory describes whether past prices can predict future prices. "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 cannot be used to predict the future in any meaningful way" (Eugene F. Fama). It means that the current size and direction of price changes are independent and unbiased outcome of previous prices. "The underlying theory of random walk in stock price behaviour statistically consists of two separate assumptions; (a) Price changes are independent random variable (b) price changes conforms to some probability distribution without specifying the particular shape or form of the distribution".

Independence is of course an important property of random walk-theory. However, this precise property must be satisfied in order to make the theory as a valid representation. But there lacks a perfect independent situation by the application of any statistical tools in general market. "Independence assumption of a successive price changes can be justified, if any outcomes produced by the tests that cannot allow the investor to

beat the return provided by the market averages. Then one can refer that the independence hypothesis of the random walk theory is accepted as law governing the behaviour of price series".

The stock market is always subjected to a steady inflow of information, much of which will have an effect on the set of anticipations that constitute price of particular security. Some of the information has a whole market wide impact such as change in monetary and fiscal policy on security prices. Some other information has an influence upon a group of stock price i.e. industry wide impact. And still some information such as announcement of dividend, bonus shares may have an influence on the price of particular security i.e. company-wide impact (Benjamin F. King, 1966).

Any distribution is consistent with the theory of random walk as it is correctly characterizes the process generating the price changes. The distribution of price changes provides descriptive information concerning the nature of the process generating price changes. The shape of the distribution provides help for the investor while committing his funds for particular security. Thus, by the careful analysis of distribution of price changes by the powerful statistical theory one can get important information either he may be investor, trader, market analyst or researcher.

The random walk theory says nothing more than that 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 the firm, random deviations from the intrinsic value, and though their active buying and selling of the state in question will force the price back to its equilibrium position (Donald E. Fisher & Ronald J. Jordan, 1995).

2.4 Review of Previous Related Studies

Scholars have been studying the way security price fluctuate for over a century.

2.4.1 Foreign Context

All of the empirical work 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 Bachelier (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.

Additional evidence that security prices followed a Random walk was found by Halbrook working 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 prices 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.'

In 1953, Kendall examined the behaviour 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 change of drew a random number from a population a fixed dispersion and added it to the current price to determine the next week's price.'

In 1959 H.V. Roberts compared Dow Jones industrial index with simulated price index generated on the basis of series of random numbers of for 1956. He found considerable similarity in the graphs 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 index cannot be used to forecast future share prices.

Alexander (1961) tested the filter rule technique on the closing prices of two indices, the Dow Jones industrials from 1897 to 1959 and standard & Poor's industrials from 1929 to 1959 and reported that in general, filters of all different sizes 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 date. But later in 1964, he corrected the short comings of his previous study were the failure to realize that dividends were cost rather than benefit. Alexander found that his filter 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.

Granger and Morgenstern (1962) published article about the random walk hypothesis of stock market behaviour applying spectral methods of analysis to the weekly, monthly end volume series from the 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 dependence between lagged price changes.

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 this 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.

King in 1966 also examined the behaviour of 63 securities from six industries of New York Stock Exchange from 1927 to 1960. This study also concludes that there exists low degree of coefficient estimates of serial correlation i.e. 0.018 which is close to zero. This helped him in concluding that stock market prices follows random walk model.

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. Therefore according to their demonstration, it seems that filter technique cannot provide returns larger than those under a naïve buy and hold policy.

Sweeney (1988) developed a filter rule that was able to earn modest profits. He replicated Fama & Blumer's results in the short positions usually generated the trading losses. In contrast, Sweeney found that the long positions were often profitable. So he used an $x\%$ filter rule as follows:

If the price of security rises at least $X\%$, buy and hold the security until its price drops at least $X\%$ from a subsequent high. Then, liquidate the long position and invest the proceeds in risk free short-term bonds until price reaches its next trough and then rises $X\%$. Sweeney also found that filter rule trading tended to be fairly and consistently profitable in some stocks. This filter rule could mechanically trade some stocks and earn statistically significant rate of profit after deducting tiny trading costs incurred. However this filter rule seems unprofitable if the higher commission rates that most investors pay were deducted.

Dryden (1970) concluded that the share price movements were non random. However in his later study, he used serial correlation and runs analysis to examine the daily closing prices of 14 individual stocks of U.K market and supported that the independence hypothesis of successive price change. 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.

Taking Indian Context, Rao (1988) conducted the study on the weekend price of the eight blue-chips stocks for five years from July 1982 to June 1987. He applied serial correlation analysis, runs tests, and filter rule technique. The result from all the tests supported the random walk hypothesis.

Levine, a senior Economist in the Finance and Private Sector Division of the World Banks' Policy Research Department (1996) has mentioned in his article that stock markets may affect economic activity through the creation of liquidity. Liquid equity markets make investment less risky and more cheaply if they need access to their savings or want to alter their portfolios. At the same time, companies enjoy permanent access to capital raised through equity issue.

Levine at his same study has found that stock market liquidity rather than stock market size and volatility of the stock market matters for growth. He has shown that with taking examples of 38 countries with more liquid stock market in 1976 grew faster than those economics with less liquid stock market in 1976. Thus stock market liquidity helps to forecast economic growth. He has used three measures of stock market liquidity, viz. values traded ration turnover and the value-traded ration divided by stock price, volatility. The study has revealed the countries that had more liquid stock markets in 1976 enjoyed both faster rates of capital formation and greater productivity over the next 18 years, because liquid stock markets encourage more investment.

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

2.4.2 Nepalese Context

In Nepalese context, there are few studies on the stock market prices. Some of the available relevant studies are reviewed in this part.

Anjani Raj Bhattarai (1990) has carried out a study on share market in Nepal. In which he emphasized the historical background and the analysis of various financial variables affecting the smooth operation of share market. He has applied both financial and statistical tools in the study. He found that out of 12 sampled companies, only two companies were useful to cross over the average price-earning ration, as a result, market price of shares were highly skewed. Moreover there was mismatch between calculated and quoted price.

Prof. R.S. Pradhan (1993) addressed 'Stock market behaviour in small capital market'. In an attempt to assess the stock market behaviour in Nepal, it specifically examine the relationship of the market equity, market value to book value, price earning and dividends with liquidity, profitability, leverages, assets turnover and interest coverage. He concluded that larger stocks have larger price earning ratio. Stocks paying higher dividends have higher liquidity, lower leverage, higher earning and higher turnover and higher interest coverage.

Mukti Aryal (1995) has studied behaviour of stock market prices with the objective to discuss the moment of stock market prices and to develop the empirical probability distribution of successive price change of an individual common stock and a stock market as a whole. This study was based on secondary information obtained from NEPSE and covers almost 8 months period and the sample was 21 listed stocks. He applied statistical tools to analyze the data. Through the analysis he has concluded that the assumption independence, as predicted by random walk model of security price behaviour has been refused at least for Nepalese context. This rejection of hypothesis made clear that the knowledge of past and present becomes useful in predicting the future movements of stock market prices.

Surya Chandra Shrestha (1999) has conducted research on stock price behaviour in Nepal, which aims to examine the efficiency of the stock market in Nepal. For this purpose he used the data constituting, the daily closing price of 30 stocks out of total listed companies in NEPSE. He applied serial correlation and runs test as statistical tools. He has concluded that the successive price changes are not independent random variable for the 30 sample stocks. Thus the random walk theory is not a suitable description for the stock market price behaviour in Nepal. Hence the changes in the future will not be independent from the price changes of the previous days. It also 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 native buy-and-hold policy.

Laxman Paudel (2001) under take his study on share price movement of joint venture commercial Banks by using various financial and statistical

tools like standard deviation, correlation, beta, t-test etc. The major objective of the study was to examine Nepal's stock market and to judge whether the market shares of different banking indicators explain the share price movements. He has concluded that the market share and growth rates of different banking indicators used are not captured by the market shares of these banks. The market value per share does not accommodate all the available historical information. The beta coefficient which measures the riskiness of individual security in relative term suggests that the stocks of joint venture commercial banks are less risky as compared to other average stocks traded in the stock exchange.

Mahesh Bhattarai, (2002) has also performed study on efficiency of Nepalese stock Market. The objectives of his study were to find out the level of efficiency of NEPSE and to find out some facts about the Nepalese investors and their behaviour. Using serial correlation and runs test for the daily market return he found that stock price movement is not independent rather than it has some relationship with the past price sequences. The subjective analysis of Nepalese investor's behaviour shows some serious problems in their side, which is responsible for market to be such inefficient. Investment decisions of Nepalese investors are based on the rumors and speculations. Thus, he concluded that the average Nepalese investors are behaving irrationally and the market inefficiency is also the consequence of irrelational behaviour of Nepalese investors.

Kiran Pradhan (2003) has done a research of shares price movement of listed companies in Nepal. The objective was to analyze the mobility of market share prices through analyzing the factors affecting the share price of the Nepalese stock market. For this total twenty listed companies are

taken as sample taking five –year period for analysis. The conclusion was the major determinants of stock price are earning, dividends, net worth of company etc.

Sandeep Regmi (2004) has conducted a study on corporate has conducted as a study on corporate performance and share price behaviour of listed companies in Nepal. The objective was to examine the relationship of market price of stock with earning per share and dividend per share. For this he used various financial ratios, correlation coefficient, standard deviation etc. He concluded that highly profitable companies stocks are highly priced. The investment decision of the individuals is based to a large extent on signals they get from capital market.

Pramila Subedi (2005) has also performed study on stock price behaviour in Nepal. She has analyzed the various factors affecting the share price of companies taking 10 companies as sample listed in NEPSE. The statistical tools used were mean, standard deviation, coefficient of variation, correlation coefficient, regression, hypothesis etc. The major findings were: Nepalese investors have not adequate education about the capital market thus stock prices in NEPSE shows rather irrational behaviour. Commercial banking sector has dominated the overall performance of NEPSE. Manufacturing and processing, trading and hotel sector have weak performance. Since NEPSE is in an increasing trend, in spite of unfavourable environment for investment, Nepalese citizens have a huge amount of scattered fund remained idle.

Thus various studies have been conducted in the field of share price behaviour. As the share prices are the crucial phenomenon in the stock market and large numbers of investors are attracted in this investment,

updating of previous studies is the most important. The new aspect of this study is to find out whether the successive daily price changes of all listed commercial banks are independent or not. In the same time risk and return of the sampled commercial banks are also examined to analyze the individual return patterns and risk involved.

CHAPTER III

RESEARCH METHODOLOGY

Any systematic research study requires a proper methodology to achieve the set of objectives. Research methodology is the systematic method of finding solution to a problem i.e. systematic collection, recording, analysis, interpretation and reporting of information. This chapter deals about the research methodology by which collected data are analyzed to get the results.

3.5 Research Design

This study is carried out to get the empirical result of the stock price movements. To conduct the study, analytical and descriptive research approach is adopted for the readily available historical data. All the data used in this study are secondary in nature.

3.6 Population and Sample

All the companies listed in NEPSE are considered to be the total population of the study. Out of them eight commercial banks that were listed and are doing share transactions in NEPSE are considered as the sample of the study.

The detail of sector wise listed companies is as follows:

Listed Companies	No. of Listed Companies	Percent
Commercial Banks	24	12.9
Development Banks	44	23.66
Finance Companies	66	35.48
Insurance Companies	20	10.75
Hotels	4	2.15
Manufacturing and Processing Companies	18	9.68
Hydro Power	4	2.15
Trading companies	4	2.15
Other companies	2	1.08
Total	186	100.00

The names of sampled commercial banks are as follows

- 1) NABIL Bank Ltd.
- 2) Nepal Investment Bank Ltd.
- 3) Standard Chartered Bank Ltd.
- 4) Himalayan Bank Ltd.
- 5) Everest Bank Ltd.
- 6) Bank of Kathmandu Ltd.
- 7) Nepal Industrial & Commercial (NIC) Bank Ltd.
- 8) Nepal SBI Bank Ltd.

3.7 Sources of Data

Data are collected from secondary sources. The sources are annual reports of listed commercial banks, SEBON, NEPSE and other concerned

organizations, bulletins publications of different authorities, researches, journals, unpublished thesis reports, newspaper, internet, websites etc.

3.8 Data Analysis Tools

The data collected from various sources leads to the logical conclusions, only if the appropriate tools and techniques are adopted to analyze such data.

3.8.1 Graphs of Time Series or Histograms

The series formed a set of values of a variable collected on different period of time is known as time series. The time may be yearly, monthly, daily etc. Most of the series relating to business and economic data are time series. The graphic representation on time series helps in the analysis of the changes in the variable with respect to the changes of time. The data forming the time series are graph or line graph or histogram. In time series graph, the independent variable i.e. time is taken along x-axis and the dependent variable under the study is taken along y-axis. Points are plotted with these dependent and independent variables. These points are joint by straight lines. A suitable title should be given to easy graph.

Graph of time series can be drawn either on a natural scale or on arithmetic scale. In natural scale, the absolute changes from one period to another are shown where as in ratio scale the rates of change or relative changes are shown.

3.8.2 Average (Mean)

An average is a single value calculated from a group of values to represent them. There are various types of averages like arithmetic mean,

simple and weighted averages, median, mode, geometric mean and harmonic mean. The most popular and widely used mean is arithmetic mean. The value of arithmetic mean can be calculated by adding together all the items and dividing this total by the number of item.

Mathematically,

$$\text{Arithmetic Mean (AM)} = \bar{R}_j \times \frac{R_j}{n}$$

Where

\bar{R}_j = expected realized rate of return

R_j = sum of all the values of variables

n = number of observations in sample

Symbolically,

$$R_j \times \frac{[P_t - P_{(t-1)}] + D_t}{P_{(t-1)}}$$

P_t = current market price of share

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

D_t = dividend in cash or stock (if any)

3.8.3 Standard Deviation

Standard deviation is quantitative measure of total risk of assets. The standard deviation of a distribution is the square root of the variance of returns around the mean. The following formula is applied to calculate the standard deviation, using historical returns:

$$\exists_j \times \sqrt{\frac{\sum R_j^2 - n \bar{R}_j^2}{n}}$$

Where

- Ξ_j = standard deviation of stock j
- R_j = realized rate of return at a time
- \bar{R}_j = expected realized rate of return
- n = number of observations in sample

3.8.4 Coefficient of Variation

The risk per unit of expected return can be measured by coefficient of variation, which is computed as follows:

$$Cv_j = \frac{\Xi_j}{\bar{R}_j}$$

Where,

- Cv_j = coefficient of variation
- Ξ_j = standard deviation of stock j
- \bar{R}_j = expected realized rate of return

3.8.5 Beta Coefficient

The beta coefficient is an index of systematic risk. It may be used for ranking the systematic risk of different assets. If beta is larger than one, then the asset is more volatile than the market which is called aggressive asset. If the beta is less than one, then the asset is considered defensive asset as its price fluctuations are less than the market. On the other hand, if the beta is equal to one, then the asset is said to average as its price moves proportionate to the market changes.

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

Where,

- β_j = Beta coefficient of stock j

Covariance(R_j, R_m)	= Covariance of the returns of stock j and Market
σ_m^2	= variance of market return

3.8.6 Regression and Correlation Analysis

Regression and correlation analysis are the techniques of studying how the variables in one series are related to variables in another series. Measurement of the degree of relationship between two or more variables is called correlation analysis and using the relationship between a known variable and an unknown variable to estimate the unknown one is termed as regression analysis. Thus correlation measures the degree of relationship between the variables while regression analysis shows how the variables are related. Regression and correlation analysis thus determines the nature and the strength of relationship between two variables.

3.8.6.1 Correlation Analysis

Correlation analysis is the statistical tool generally used to describe the degree to which one variable is related to another. The relationship, if any is usually assumed to be a linear one. In fact, the word correlation refers to the relationship or independence between two variables. For correlation it is essential that the two phenomena should have cause-effect relationship.

Correlation can either be positive or it can be negative. Whether correlation is positive or negative would depend upon the direction in which the variables are moving. If both variables are changing in the same direction, the correlation is said to be positive but when the

variations in the two variables take place in opposite directions, the correlation is termed as negative.

Coefficient of Correlation by Karl Pearson's Method

Karl Pearson's method is most widely used method of measuring the relationship between two variables. According to Karl Pearson Correlation Coefficient 'r' can be work out as under:

$$r = \frac{n \sum xy - \sum x \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

Where,

When $r = +1$, there is perfect positive correlation

When $r = -1$, there is perfect negative correlation

When $r = 0$, there is no correlation

When r lies between 0.7 to 0.999 (or. 0.7 to -0.999) there is high degree of positive (or negative) correlation

When r lies between 0.5 and 0.699 there is a moderate degree of correlation

When r is less than 0.5, there is low degree of correlation

3.8.6.2 Multiple Regression Analysis

In case of simple regression analysis we take only one independent variable and predict the value of dependent variable through the appropriate regression line. The extension of simple regression technique i.e., the use of two or more independent variables is known as multiple regression analysis through multiple regression analysis a variable can be predicted on the basis of more than one predictive factor. A regression line of X_0 on X_1, X_2 and X_3 is shown below.

$$X_0 = a + b_1X_1 + b_2X_2 + b_3X_3$$

Where

X_0 = value of dependent variable

X_1, X_2, X_3 = values of independent variables

a_1, b_1, b_2, b_3 = values of constant variables

3.8.6.3 Coefficient of Multiple Correlation

The most commonly used measure of correlation between two or more independent variables and a dependent series is that known as the coefficient of multiple correlation (symbolically represented as, $R_{0.1, 2, 3}$ can be worked out as under.

$$R_{0.123} = X \sqrt{\frac{a x_0 \Gamma b_1 x_1 x_0 \Gamma b_2 x_2 x_0 \Gamma b_3 x_3 x_0 \sum n \bar{x}_0^{-2}}{x_0^2 \sum n \bar{x}_0^{-2}}}$$

Where,

X_0 = value of dependent variable

X_1, X_2, X_3 = values of independent variables

\bar{X}_0 = mean of the values of the dependent variable

n = number of items in the sample

a, b_1, b_2, b_3 = the coefficients in the concerning multiple regression equation

3.8.6.4 Coefficient of Multiple Determination

The square root of $R_{0.1, 2, 3}$ is known as the coefficient of multiple determination. Here $R_{0.1, 2, 3}^2$ is mostly used for the decision making purpose.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

This chapter deals with the main body of the study i.e. analysis and findings of the collected data. The first section of this chapter examines the behavior of NEPSE Index and trading performance of sampled commercial banks. The second section provides the picture about the risk, return and market sensitivity of the sampled stocks. The third section of this chapter investigates the dependence of stock price with its book value, earnings and dividends. The last section highlights the empirical findings of the analysis.

4.5 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 brick in stock market activities. Share prices increased tremendously and the turnover volume was also high. The increased share price could not last for long and soon the prices began to fall.

4.5.1 Behaviour of NEPSE Index

Market index have always been of great importance in the world of security analysis and portfolio management. This index is used as a bench mark by the individual and institutional investors 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 systematic 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 figure I shows the monthly trend of NEPSE index abstracted from table I. The figure II shows the trend of NEPSE index from the fiscal year 1993/97 to 2007/08 abstracted from table II. The trend is in increasing manner.

Table 1

Monthly Closing NEPSE Index (Fiscal Year 2007/2008)

Month	NEPSE Index (Closing)
August	683.95
September	885.50
October	878.96
November	897.3
December	984.5
January	803.70
February	756.80
March	709.40
April	736.50
May	833.20
June	937.50
July	963.36

Source: NEPSE, Annual Trading Report, 2007/2008

Table 2

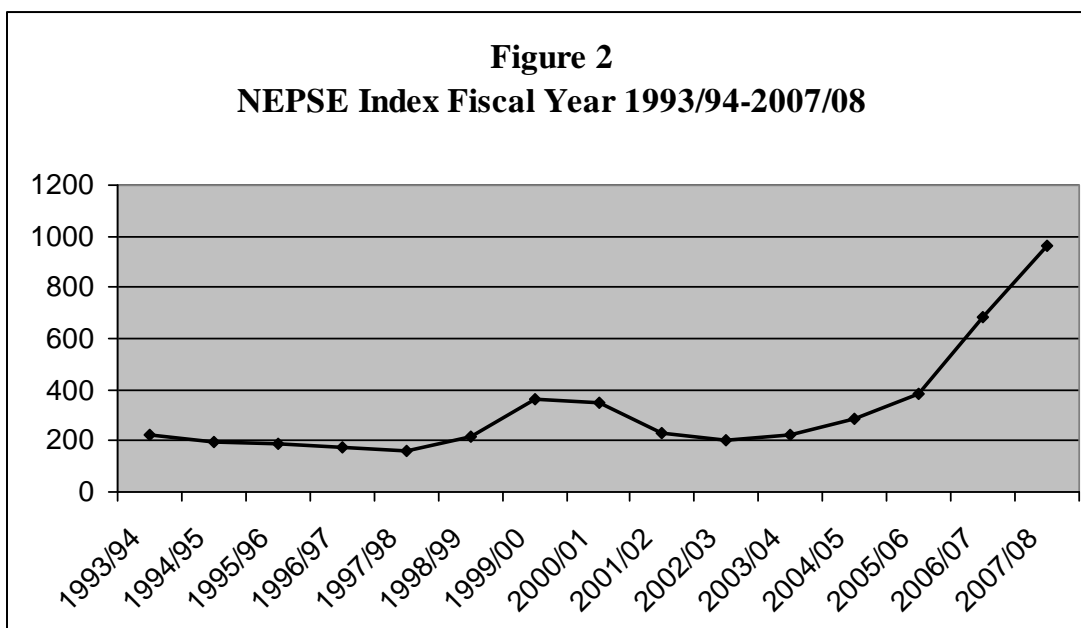
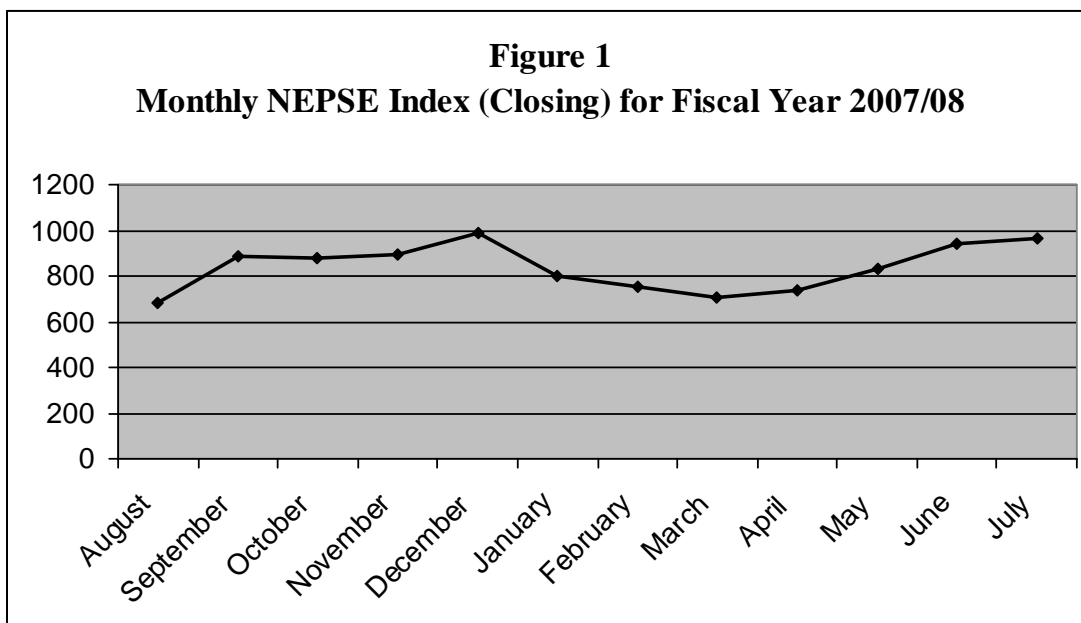
NEPSE Index (Fiscal Year, 1993/94-2007/08)

Year	NEPSE Index
1993/94	226.03
1994/95	195.48
1995/96	185.61
1996/97	176.31
1997/98	163.35
1998/99	216.92
1999/00	360.70
2000/01	348.43
2001/02	227.54
2002/03	204.86
2003/04	222.04
2004/05	286.67
2005/06	386.83
2006/07	683.95
2007/08	963.36

Source: NEPSE, Annual Trading Report, 2007/2008

By the end of the fiscal year 2007/08, the NEPSE index of the listed securities (price index) remained to be 963.36 points, which is 279.42 points higher than that of the last fiscal year end index of 683.95 points. The highest index during the fiscal year 2007/08 was recorded at 1064.09 points on December 17, 2007 and the lowest index was 677.98 points on

July 18, 2007. The monthly trend of NEPSE index is presented in below chart.

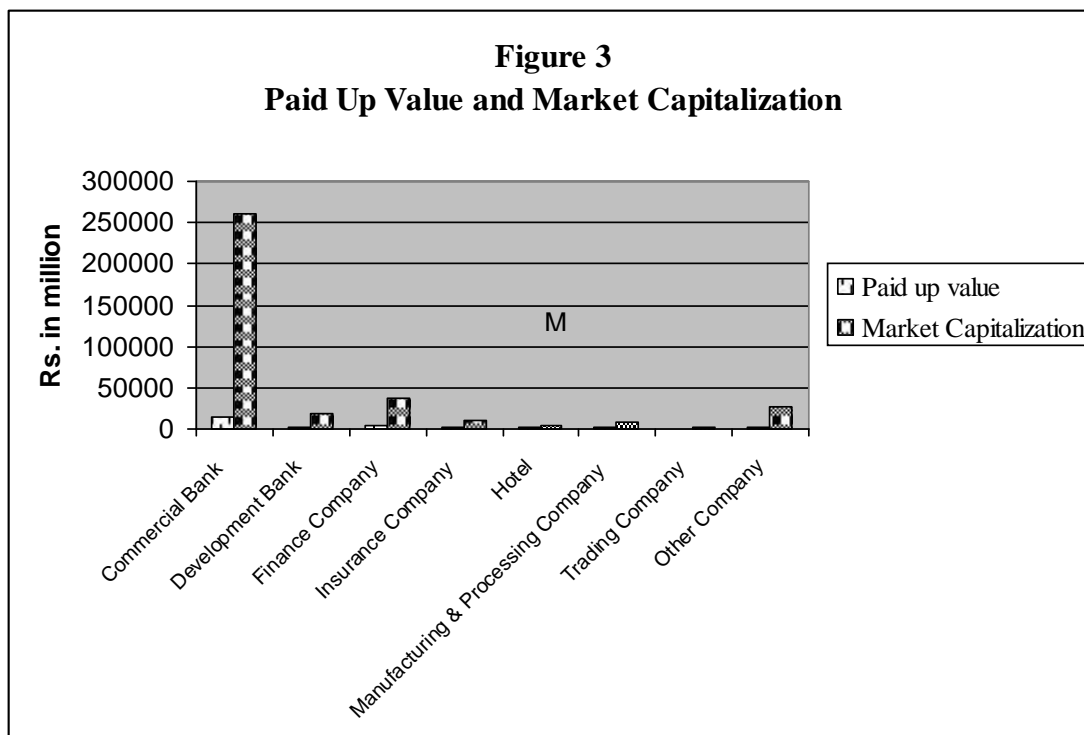


4.5.2 Paid up Value and Market Capitalization

Paid up value indicates the actual amount of the investment in assets where as market capitalization indicates the present value of the

investment. It means the value of market capitalization is related differs from the value of paid-up capital, because the value of market capitalization is related with market price of the share. The value of market capitalization changes due to changing sentiments of capital market. If the market condition is favourable the market value of assets increases substantially so that the value of company is increased and vice versa. The increased market value further suggests the good performance of the concerned companies. So, the investors are highly interested to such companies.

Table in appendix -1 presents groupwise monthly paid-up value and market capitalization value of the listed companies for the fiscal year 2007/2008. The percentage of paid-up value of commercial banks on total paid up value of listed companies is the highest among the eight groups. The proportion of paid-up value of trading group is the least. Further, the commercial banks also dominate the proportion of market capitalization. This indicates the performance of commercial banks is the best among the groups of companies listed in NEPSE. The detail is presented in figure 3.



4.5.3 Turnover

The table in appendix -2 exhibits the total amount of securities traded in the fiscal year 2007/2008 which is 22820.8 million. Among the various groups of industries commercial banks dominates other industries in terms of traded amount of Rs. 14351 millions (i.e. 62.90%). The higher number of turnover implies commercial banks are blue-clip stocks. The detail of groupwise turnover is presented in figure 4.

The figure 5 shows monthly turnover in the fiscal year, 2007/2008 abstracted from appendix 3. As the deal cancel is subtracted from the annual turnover, the total monthly turnover diminished to Rs. 7860.90 million. The initial month's trading turnover is 1717.60 million where as the highest trading turnover figure is for the month of January with trading amount of Rs. 3030.80 million. During this period the lowest turnover is Rs. 918.30 million recorded in April 2008.

Figure 4
Groupwise Annual Turnover

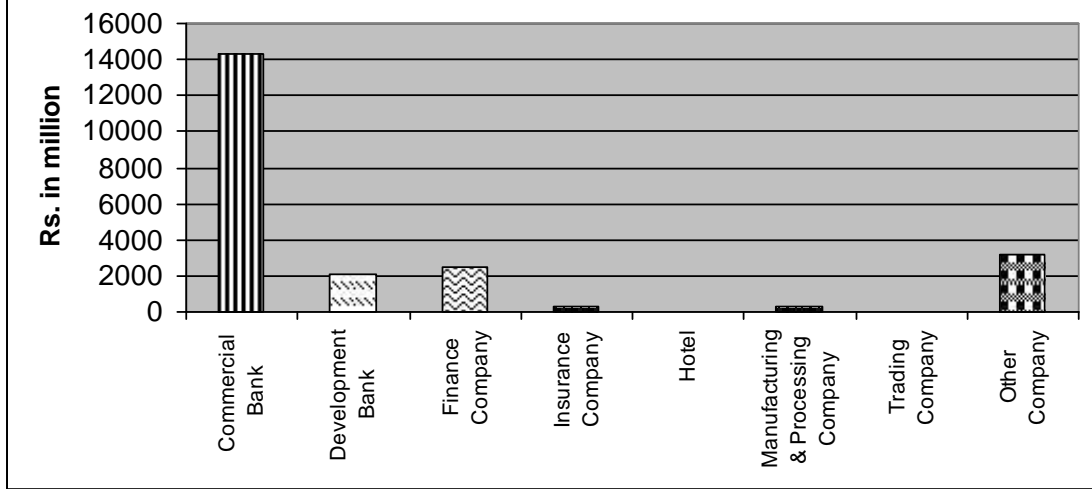
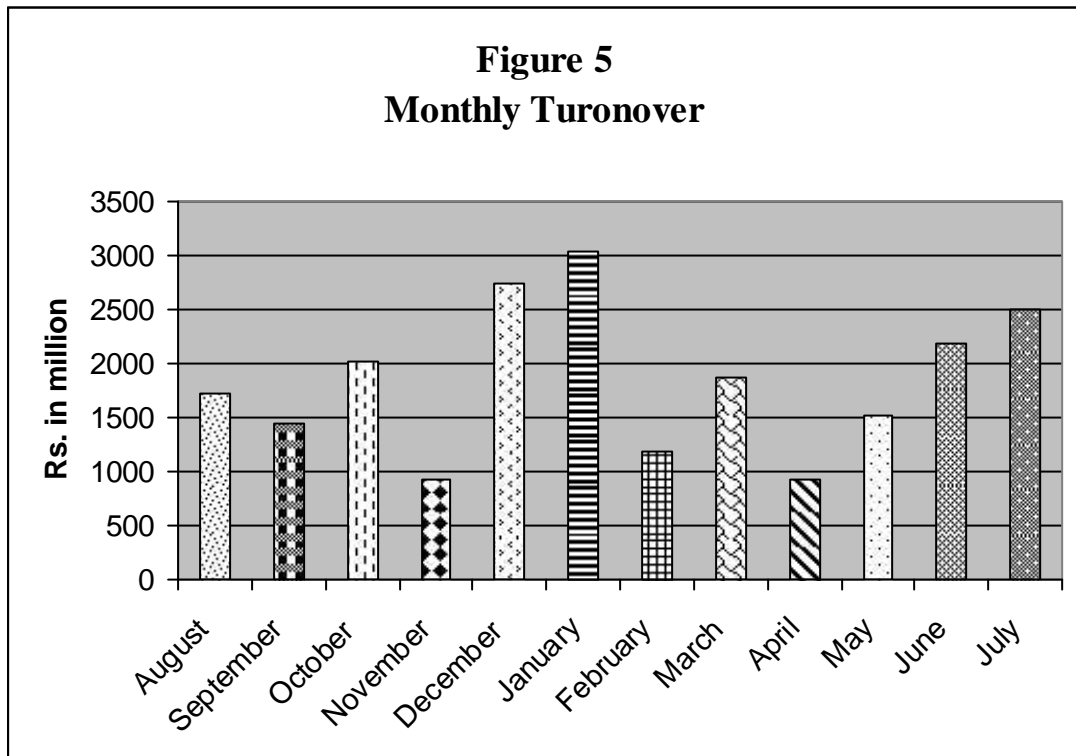


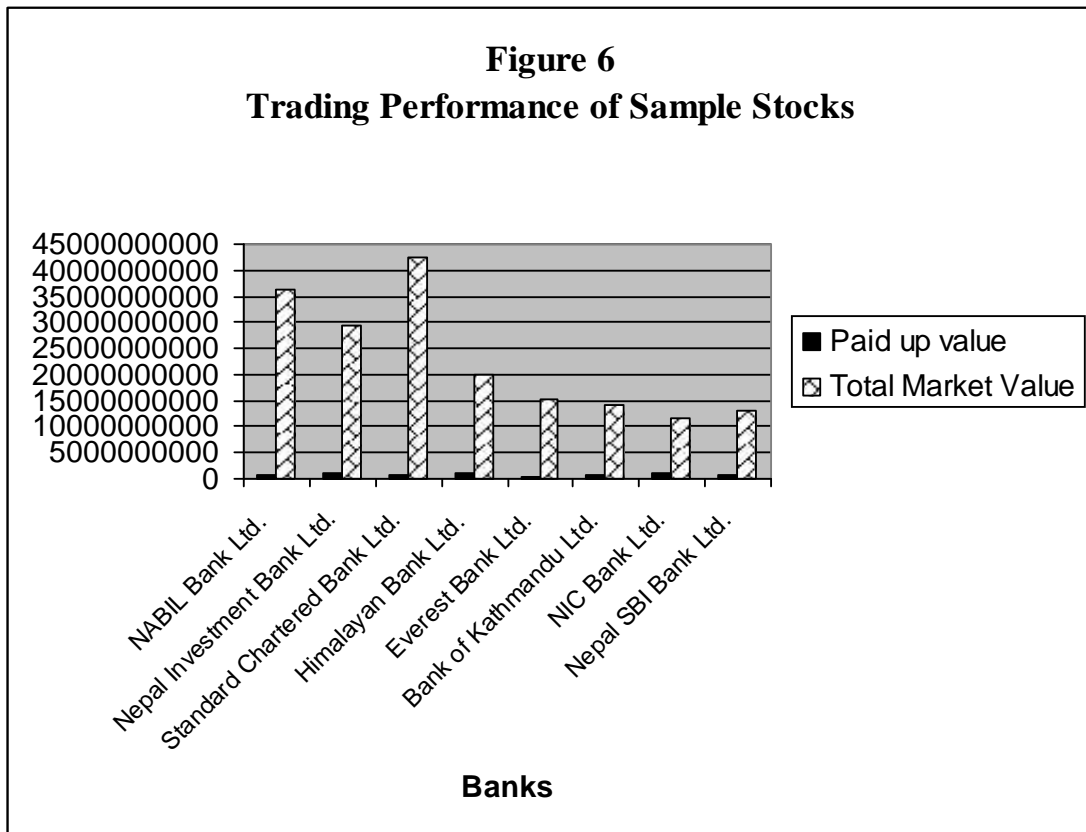
Figure 5
Monthly Turonover



4.5.4 Trading Performance of Sample Stocks

The table in appendix -4 gives different quantitative information about the stock market functioning during the fiscal year 2007/2008 for each and every company taken as sample.

In the first column there is the name of sampled stock. In second column, closing price of securities has been given. Column 3 and 4 contains the paid up value and total market value.



4.6 Risk and Return Analysis

Return is the reward for the investors. Investors invest their wealth in securities for the expectation of some return. Return may be realized return and expected return. Realized return is the return experienced by investor where as expected return is future return expected by investors on the basis of past realized return. Any variance in the return is considered as risk. 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.

The expected return is the average of realized rates of return. To measure risk, some statistical tools like standard deviation, coefficient of variation and beta coefficient are used. All these are calculated by using the formula described in research methodology chapter.

4.6.1 Mean and Standard Deviation

Mean is expected return for the next year. Standard deviation is a strong statistical device to measure the total risk involved in an investment which consist 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 for each sampled commercial bank are presented in the below table.

Table 3
Expected Realized Return and Standard Deviation of Sampled Commercial Banks

Stocks	Expected Realized Return (%)	Standard Deviation (%)
NABIL	50.72	40.41
NIB	25.59	24.16
SCBL	34.59	22.17
HBL	15.46	23.27
EBL	44.68	21.89
BOK	53.64	36.93
NICB	36.71	36.40
SBI	33.66	44.08

As shown in table, Bank of Kathmandu has higher rate of return of 53.64% with standard deviation of 36.93%. The stock of Everest Bank Ltd. could be considered as less risky, being the standard deviation lower

than that of other bank. The common stock of Nepal SBI bank is associated with 44.08% of the highest risk with expected return of 33.66%. This indicates that the expected return can be deviated by 44.08% in case of common stock investment of SBI bank.

Referring to annex-6, in six year's study there is 30.02% of the average market return the standard deviation is 27.07% which devotes that the market rate of return can be deviated by 27.07%.

4.6.2 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. Here also 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 bank. The coefficient of variation measures the risk per unit of return. The coefficient of variation of the realized rates of return of the sample are shown in the following table.

Table 4

Coefficient of Variation (CV) of Sampled Commercial Banks Ranking of Riskiness Based on CV

Name of Company	CV	Rank based on riskiness
NABIL	0.80	5
NIB	0.94	4
SCBL	0.64	7
HBL	1.51	1

EBL	0.49	8
BOK	0.69	6
NICB	0.99	3
SBI	1.31	2

On the basis of the CV common stock of HBL seems to be most risky. The common stock of EBL seems to be less risky. HBL and SBI stocks CV are higher than 1, so they are classified as risky assets.

4.6.3 Beta Coefficient

Standard deviation measures the total risk of an investment and 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 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 tends to move up or down with the general market as measured by some index. Here NEPSE index is taken into consideration to measure the movements of the general market regarding the stocks of listed commercial banks. 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 regarding the stocks of listed commercial banks.

Table -5

Beta Coefficient of Sampled Commercial Banks

Stocks	Beta Coefficient	Ranking of riskiness based on Beta Coefficient
NABIL	1.11	3
NIB	0.409	8
SCBL	0.564	6
HBL	0.839	5
EBL	0.538	7
BOK	0.877	4
NICB	1.145	2
SBI	1.377	1

By analyzing the above table, 3 out of 8 banks have beta more than one. Stocks of NIB, SCBL, HBL, EBL and BOK have beta less than 1 and can be termed as defensive stock. NABIL, NIC and SBI have beta more than 1 and can be termed as aggressive stocks in the market. Most of the stocks are less than one or slightly higher than 1 which shows that they are less sensitive to the market in comparison to the average stocks in the market.

4.7 Regression and Correlation Analysis

Regression and Correlation analysis is done to find out the relationship between MPS, EPS, DPS and BVPS. Here MPS is the dependent variable and EPS, DPS and BVPS are independent variables.

4.7.1 Correlation Analysis

Correlation between MPS and EPS, MPS and DPS and between MPS and BVPS is calculated to find out how these are related with each other for each sampled commercial bank.

1) Nabil Bank Ltd.

Correlation between MPS and EPS = 0.655

Correlation between MPS and DPS = 0.471

Correlation between MPS and BVPS = 0.754

The market price of NABIL stock has positive correlation with its earnings, dividends and its book value. Book value has high degree of positive correlation, dividends have low degree of positive correlation and earnings have moderate correlation with its market price.

2) Nepal Investment Bank Ltd.

Correlation between MPS and EPS = 0.716

Correlation between MPS and DPS = -0.689

Correlation between MPS and BVPS = 0.174

The market price of Investment Bank's stock has positive correlation with its earnings and book value but has moderate degree of negative correlation with its dividends. The earnings have high degree of positive correlation and book value has low degree of positive correlation with its market price.

3) Standard Chartered Bank Ltd.

Correlation between MPS and EPS = 0.037

Correlation between MPS and DPS = -0.748

Correlation between MPS and BVPS = 0.127

The market price of Standard Chartered Bank's stock has low degree of positive correlation with its EPS and BVPS but has high degree of negative correlation with its dividends.

4) Himalayan Bank Ltd.

Correlation between MPS and EPS = 0.886

Correlation between MPS and DPS = 0.590

Correlation between MPS and BVPS = 0.481

The market price of Himalayan's stock has high degree of positive correlation with its earnings while it has low degree of positive correlation with its dividends and book value.

5) Everest Bank Ltd.

Correlation between MPS and EPS = 0.968

Correlation between MPS and DPS = 0.049

Correlation between MPS and BVPS = 0.946

The market price of Everest Bank Ltd. has high degree of positive correlation with its earnings and book value while it has low degree of positive correlation with its dividends.

6) Bank of Kathmandu Ltd.

Correlation between MPS and EPS = 0.946

Correlation between MPS and DPS = -0.205

Correlation between MPS and BVPS = 0.014

The market price of Bank of Kathmandu Ltd.'s stock has positive correlation with its earnings and book value but has low degree of negative correlation with its dividends. The correlation between MPS and EPS is high but the correlation between MPS and BVPS is low.

7) NIC Bank Ltd.

Correlation between MPS and EPS = 0.769

Correlation between MPS and DPS = -0.137

Correlation between MPS and BVPS = 0.711

The NIC's stock price has high degree of positive correlation with its earnings and book value but has low degree of negative correlation with its dividends.

8) Nepal SBI Bank Ltd.

Correlation between MPS and EPS = 0.861

Correlation between MPS and DPS = 0.146

Correlation between MPS and BVPS = 0.773

SBI's stock price has positive correlation with its earnings, dividends and book value. Here the correlation is high enough with earnings and book value but low with its dividends.

4.7.2 Regression Analysis

The regression line of dependent variable MPS (x_0) on its independent variable earnings (x_1), dividends (x_2) and book value (x_3) is a

$$X_0 = a + b_1x_1 + b_2x_2 + b_3x_3$$

Here, a , b_1 , b_2 and b_3 are four constant values. The calculation for the constant values of each sampled commercial banks are presented below.

1) Nabil Bank Ltd.

The multiple regression analysis gives the multiple regression equation as:

MPS on EPS, DPS and BVPS

$$\text{MPS} = -12024.443 - 127.996\text{EPS} - 92.78\text{DPS} + 1013.007\text{BVPS}$$

The equation implies that the multiple regression constant (a) is -12024.443 suggests that when EPS, DPS and BVPS is zero, MPS would be Rs. -12024.443 (but in practice market price of shares never becomes negative, even zero). The constant for EPS is -127.996, implies that Rs. 1 increase in EPS will reduce the MPS by Rs. 127.996. The constant for DVS is -92.780 which implies that Rs. 1 increase in DPS will reduce the MPS by Rs. 92.780. Generally EPS and DPS have positive relation with

MPS. But here the relationship is negative because the price of NABIL stock has increased in high ration comparing to EPS and DPS. Sometimes the MPS also increases though its EPS and DPS has been decreased. The constant of BVPS (b_3) is +103.007 which implies that when BVPS increases by Rs. 1, the MPS also increases by Rs. 1033.007.

2) Nepal Investment Bank Ltd.

The multiple regression analysis gives the multiple regression equation as:

MPS on EPS, DPS and BVPS

$$\text{MPS} = 2760.489 + 62.813 \text{ EPS} - 22.217 \text{ DPS} - 19.334 \text{ BVPS}$$

The equation implies that the multiple regression constant (a) is +2760.489 which suggests that when EPS, DPS and BVPS are zero, MPS would be Rs. 2760.489. The constant for EPS is +62.813, implies that Rs. 1 increase in EPS will increases MPS by Rs. 62.813. The constant for DPS is -22.217, implies that Rs. 1 increase in DPS will reduces MPS by Rs. 22.217. The constant for BVPS is -19.334, implies that Rs. 1 increase in BVPS will reduces MPS by Rs. 19.334.

3) Standard Chartered Bank Ltd.

The multiple regression analysis gives the multiple regression equation as:

MPS on EPS, DPS and BVPS

$$\text{MPS} = 4567.741 - 12.718 \text{ EPS} - 69.713 \text{ DPS} + 19.311 \text{ BVPS}$$

The equation implies that the multiple regression constant (a) is +4567.741 which suggests that when EPS, DPS and BVPS are zero, MPS would be Rs. 4567.741. The constant for EPS (b_1) is -12.718, implies that Rs. 1 increase in EPS will reduce the MPS by Rs. 12.718. The constant for DPS (b_2) is -69.713, implies that Rs. 1 increases in DPS will reduces the MPS by Rs. 69.713. The constant for BVPS (b_3) is + 19.311, implies that Rs. 1 increase in BVPS will increases the MPS by Rs. 19.311.

4) Himalayan Bank Ltd.

The multiple regression analysis gives the multiple regression equation as:

MPS on EPS, DPS and BVPS

$$\text{MPS} = -6736.268 + 24.627 \text{ EPS} + 22.119 \text{ DPS} + 25.680 \text{ BVPS}$$

The equation implies that the multiple regression constant (a) is - 6736.268 which suggests that when EPS, DPS and BVPS are zero, MPS would be Rs. -6736.268. The constant for EPS (b_1) is +24.627. Suggests that Rs. 1 increase in EPS will increases MPS by Rs. 24.627. The constant for DPS (b_2) is + 22.119, implies that Rs. 1 increase in DPS will increase the MPS by Rs. 22.119. The constant for BVPS (b_3) is +25.680, suggests Rs. 1 increase in BVPS will increase the MPS by Rs. 25.680.

5) Everest Bank Ltd.

The multiple regression analysis gives the multiple regression equation as:

MPS on EPS, DPS and BVPS

$$\text{MPS} = -1676.542 + 32.704 \text{ EPS} + 3.764 \text{ DPS} + 4.932 \text{ BVPS}$$

The equation implies that the multiple regression constant (a) is -1676.542 which suggests that when EPS, DPS and BVPS are zero, MPS would be Rs. -1676.542. The constant for EPS is +32.704, suggests that Rs. 1 increase in EPS will increase the MPS by Rs. 32.704. The constant for DPS is +3.764, suggest that Rs. 1 increase in DPS will increase the MPS by Rs. 3.764 and the constant for BVPS is +4.932, suggests that Rs. 1 increase in BVPS will increase the MPS by Rs. 4.932.

6) Bank of Kathmandu Ltd.

The multiple regression analysis gives the multiple regression equation as:

MPS on EPS, DPS and BVPS

$$\text{MPS} = 1106.589 + 55.013 \text{ EPS} - 31.904 \text{ DPS} - 8.968 \text{ BVPS}$$

The equation implies that the multiple regression constant (a) is +1106.589, suggests that when EPS, DPS and BVPS are zero, MPS would be Rs. 1106.589. The constant for EPS is +55.013, suggests that increase in EPS by Rs. 1 will increase the MPS by Rs. 55.013. The constant for DPS is -31.904, suggests that Rs. 1 increase in DPS will reduce the MPS by Rs. 31.904. The constant for BVPS is -8.968 suggests that Rs. 1 increase in BVPS will reduce the MPS by Rs. 8.968.

7) Nepal Industrial and Commercial (NIC) Bank Ltd.

The multiple regression analysis gives the multiple regression equation as:

MPS on EPS, DPS and BVPS

$$\text{MPS} = 10193.423 + 193.121 \text{ EPS} - 50.306 \text{ DPS} - 100.178 \text{ BVPS}$$

The equation implies that the multiple regression constant (a) is +10193.423, suggests that when EPS, DPS and BVPS are zero, MPS would be Rs. 10193.423. The constant for EPS is +193.121, suggests that the increase in EPS by Rs. 1 increases the MPS by Rs. 193.121. The constant for DPS is -50.306 implies that Rs. 1 increase in DPS will reduce the MPS by Rs. 50.306. The constant for BVPS is -100.178, suggests that Rs. 1 increase in BVPS will reduce the MPS by Rs. 100.178.

8) Nepal SBI Bank Ltd.

The multiple regression analysis gives the multiple regression equation as:

MPS on EPS, DPS and BVPS

$$\text{MPS} = 2273.084 + 76.286 \text{ EPS} - 51.592 \text{ DPS} - 18.969 \text{ BVPS}$$

The equation implies that the multiple regression constant (a) is +2273.084, suggests that when EPS, DPS and BVPS are zero, MPS would be Rs.2273.084. The constant for EPS is +76.286 implies that Rs. 1 increase in EPS will increase the MPS by Rs. 76.286. The constant for DPS is -51.592 implies that Rs. 1 increase in DPS will reduce the MPS

by Rs. 51.592. The constant for BVPS is -18.969 suggests that Rs.1 increase in BVPS will reduce the MPS by Rs. 18.969.

4.7.3 Coefficient of Multiple Correlation and Multiple Determination

The correlation of MPS between the three independent variables: EPS, DPS and BVPS is presented by coefficient of multiple correlation (R). And coefficient of multiple determination (R^2) is calculated for decision purpose for each sampled commercial banks.

Table -6

Coefficient of Multiple Correlation and Multiple Determination

Stocks	R	R square
NABIL	0.923	0.851
NIB	0.869	0.755
SCBL	0.811	0.657
HBL	0.952	0.906
EBL	0.956	0.890
BOK	0.999	0.995
NICB	0.969	0.940
SBI	0.960	0.921

Here R^2 is equal to 0.851 for Nabil Bank Ltd. which indicates that the three independent variables EPS, DPS and BVPS explain 85.1% of the total variation in the dependent variable MPS. For Nepal Investment Bank the percentage is 75.5% for Standard Chartered Bank it is 65.7% for Himalayan Bank Ltd. It is 90.60%, for Everest Bank Ltd. it is 89.0%, for

Bank of Kathmandu it is 99.5%, for Nepal Industrial & Commercial (NIC) Bank Ltd. It is 94% and for SBI Bank Ltd. it is 92.1%. The remaining variation is through factors not mentioned.

4.8 Description of Major Findings

Based on the analysis of data and their interpretation, the major findings of the study in relation to the objectives set could be summarized as follows:

-) Common stock of Bank of Kathmandu is yielding highest realized rate of return 53.64%. Regarding the total risk, SBI stock consists of highest 44.08% of total risk which is riskiest among the sample.
-) Through the coefficient of variation analysis, it is found that there is highest percent of per unit risk for the stocks of Himalayan Bank Ltd. Stocks of Nabil, NIC and SBI are more aggressive to market changes as revealed by the beta more than 1.
-) MPS is positively correlated with its EPS, DPS and BVPS for Nabil Bank LTd., Himalayan Bank Ltd, Everest Bank Ltd., and Nepal SBI Bank Ltd. while MPS is negatively correlated with DPS for Nepal Investment Bank Ltd., Standard Chartered Bank Ltd., Bank of Kathmandu LTd., NIC Bank Ltd.
-) Through multiple regression analysis it is concluded that the EPS, RPS and BVPS are the major determining factor for MPS for all the sampled banks.
-) In group wise presentation of paid up value, market capitalization and turn over the commercial banking groups dominates the chart.

-) Among eight sample stocks Standard Chartered Bank Ltd. has high market value whereas NIC Bank Ltd. has low market value.
-) Looking at the NEPSE Index of 15 years period, it is in increasing trend and investment in stocks seems to be profitable.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The research attempts to analyze the share price behaviour of listed commercial banks in Nepal. This chapter deals with the findings and conclusions derived from the study of share price behavior of eight commercial banks. 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 deal the problems observed on the basis of the findings.

5.1 Summary

The study has been conducted with the main objective to analyze the share price behaviour of listed commercial banks in Nepal. It is mainly focused to develop the model accordingly and its empirical tests in previous chapters. Financial institutions are the backbone of the nation for economic development. Among them commercial banks play significant role in mobilizing savings in different sector where return can be maximized with low risk. Commercial banks play a vital role in development of the capital market through listing their common stock. Investors get opportunity to invest their funds in the common stocks of these banks. The common stocks of commercial banks are considered blue chip stocks. The market price and book value of there stocks are high enough. They have good earnings and are providing high dividends to their shareholders. People are attracted by the common stock of

commercial banks. Nepalese capital market has been passing through the transaction phase with various inconsistencies and hindrances. At the end of June/July 2007/08 there were 142 listed companies in NEPSE among them there are 17 commercial banks. As per nature of the study, secondary data of fiscal year 2002/03 to 2007/08 are used for this research. The data are secondary and are collected from annual report of sample commercial banks, NEPSE and SEBON. The regression analysis, correlation coefficient, multiple correlation coefficient and coefficient of multiple correlation coefficients along with standard deviation, coefficient of variation, beta coefficient and return analysis has been adopted as test methodologies.

Before analyzing the performance of eight commercial banks, the overview of Nepalese stock market has been sketched. The recent position and performance of stock 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, negligible development of corporate sector etc. However, the capital market experienced an impressive growth in last two years. Improvement in the peace and security situation, the central bank policy to increase the paid up capital of banks and financial institutions, market reform, institutional and infrastructural developments related to the capital market has contributed to its growth. In addition, the number of commercial banks branches has also increased in this period. With this, the outreach of banking services has increased with the average population served by one branch reduced to 46 thousand compared to 48 thousand a year ago and 58 thousands two year ago.

The Nepalese stock market continued to expand in the FY 2007/08 too. With the restoration of peace and subsequent boost in investors' confidence, major indicators of the share market grew tremendously. Almost all the major indicators of the secondary market like amount of shares traded, number of listed shares, the number of transactions, annual turnover, and total market capitalization of listed shares all increased in this period.

The groupwise annual turnover and market capitalization of listed companies shows the domination of commercial banks. The commercial banking group's overall domination continued as before because of a better performance of commercial banks. Commercial banks are running in profit and the risk is also affordable. The expected return, standard deviation, coefficient of variation and beta coefficient are calculated for risk and return analysis of sample commercial banks. The good track record of financial position, market penetration and continuous declaration of dividends encourage the potential investors to buy the shares of commercial banks.

Besides them, the relationship of MPS with EPS, DPS and BVPS for eight sampled commercial banks has also been presented. From the results of both regression analysis and correlation coefficient, it shows that there exist significant relationship between MPS and three independent variables EPS, DPS and BVPS. It also implies that these independent variables mostly explain the dependent variable.

5.2 Conclusion

The relationship between the market price and book value, market price and dividends and market price and earnings has been tested – with the

significance of correlation analysis. MPS has positive correlation with EPS, DPS and BVPS but for some banks it has negative correlation with DPS also. The multiple regression and correlation coefficient gives an idea whether the market prices fully reflect all the publicly available information or not. The analysis regarding the correlation coefficient and regression analysis show that the sample banks have positive relationship among MPS, EPS, DPS and BVPS. The independent variables somehow fully explain the dependent variable MPS, EPS, DPS and BVPS jointly; have significant effect in market price of shares.

Commercial banking sector has dominated the overall performance of NEPSE. The market price of these stocks is also high enough. Investors are getting sufficient return with affordable risk.

Though, risk NEPSE is in increasing trend, Nepalese citizens have a huge amount of scattered fund remained idle, which can be used in the industrial development through capital market to accelerate the economic growth.

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:

-) NEPSE index plays major role for creating investment prosperity. So for removing stock market difficulties such as transaction facilities should be managed in effective way by formulating investor's protection act.

-) Because of the persistence in the stock market price movements, professional traders either institution or individual can beat the market. Thus, it is recommended that the investors should be alert to exploit the opportunities through short term speculation.
-) The fluctuating trend of the share price is not predictable by general investor. So investors are recommended to get the consultancy service from the investment experts while making the investment. They should not direct their savings in shares haphazardly.
-) Signaling factors should be analyzed on a regular basis through the concern authorities so that the future movement of the price can be predicted from the side of analysts and investors.
-) To know the stock price trend, the investors should always be aware of the daily stock price and volume-traded figures of the stock price recorded by NEPSE. The public companies should provide the updated reports to the investors periodically, informing actual financial position of the company.
-) There is necessity of a separate body to analyze the risk pattern of the companies. It will provide proper guidance to the investors by disclosing right information and suggestion about the investment risk. This will help the investors to take proper investment decision at the right time to avoid or to minimize the level of risk.

BIBLIOGRAPHY

- Adhikari, Nawin, 2004, *Share Price Behaviour of Joint-Venture Banks in Nepal*, An Unpublished Master's Degree Thesis, Central Department of Management, T.U., Kirtipur
- Alexandar, Gordon J., William F. Sharpe & Jeffery V. Bailey. 2000, *Fundamentals of Investments*, New Delhi: Prentice-Hall of India Pvt. Ltd.
- Alexander S. Sidney, 1961, *Price Movements in Speculative Markets*, Trends or Random Walks
..... 2001, *Investments*, New Delhi: Prentice-Hall of India Pvt. Ltd.
New Delhi: McGraw-Hill Publishing Company Ltd.
- Aryal, Mukti, 1995, *The General Behaviour of Stock Market Prices*, An Unpublished MBA Thesis, T.U. Kirtipur
- Bhatta, Bharat, P., 1997, *Dynamics of Stock Market in Nepal*, An Unpublished M.A. Economics Thesis. Central Department of Economics. T.U. Kirtipur
- Bhattacharai Mahesh, 2002, *Market Efficiency and the Investors*, An Unpublished Master's Degree Thesis, Shankar Dev Campus, Kathmandu
- Bhattacharai, Anjani Raj. 1990, *Share Market in Nepal*, An Unpublished Master's Degree Thesis, Central Department of Management, T.U., Kirtipur
- Bodie, Zvi, Alex, Kane & Alan J. Marcus, 2002, *Investment*, New Delhi: Tata McGraw Hill Publishing Company Ltd.

- Brealy, Richard, 1970, *The Distribution & Independence of Successive Rates of Return from the British Stock Market*, Journal of Finance
- Cheney, John M. & Edward A., Moses, 1992, *Fundamentals of Investments*, New York: West Publishing Company Pvt. Ltd.
- Dryden M. Miles, 1970, *Statistical Study of U.K. Share Price*, Scottish Journal of Political Economy. Vol. 17.
- Fama F. Eugene & Blume M.E. 1996, *Filters, Rules & Stock Market Trading*, Journal of Business. Vol. 39.
- Fama F. Eugene, 1965, *The Behaviour of Stock Market Prices*, Journal of Business Vol. 37.
- Fisher E. Donald & Ronald J. Jordan 1995, *Security Analysis & Portfolio Management*, New Delhi: Pearson Education Inc.
- Fisher E Donald & Ronald J. Jordon. 1995, *Security Analysis and Portfolio Management*, New Delhi: Prentice Hall of India Pvt. Ltd.
- Francis, Jack C. 1991, *Investment: Analysis & Management*, New York: McGraw Hill Inc.
- Francis, Jack. C. 1997, *Investment Management*, New Delhi: S. Chand & Company Ltd.
- Gitman, Lawrence, J. 2000, *Principle of Managerial Finance*, New Delhi: Pearson Education Asia Pvt. Ltd.
- Gragner C. & Morgenstern O., 1962, *Spectral Analysis of New York Stock Market Prices*, Wall Street Journal Vol.3.
- Haugen, Robert A. 2009, *Modern Investment Theory*, New Delhi: Prentice-Hall of India Pvt. Ltd.
- Joshi, P.R. 2002, *Research Methodology*, Kathmandu. Buddha Academic Publisher and Distributors Pvt. Ltd.
- Kendall G. Maurice, 1953, *The Analysis of Economic Time Series*, Journal of the Royal Statistical Society. Series A. 116.

- King F. Benjamin 1966, *Market and Industry Factors in Stock Price Behaviour*, Journal of Business Vol. 39.
- Levin, Richard I., & Davis S. Rubin. 2000, *Statistics for Management*, New Delhi: Palgrave Publishers Prentice-Hall of India Pvt. Ltd.
- Mainali Mahesh, 2003, *A Study on Share Price Behaviour of Listed Commerical Banks*, An Unpublished Master's Degree Thesis, Shankar Dev Capus, T.U. Kathmandu
- Nepal Rastra Bank, (Various Issues), *Economic Report*, Kathmandu: Research Department, Nepal Rastra Bank
- Nepal Stock Exchange Ltd. (F/Y 2007/2008), *Annual Trading Report*, Kathmandu: Research & Planning Division. NEPSE
- Palat, Raghu, 1991, *Shares for Investment and Wealth: A Guide to Investing, Wisely*. New Delhi: Indian Book Distributors
- Paudel, Laxman, 2001, *A Study on Share Price Movements of Joint Venture Commercial Banks in Nepal*, An Unpublished Master's Degree Thesis, Shankar Dev Campus, T.U. Kathmandu
- Poudel, Laxman, 2001, *A Study on Share Price Movements of Joint Venture Commercial Banks in Nepal*, An Unpublished MBA Thesis, Shankar Dev Campus, Kathmandu
- Pradhan, Kiran, 2003, *Share Price Movements of Listed Companies in Nepal*, An Unpublished Masters Degree Thesis. Central Department of Management. T.U. Kirtipur. Kathmandu
- Pradhan, R.S. 2004, *Financial Management*, Kathmandu: Buddha Academic Enterprises
- Pradhan, R.S. 1994, *Financial Management Practices in Nepal*, New Delhi: Vikas Publishing House

- Rao N.K., 1989, *Stock Market Efficiency & Price Behaviour: The Indian Experience*, New Delhi: Tata Mc Graw-Hill Publishing Company Ltd.
- Regmi Sandeep, 2004, *A Study on Corporate Performance and Share Price Behaviour of Listed Companies in Nepal*, An Unpublished Masters Degree Thesis. Central Department of Management. T.U. Kirtipur. Kathmandu
- Reilly, Frank K. & Keith C. Brown. 2000, *Investment Analysis & Portfolio Management*, New York: Harcourt College Publishers
- Roberts Harry V. 1959, *Stock Market Patterns & Financial Analysis*. Journals of Finance Vol. 14.
- Ross, Stephen A., Radolph W. Wethersfield Bradford R. Jordon. 2003, *Fundamentals of Corporate Finance*, New Delhi: Tata McGraw-Hill Publishing Company Ltd.
- Securities Board, Nepal, 1997, *An Introduction to SEBON*, Kathmandu. Securities Board, Nepal
- Sharma, Neelam, K. 2003, *Monetary Economics*, Kathmandu: Pairabi Prakashan
- Shrestha Manohar K. 2001, *How Efficient is the Stock Market?*, Spot Light 20:35
- Shrestha Surya Chandra, 1999, *A Study on Stock Price Behaviour in Nepal*, An Unpublished MBA Thesis Public Youth Campus, Kathmandu
- Subedi Pramila, 2005, *A Study on Stock Price Behaviour In Nepal*, An Unpublished Master's Degree Thesis, Central Department of Management, T.U. Kathmandu
- Sweeney J. Richard, 1988, *Some New Rule Test: Methods and Results*, Journal of Financial and Quantitative Analysis Vol. 23

Vanhorne, James C. 2000, *Financial Management & Policy*, New Delhi: Prentice Hall of India Pvt. Ltd.

Waston, Denzil & Tony Head, 1998, *Corporate Finance: Principles & Practices*, London: Financial Times Professional Ltd.

Wolff, Harold K. & Prem R. Pant. 2002, *A Handbook for Social Science Research and Thesis Writing*, Kathmandu: Buddha Academic Publisher & Distributors Pvt. Ltd.

Working Halbrook 1934, *A Random Difference Series for the Use in the Analysis of Time Series*, Journal of the American Statistical Association Vol. 29.

Websites:

<http://www.sebonp.com>

<http://www.stocks.about.com>

<http://www.nepalstock.com.np>

<http://www.nyse.com>.

Appendix 1

(Rs. in million)

S.N.	Sector	Paid up value	Percent	Capitalization	Percent
1.	Commercial Bank	14667.3	49.78	259955.3	70.98
2.	Development Bank	2322.7	7.88	17997.8	47.97
3.	Finance Company	4317.3	14.65	37674.4	10.29
4.	Insurance Company	1669.7	5.67	11241.4	3.07
5.	Hotel	1552.9	5.24	4809.6	1.31
6.	Manufacturing & Processing Company	2539.7	8.62	7516.9	2.05
7.	Trading Company	78.7	0.27	1170.2	0.32
8.	Other Company	2317.8	7.87	25881.9	7.07
	Total	29465.8	100.00	366247.5	100.00

Appendix 2

Groupwise Turnover

(Rs. in million)

S.N.	Sector	Amount	Percent
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1.	Commercial Bank	14351.0	62.90
2.	Development Bank	2075.2	9.09
3.	Finance Company	2518.5	11.04
4.	Insurance Company	264.9	1.16
5.	Hotel	27.7	0.12
6.	Manufacturing & Processing Company	343.4	1.50
7.	Trading Company	33.6	0.15
8.	Other Company	3206.5	14.06
9.	Total	22820.8	100

Appendix 3
Monthly Turnover

(Rs. in million)

Month	Turnover
August	1717.6
September	1441.6
October	2024.4
November	921
December	2732.4
January	3030.8
February	1181.9
March	1876.4
April	918.3
May	1519.3
June	2178.5
July	2497.8

Appendix 4
Trading Performance

Name	Closing price	Paid up value	Total Market Value
NABIL Bank Ltd.	5275	689216000	36356144000
Nepal Investment Bank Ltd.	2450	1203915400	29495927300
Standard Chartered Bank Ltd.	6830	620784000	42399547200
Himalayan Bank Ltd.	1980	1013512500	20067547500
Everest Bank Ltd.	3132	491400000	15390648000
Bank of Kathmandu Ltd.	2350	603141300	14173820550
NIC Bank Ltd.	1248	943877100	11779586210
Nepal SBI Bank Ltd.	1511	874527800	13214115060

Appendix 5

Key Indicators of Sampled Commercial Banks

1. Nabil Bank Ltd.

Year	MPS	EPS	DPS	BVPS	Annual Rate of Return
2001/02	700	55.25	30	233	-
2002/03	740	84.66	50	267	12.86
2003/04	1000	92.61	65	301	43.92
2004/05	1505	105.49	70	337	57.50
2005/06	2240	129.21	85	381	54.48
2006/07	5050	137.08	100	418	129.91
2007/08	5275	108.31	60	354	5.64

2. Nepal Investment Bank Ltd.

Year	MPS	EPS	DPS	BVPS	Annual Rate of Return
2001/02	760	33.59	0	307.95	-
2002/03	795	39.56	20	216.24	7.24
2003/04	940	51.70	15	246.99	20.13
2004/05	800	39.50	12.5	200.80	-13.56
2005/06	1260	59.35	20	239.67	60.00
2006/07	1729	62.57	7	234.37	37.62
2007/08	2450	57.87	7.5	223.17	42.13

3. Standard Chartered Bank Ltd.

Year	MPS	EPS	DPS	BVPS	Annual Rate of Return
2001/02	1575	141.13	100	363.86	-
2002/03	1640	149.30	110	103.15	11.11
2003/04	1745	143.55	110	399.25	13.11
2004/05	2345	143.14	120	422.38	41.26
2005/06	3775	175.84	130	468.22	66.52
2006/07	5900	167.37	80	512.12	58.41
2007/08	6830	131.92	80	401.52	17.12

4. Himalayan Bank Ltd.

Year	MPS	EPS	DPS	BVPS	Annual Rate of Return
2001/02	1000	69.26	25	220.02	-
2002/03	836	99.45	1.32	247.81	-16.27
2003/04	840	49.05	0	146.93	0.49
2004/05	920	47.91	11.58	239.59	10.90
2005/06	1100	59.24	30	228.72	22.83
2006/07	1740	60.66	15	264.74	59.55
2007/08	19800	62.74	25	247.95	15.23

5. Everest Bank Ltd.

Year	MPS	EPS	DPS	BVPS	Annual Rate of Return
2001/02	405	32.91	0	170.75	-
2002/03	445	29.90	20	150.09	14.81
2003/04	680	45.60	20	219.87	57.30
2004/05	870	54.20	0	171.52	27.94
2005/06	1379	62.80	25	217.67	61.38
2006/07	2430	78.40	10	292.75	76.94
2007/08	3132	91.82	20	321.77	29.71

6. Bank of Kathmandu Ltd.

Year	MPS	EPS	DPS	BVPS	Annual Rate of Return
2001/02	254	2.00	10	171.83	-
2002/03	198	17.72	5	192.52	-20.08
2003/04	295	27.50	10	218.38	54.04
2004/05	430	30.10	15	213.60	50.85
2005/06	850	43.67	18	230.67	101.86
2006/07	1375	43.50	20	164.68	64.12
2007/08	2350	59.94	2.11	222.51	71.06

7. NIC Bank Ltd.

Year	MPS	EPS	DPS	BVPS	Annual Rate of Return
2001/02	245	1.36	0	105.24	-
2002/03	220	5.19	0	110.45	-10.24
2003/04	218	13.65	0	124.11	-0.91
2004/05	366	22.75	10	136.84	72.48
2005/06	496	16.10	0.53	127.74	35.66
2006/07	950	24.01	1.05	139.17	91.74
2007/08	1248	25.75	1.05	138.09	31.48

8. Nepal SBI Bank Ltd.

Year	MPS	EPS	DPS	BVPS	Annual Rate of Return
2001/02	401	9.61	0	131.88	-
2002/03	255	11.47	8	134.03	-34.41
2003/04	307	14.26	0	146.80	20.39
2004/05	335	13.29	0	159.54	9.12
2005/06	612	18.27	5	151.78	84.18
2006/07	1176	39.35	12.59	178.04	94.21
2007/08	1511	28.33	0	160.57	28.49

Appendix 6 Market Return

Year	NEPSE Index	Annual Return (R_m)
2001/02	227.54	-
2002/03	204.86	-9.97
2003/04	222.04	8.39
2004/05	286.67	29.11
2005/06	286.83	34.94
2006/07	683.95	76.81
2007/08	936.36	40.85