CHAPTER-I
INTRODUCTION

1.1 General background:

Nepal is one of the least developed countries in the world. The paucity of the capital has been the main cause for under development. Nepal launched planned economic development more than five decades ago. Recently, it has adopted the path of economic development through liberalization However; any strategy for development requires a steady for supply of medium to long term capital funds for productive investment. For the mobilization of available resources, capital market intermediary through which effective bridging of the deficits units and surplus units can be ensure. Capital market institutions are engaged in the mobilization of the savings from surplus unit and deploy funds into the deficits unit for productive investments.

Securities market implies that mobilization of the fund through issuance of securities: shares, bond and debentures by corporate sector and bond, bills and debentures by government. The securities available in this market can be in the form of equity such as shares and stocks, debt instruments such as corporate bonds and government securities or equity equivalents such as convertible bonds or debentures. These securities traded in the market are generally a negotiable and hence can be traded in the secondary markets. Non securities market refers the mobilization of financial resources by the financial institutions engage in performing the financial intermediation process. Financial intermediation involves the transaction of deposits, hire purchase, leasing and other loans, insurance premium and claims, pension funds, employee's contributions to social securities etc. Stock market acts as a part of capital market and can provide major source for the investment in the economic development. Stock market includes primary and secondary markets. Primary market is the market in which new company's stocks are issued by the corporate sector. These securities can be offered by the method of public floatation or private placement. The secondary market on the other hand deals with the previously issued shares mainly traded through the stock exchanges, over the counter market, or direct dealing.

In this respect, capita market plays a crucial role in the mobilizing a constant flow of

saving and channeling these financial resources for expanding productive capacity in the countries. Capital market can be decomposed into securities market and non- securities market. Stock market is a medium through which corporate sector mobilizes funds to finance productive projects by issuing shares in the market. Similarly, stock market provides the best investment opportunity to the investors. Thus, the effective collection of small amounts of savings and transferring funds into competitive and efficient uses require a well functional capital market to facilitate the process. In the absence of an efficient capital market, which attracts the funds from the savers and channels them for the industrial development, the saving which would otherwise have been available through capital markets are prone to remain dormant o leave the country or deflected to less efficient uses.

The stock market also imparts liquidity to the securities holders. This offers an opportunity for investors to invest in long term venture, while market as enables, them to convert their securities into liquid cash before maturity of the project. Furthermore they can invest their current income against future income thereby achieves their time preference of consumption. The liquid stock market also promotes the primary issuance of shares, because investors participate in the issuance of the share market for getting back the fund easily. The primary market is positively and highly elastic with the stock prices and the liquidity in the secondary market.

Also, to maintain high liquidity in the stock market, the market has to be efficient in pricing the stocks. In an efficient market, prices "fully reflect" available information. In this situation each and every moment the actual prices of the security represents best estimate of intrinsic value. That is, participation in the market would be dealing with "fair" prices of the security. In these conditions, the investment decision problem of general investors is simplified because random selection of the stocks which matches their portfolio risk class, does not differs in its returns significantly from others. In essence in a random walk market the security analysis problems of the average investor is simplified. Further the pricing in the market allocates the scarce resources efficiently into the best use of the interest of the country. "The ideal is market where prices are accurate signals for capital allocation.

The world economy has grown by 4.0 percent in'2003 from 3.0 percent of 2002. This increase in world economic growth is attributable to the adoption of expanding financial

and monitory policies by United States of America and south East Asian countries. Due to the increasing global industrial product, increasing confidence of the consumer, remarkable improvement in the world trade, dynamism in the financial markets, and encouraging growth in the economy of United States of America and emerging economies of Asia, the estimated global economic growth rate was 5.1 percent in 2004. Similarly, on the basis of continuation of supporting environment of the financial markets, increasing trend in the employment, probability of continuation of economic growth of the emerging economies, the estimated world economic growth rate was 4.6 percent in 2005.

The economic growth rate of the developed countries increased in 2005 in comparison to that of 2004, and reached 3.4 percent. However, this rate is estimated to decline in 2006. Likewise, the economic growth rate of the developing countries has also increased has also increased in 2005 and reached to 7.2 compared to that of 6.4 in 2004. The economic growth rate of South Asian countries in 2004 and 2005 remained same at 7.1 percent, while, it is projected to be 6.5 percent in 2006. The economic growth rate of India is estimate to be 7.3 percent in 2004, which was 7.5 percent in 2003. Remarkable improvement has been noted in the economic growth of Pakistan in 2004 compared to that of 2003, while Bangladesh was able to maintain the same growth rate of the last year. In 2006, the economic growth rates of both the countries are estimated to improve further.

The organized stock market is a recent phenomenon in context of Nepal. In the beginning of the organized open-out cry system, there was a brisk in the stock market activities. The stocks price increased tremendously and also the turnover volume was high. The increased stocks price could not last for long and soon began to fall. With this regards, in the past 11 years [i.e. F.Y. (1995/96-2005/2006)] Nepalese securities market has not been developed at its desired rate, the annual average amount of public issue was Rs. 620.04 million, annual average amount of turnover was Rs. 1423.48 million, annual average paid up value of listed securities was Rs. 8197.96 million, annual average market capitalization was Rs 30723.70 million, annual average percent turnover on paid up value was 16.35, annual average percent of turnover on market capitalization was 4.30, This indicates low level of resource mobilization, and low level of turnover in the national economy.

1.l.l. Development of securities market in Nepal:

The history of securities market in Nepal in not very long, it began when shares of Biratnagar Jute Mill Ltd. and Nepal Bank Ltd. were issued to the general public in the year 1937. Further this, an important event in the development of the securities market in Nepal was the enactment of the company act in 1964 with the objective of generating investor's interest in corporate securities by introducing the feature of limited liability, the first issuance of Government bond in 1964 and the establishment of Securities Marketing Center, [SMC] in 1976. Later in the year 1984[SMC] was renamed as Securities Exchange Center [SEC] which was entitle for managing and operating primary and secondary markets of long-term Government and Corporate Securities.

But the first amendment in the Securities Exchange act, 1983 in 1993 opened the way for the restructuring of securities market in Nepal, which led to the establishment of Securities Board of Nepal [SEBO] in 1993 and in the same year [SEC] was convert into Nepal Stock Exchange Ltd. [NEPSE] and opened the trading floor on 13th January 1994 which helped, the securities business start through members, market intermediaries such as Broker, Market maker etc.

The second amendment in Securities Exchange Act, 1983 this amendment made provision for registering securities businesspersons in [SEBO] which provided licenses to the securities businessperson. Also the amendment made mandatory provisions for the listed companies to submit annual and semi-annual reports to the Securities Board of Nepal [SEBO]. Currently, there are 24 stock brokers, 2 securities dealers, 9 issue manager's one stock exchange and 125 listed companies in the Nepalese securities market. At present, the status securities market has been performing smoothly than in the past. The improvement in the securities market has been attributed to various factors including good prospect of corporate earnings and household participation in the stock market. Investors not only relay on the statement of broker, lint they also have a concern/over the financial information of the concern company. Therefore the shares of companies with better prospect of dividend, capital increment have normally higher prices in the securities market. Also, raise in the stock price may be due to the gradual fall in the bank interest rates on its deposit causing excess liquidity in the market. Thus, the securities market in Nepal has witnessed its strength surprisingly and this has raised hopes for sustained growth of corporate undertaking now a days.

1.1.2. Primary Market

Before the establishment of the Securities Exchange Centre (SEC) there was no, single institutional arrangement to undertake nee issue and mange the sales of the shares and debentures of the corporate bodies. A public limited company could make public offering according to the provisions of the Companies Act 1964. When the SEC came into existence, it started managing new issues of shares and debentures according to the guidelines for new issues and sales management 2043(1986). It used lo charge commission for its service to the issuing company varying from a minimum of 1.35 percent to a maximum of 2.0 percent depending on the amount of new issue. A lower amount of transaction would attract a higher rate of commission and vice versa. Therefore, the issuing company had to pay commission of 2.0 percent for the management of new issue and sales services to SEC for an amount up to Rs2.5 million. The rate of commission for new issue of Rs 1O million and above was 1.35 percent. At present, the rate of commission ranges from 1.5 percent to 2.5 percent depending upon the value of securities sold. The issue a managers who arrange the sale of securities charge commission to (he issuing company at the rate of 2.5 percent of the value of the sold securities up to Rs2.5 million. If the value of the issue is more than Rs. 1O million, the rate of commission is 1.5 percent.

Primary market denotes the market mechanism for the original sale of securities by an issuer to the public. Also it is the market in which securities are sold at the time of their initial issuance corporation and governmental bodies issues new securities in the primary market by the method of public floatation and private placement. The term primary market can also be defined as the market in which corporation's raises (lie new capital by selling newly created stocks and. receives the proceeds from these transactions. Thus securities absorbs new fund or capital from the initial issues is known as primary market.

1.1.3 Secondary Market:

Secondary market is the market in which securities are traded that has been issued at some previous point of time. In other word we can say that the market where outstanding securities are traded is known as secondary or more popularly, the stock market. So, secondary market in a simple sense is the market in which exiting, outstanding, securities are traded between the investors. It is the market that creates the price and allow for

liquidity. If there have no place to sell their assets without liquidity many people would not invest at all. The corporations whose securities are being traded are not involved in receiving market transaction and thus, do not receive any funds from such a sale. The function of secondary market is to provide liquidity for the secondary purchased in the primary market.

In the fiscal year 2004/05, a total of Rs.1476.82 million was mobilized by 12 public companies from the securities market. This amount is higher by 43.7 percent compared to that of the last fiscal year. In the last fiscal year, total listed companies in Nepal Stock Exchange Ltd. were 114, which have increased to 125 till the end of this fiscal year. Total market capitalization of the listed companies at the end of this fiscal year is recorded to be Rs. 61365.89 million, which is 48 percent higher than that of the last fiscal year. In this fiscal year, the contribution of market capitalization to the GDP has been estimated to be 12.17 percent. The price index of the listed securities (NEPSE Index) has closed at286.67 points in the fiscal year. It is 64.63 points higher than that of the last fiscal year. Securities market indicators in the fiscal year 2004/05.

1.1.4 An Introduction on SEBO/N:

Securities Board, Nepal was established in the year 1993 A.D on May 26th, under the provision of securities exchange act 1983 A.D[first amendment]. Since the date of establishment, it has been concentrating to improve the legal and statutory framework, for the healthy development of capital market. In the year 1997 on January 30th the first act was amended for the second time. This amendment paved the way for the establishment of SEDQ/n as an apex regulatory body as it livened the horizon by bringing market intermediaries directly under its jurisdiction and also made it mandatory for (lie corporation to report annually or semi-annually to SRRO/N. Although the second amendment in the act established to make direct relationship of SEBO/N with market intermediaries and the listed companies, supremacy in its jurisdiction is yet to be established and clearly recognized.

Also in order to improve such situation, SEBO/N focusing on the major areas where improvements are necessary has launched a four-year strategies plan [1998-2002 AD] with major thrust in four major policy development areas. SEBO/N has also drafted anew securities and Exchange Act, which has sought to improve inconsistencies observed in

the present act and establish SEBO/N as an apex regulatory of the securities market.

Thus, SEBO has a dual role of regulating and developing the securities market in the country. Nepal accession to the World Trade Organization has added greater challenges in the securities markets, as it should be opened to foreign investors and foreign securities businesspersons. Fulfilling more roles and responsibilities with limited resources can seriously compromise the potential of a thriving capital market and also due to low level of income from the securities market, SEBO has no alternative then to depend on government funding to carry out its regulating and market development roles. However in the long term SEBO cannot relay on government grant and would have to look for other alternatives to provide SEBO with greater operational and financial autonomy.

The function of SEBON are as follows:

- Register securities and approve prospectus of public companies.
- Provide license to operate stock exchanges.
- Provide license to operate securities businesses.
- Give permission to operate collective investment schemes and investment funds.
- Draft regulations, issue directives and guidelines, and approve by laws of stock exchanges.
- Take enforcement measures to ensure market integrity.
- Review reporting of issuer and listed companies, and securities market.
- Conduct research, study and awareness programmers regarding securities market.
- Coordinate and cooperate with other domestic as well as international regulators.
- Frame policies and programmers relating to securities markets and advise HMG/N in tills aspect.

As per the Securities Ordinance, 2006, the governing Board of SEBON is composed of seven members including a full time Chairman appointed by the HMG/N for the tenure of four years. Other member of the Board are joint secretary from Ministry of Finance, joint secretary from Ministry of Law, Justice and Parliamentary Affairs, representative from Nepal Rastra Bank, representative from Institute of Chartered Accountants of Nepal, representative from Federation of Nepalese Chambers of Commerce and Industries, and one member appointed by the HMG/N on the recommendation of SRBON from amongst the market experts.

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

1.1.5 NEPSE:

NEPSE is non profit organization, which has been operated under securities exchange act, 1983. The basic objective of NEPSE is to impart free marketability and liquidity to the Government bonds and corporate securities by facilitating transaction in its trading floor through financial intermediaries such as broker, market maker etc. Eleven issue mangers and twenty-seven brokers were appointed to avail the daily transactions of buying and selling of securities under its restructure program in the year 1993. Also in the year 1994 on January 13th NEPSE opened for its newly appointed brokers and market makers. NEPSE has adopted an "Pen-Out-Cry" system. It means truncations of securities are conducted on the open auction principle on the trading floor. The buying broker with the highest bid will post the price and his code number on the buying column, while the selling broker with the lowest offer will post the price and code the number on the selling column on the quotation board. The market makers quote their bid and offer price on their own board before the floor starts. Once the bid and offer price match, contracts between the buying and selling broker or between broker and market maker are conducted on the floor.

NEPSE has adopted a T+5 to T+3 systems which mean that settlement of transactions should be done within 5 working days following the transactions day. Settlement will be carried no Out on the basis of paper verses payment.

1.1.6 Prices of the Securities:

Securities market is the most important part of any financial market were prices of the Securities determine the performance of the company and information dissemination process. Entrepreneurs who have ideas but lacks funds to establish, manage and operate the business can collect the required funds by mobilizing the scattered public saving by

issuing tradable securities like shares, debenture and. others in the market. Id public response positively then it is called successful issue because of over-subscription. So the forces of demand supply determine a stock market price. When the supply of stock is greater than that of demand, price exceeds supply than price of the securities tends to raise. Thus, there are essentially two concepts to explain this stock price movement. They are:

- Technical analysis
- Fundamental analysis

In technical analysis the historical financial data of the securities are recorded in charts and diagrams and the technicians i.e. the person who analyze securities base on this approach tend to look backward and they think little about future earnings and dividends. So, a technical analyst usually attempts to predict short term price movements and makes recommendations concerning the timing of purchases and sales of the securities.

Fundamental analysis is based on the information relating to the companies and the person who analyzes the securities based on facts and figures called fundamental analyst. Generally fundamental analyst is concerned with matters such as future earnings and dividends, so they tend to look forward and make judgment of the securities with risk return framework, based upon earning power and economic environment. And also this analysis helps to evaluate company on (lie basis ol' its records i.e. Sales, earnings, dividends, products, management as well as the economy and industry outlook.

1.2 Focus of study:

Financial markets play a catalyst role in the development of the country's economy. Many countries around the world have been developed due to highly sophisticated financial institutions and also due to the countries capital market moved towards liberal economic polices. This emerging market has shown extraordinary growth with high volatility, which has attracted many investors into these markets. So one of the main focuses of this study deals with the synthesis of the process of development of the securities market and the consequent market behavior along this process.

In Nepalese context, there is lack of wider investment opportunities that can provide favorable results, with regards to this most of the savings of the public has not been utilized. In addition, most of the existing and potential investors are not well knowledge about the real financial strength and weakness of the financial companies in which they are investing or going to invest their funds, further they cannot analyze and interpret the real financial position of a company on the best of a company on the best of available data and information to reach at the correct conclusion. Therefore, this study may help investors to think about restructuring their investment portfolio along with timely decision making for their investment.

1.3 Statement of the Problems:

Securities market is also known as capital or stock market, comprising two segments; Primary and Secondary market. These markets are said to be complimentary and are foil for each other. The main objective of the securities market is to create opportunity for the public to obtain return by mobilizing the lengthy tenure capital. In other word; securities market provides investors good investment opportunity with fair return and instant liquidity with minimal risk of loss. After the economic liberalization policy introduced for the socio-economic development of the country in the year 1990, most of the businesses were running in profit, in this regards directive principles and policies of the state do work for the government to act upon the economic justice for securities market development and also to protect investors.

Nepalese securities market has been seen unparallel detonation over the past decade in terms of listed companies, trade volumes and investor's interest. But, currently it's passing through a grave segment of capital sector development. The reason for the securities market failing to perform may be due to the policy maker's inability to make appropriate policy for the development of the securities market. And also most of the government efforts for the development of securities market have not been up to the mark. Although government policy to reform the securities market under the extended structural program have left some favorable conditions for the development, but due to improper implementation of the policy it has also become unsustainable.

Regarding the stock price movement in the market, one of the approaches assumes that the market is inefficient in pricing the stocks. The technical analysis theory argues that

the analysis of the historical prices and voluminous data reflects meaningful information which helps to forecast future price movements. Therefore the investment strategy based upon the technical analysis is more profitable than naive buy -and -hold policy on timing of selling and buying. There are many market professionals among all the securities market participants, holds the view that information concerning a securities. Fundamental or intrinsic value causes the stock price trend, which can be useful in achieving the expected returns. This trend is believed to be generated by the gradual discounting not instantaneous adjustment of new information to the price of the security owner time by the investors in the general securities market. Fundamentalist seek early knowledge of stock price changes through the analysis of internal and external factors having a potential effect on the intrinsic value of firm's common stocks.

In contrast to above explanation, random walk theories deny the existence of "trends" or "patterns" of stock price movements. They maintain that the stock market is highly competitive or organized markets, where all the available information up to date would be incorporated on present price so the securities.

This price adjustment would establish instantaneously by the competitive interaction of knowledgeable and rational investors, so according to this theory securities market is efficient.

However, in context of Nepal behavior of the stock prices shows the misevaluation of the stock price in the secondary market. Due to the investors not getting timely information regarding the price earnings suffers a lot. They cannot identify the good and bad stocks. The prices of some stocks that have sustained loss for long period readied to peak while other stocks with sustained profits could not increase. So, the lack of value judgment to determine the stock prices is the serious problem. This mostly happened due to the inability of regulatory bodies of the securities market to regulate the market mechanism and also the failure to gain faith of the investors.

The problem can be solved only when real determinants of stock prices are diagnosed and identified. The research studies on these issues are not enough in the Nepalese securities market. Therefore, the present study is carried out to analyze the market stock price of the Nepalese securities market in relation to banking sectors so as to recommend for improvement.

1.4. Objectives of the study

The main objective of this study is to analyze stock price behavior of commercial banks in Nepal. On basis of this fundamental objective the study has set the following specific objectives:

- To evaluate the trend in paid up value, market capitalization, trading turnovers, behavior of NEPSE index and other securities market performance indicators.
- To analyze the market stock price behavior of commercial banks in the Nepalese securities market.
- To analyze the sensitive of the stock in relation with the market by the help of beta co-efficient.
- To provide suggestion and recommendation on the basis of findings.

1.5 Significance of Study:

Securities markets are the mechanism through which the saving of the people and institutions are canalized towards the long term productive investment. Therefore, timely development of securities market is quite essential for the economic growth of the country.

When securities market is booming the financial market is in good condition and when the securities market is declining financial market is not favorable. This also represents the countries policy towards industry. Economy policy as well as securities market policy is formulate by government rules and regulation of different sector.

Analysis of various capital market performance indicators such as trading turnover, paid up value, market capitalizations, NEPSE index, behaviors of stock prices, etc are of paramount importance for potential investors. No systematic study on these aspects has been done so far. Apart from these, no attention has been paid so far to examine the behavior of stock price in context of Nepal. Thus; this study will contribution to the literature of securities market in Nepal. Besides this, researcher, shareholders, financial institutions and insurance companies may also benefit in one way or others form this study.

1.6 Limitation of the Study:

Notwithstanding the conceptualization made, analysis performed and generalization drawn regarding the stock market price behavior, there are many areas for criticism in tins study. Due to the time and resources constraints, this study has as with some others following limitations :

- The study has confined six commercial banks common stock and its yearly movement of prices in the secondary market.
- The study is based on the secondary data made available to the public by the NEPSE, SEBO/N and concerned banks.
- Unwillingness to provide with necessary data is also one of the limitations.
- For our study purpose only common stock or ordinary shares are taken.

1.7 Chapter Scheme :

The study is carried out for the partial fulfillment of the requirements for the degree of master of business studies [MRS]. The research report will be organized under the prescribed format by the Central Department of Management, Tribhuvan University. The study is organized into following five different chapters.

Section One :

The first section covers General backgrounds. Focus of the study. Statement of problem, objectives of study. Significance of the study, and limitation of the study.

Section Two :

The second section deals with framework of the study and reviews of major empirical work in the areas of securities market and stock price behaviors. This includes reviews of the theories of the concerned topic and other major studies conducted inside or outside the country.

Section Three:

Under this section, research design, population & samples of the study, sources and types of data, data collecting instrument, procedures of gathering data and tools for analysis of data i.e. formulas is used.

Section Four:

One of the most important parts of the study is, this section, under which a careful examination of available facts will be analyzed systematically so that we can come to certain conclusion and can recommend the results. This part concerns with evaluating the trend in paid up value, market capitalization, trading turnovers, behavior of NEPSE index, and also to analysis market share price along with the sensitivity of the stock in relation to market with the help of beta co-efficient.

Section Five:

At last, in the fifth section summary of the whole study along with conclusion & recommendation are presented so that the readers can make improvement in near future in similar types of study.

CHAPTER -II
REVIEW OF LITRETURE

In this chapter, some of the basic literatures on the stock price behavior are reviewed like scholarly articles, books, dissertations etc. It includes literatures regarding theories on the topic and reviews of the empirical evidences of the previous study done within or outside of the country.

The first section of this chapter incorporates the conceptual framework of the securities market in Nepal. It also includes the fundamentals analysis, technical analysis and efficient market theories. However, in the second section it covers the studies which was conducted in the past weather in foreign or in Nepalese context.

2.1 Conceptual Framework of Financial Market:

2.1.1 Securities Market:

Securities market is recognized as an effective way of raising funds for business enterprises along with this it also provides an opportunity to individuals and institution for investment through buying and selling securities in the securities markets. Nepal being one of the least developed country in the world, so the need for securities market has become pre-requisite in order to provide stable long-term finance for companies and a means of saving to the general public, as an efficient tool for resource allocation. However, in the securities market demands for the funds comes from agriculture, industry, trade and government while supply of funds comes from individual or corporate saving, institutional investors and surplus of government.

In the fiscal year 2003/04, the preliminary estimate of Nepalese economic growth rate was 3.1 percent where as it's revised estimate was 3.4 percent. It was estimated that in the Fiscal year 2004/05, the economic growth rate has dropped to 2.5 percent because of the unfavorable weather, negative growth rate in tourism, trade and construction sectors as well as the impact of national and international events in the national economy.

In the fiscal year 2005/06, the total fixed capital formation is estimated to have increased by 7.1 percent, where as in the fiscal year 2004/05 it had increased by 9.3 percent. In this fiscal year, despite the decreased growth rate of total capital formation, its ratio with the

GDP has marginally increased to 19.3 percent from 19.2 percent of the last fiscal year. This increment in the ratio of total capital formation to the GDP is due to the total capital formation growth rate being marginally higher than the growth rate of GDP. In this fiscal year, growth rate of total fixed capital formation of the private sector is estimated to be 10.5 percent where as in the last fiscal year the rate was 12.2 percent. Similarly, growth rate of total fixed capital formation of the public sector is estimated to be 0.6 percent decreasing from 4.1 percent of the last fiscal year.

Among the monitory indices, total credit and investment of the commercial banks increased by 10.9 percent during the period of first eight months of the fiscal year 2003/04, whereas in (lie same period of the last fiscal year, it had increased by 8.8 percent. Of the total credit and investment, level of credit to HMG/N from commercial banks during this period increased by 1.5 percent, which had increased by 8.1 in the same period of the fiscal year 2003/04. During the first eight months of this fiscal year, credit to the government Enterprises from the commercial banks increased by 9.7 percent, which had increased by 10.3 percent during the commercial banks to the private sector in this fiscal year increased by 10.5 percent, which had increased by 9.1 percent during the corresponding period of the last fiscal year.

Table 1: Nepalese Economic Indicator

S.N.	Description	Fiscal Year		
		2003/04	**2004/05**	**2005/06**
1	Economic Growth Rate (Percent)	3.4	3.4	2.5
2	Gross Domestic Product (Growth rate)	7:7	8.4	6.3
3	Gross National Income (Rs. In Million)	437546	8.4	504101
4	Gross National Saving (Rs. In Million)	47286.9	474129	539367
5	Gross Domestic Saving (Rs. In Million)	7097.2	50854.4	75233
6	Total Domestic Saving (Rs. In Million)	5477.2	7418.5	64869
7	Total Investment (Rs. In Million)	11904.8	13479.1	137885
8	Total Consumption (Rs. In Million)	40189.7	473435.9	464133
	Foreign Trade// (Rs. In Million)	190188	122236	118497
	a. Import// (Rs. In Million)	13677	86507	81548
	b. Export// (Rs. In Million)	59911	36112	36949
	Total Fixed Capital Formation (Growth rate)	6.6	9.3	7.1
	a. Fixed Capital Formation in Private sector	12.6	12.2	10.4
	b. Fixed Capital Formation in Public Sector	-2.5	4.1	0.6
	Total Loan of Commercial Banks#(Growth rate)	11.0	8.8	10.6
	a. to HMG/N# (Growth rate)	25.1	8.1	1.5
	b. To Public Sector# (Growth rate)	-6.3	9.7	10.3
	c. To Private Sector# (Growth rate)	-9.5	9.1	10.5

Source: Economic Survey 2005/06

As at mid March * Revise Estimate ** Preliminary Estimate

2.1.2 Concept of Stock valuation:

Security valuation process quickly absorbs sensational information or events happening around the business world. This economic process generates rational stock prices. The fluctuations in the prices may appear to confuse as they are randomly fluctuated when new information is arrived. When the investors takes a decision for long positioning or short positioning whit a hope to earn for themselves, they becomes a part of economic

force that moves stock price toward their values. After delving into hedge and arbitrage, it can be observed that the activities aligning prices and values of the stock. The decision to take many of this investment position can be traced to security analysts to estimate values. Value estimates provide the focal point towards which economic forces push the securities.

Also, the concept of stock valuation is a heart of financial management. The value of any traceable items is, whatever the bidder is prepared to pay, with the well established market in the assert concerned and if the asset is fairly homogeneous, valuation is relatively simple. Therefore, as long the market accept being reasonably efficient, the marker price can be trust as a fair assessment of value.

Earnings per Share

Earnings per share are calculated by taking a company's net earnings and dividing by the number of share outstanding. For example, if a company reports Rs. 10 million in net earnings for the previous year and has 5million numbers of outstanding shares, then that company has an EPS of Rs. 2 per share. So, EPS can be calculated for the previous year ["trailing EOS"], for the current year ["current EPS"), or for coining year ["forward EPS"]. Note that last year's EPS would be actual, while current year and forward year EPS would be estimates.

P/E Ratio:

EPS is the best way to compare earnings across the companies, but it doesn't tell you about how the market values, the stock. That's why fundamental analysis use the price -to -earning ratio, more commonly known as P/E ratio, to figure out how much the market is willing to pay for a company's earnings. One can calculate a stock's P/E ratio by taking its price per share and dividend by its EPS. For instance, if a stock is price at Rs. 50 per share and it has an EPS of Rs. 5 per share, then it has a P/E ratio of 10. (Or equivalently, you could calculate the P/E ratio by dividing common stocks, is simply the present value of all the future income which the owner of the intrinsic value of the stock i.e., good anticipation of cash flows and capitalization rates corresponding to future period, and secondly, it is not clear about what will appropriate discount rate should be for a particular stock. So, fundamentalist attempts to reach best estimate of the intrinsic value

of the stock of the company's, also studying company's sales, profit, dividends, management competency, and oilier economic & industrial factors which determines its future income and prospect of the business opportunities.

2.1.3 Concept of Risk and Return:

The General Concept : Higher Expected Returns Require Taking Higher Risk most investors are comfortable with the notion that taking higher levels of risk is necessary to expect to earn higher returns. In this note, we explain two important models that have been developed to make this relationship precise. Then we explain how such tools can be used by investors to evaluate assets.

Why should riskier companies have higher returns ? Intuitively, an investor would require a higher expected return in exchange for accepting greater risk. And, we do, in fact observe this relationship when we look back at historical long-run returns of stocks, bonds, and less risky securities as shown in the first chart.

To understand this, imagine an investment that is expected to generate $1 million per year in perpetuity. How much is someone likely to pay for such an asset? The answer depends on the uncertainty of risk of the cash flows. With complete certainty that the cash flows will all be paid when promised, an investor would discount the asset at the risk-free rate. As the degree of uncertainty increases, the return required to justify the risk will be much higher, resulting in a much lower price the investor would be willing to pay, simply because of the higher required discount rate.

Furthermore, economists have made the assumption that investors are risk-averse, meaning that they are willing to sacrifice some return (and accept even less than the expected present value of the future returns) to reduce risk. If this assumption is true, we would expect investors to demand a higher return to justify the additional risk accepted by holders of riskier assets.

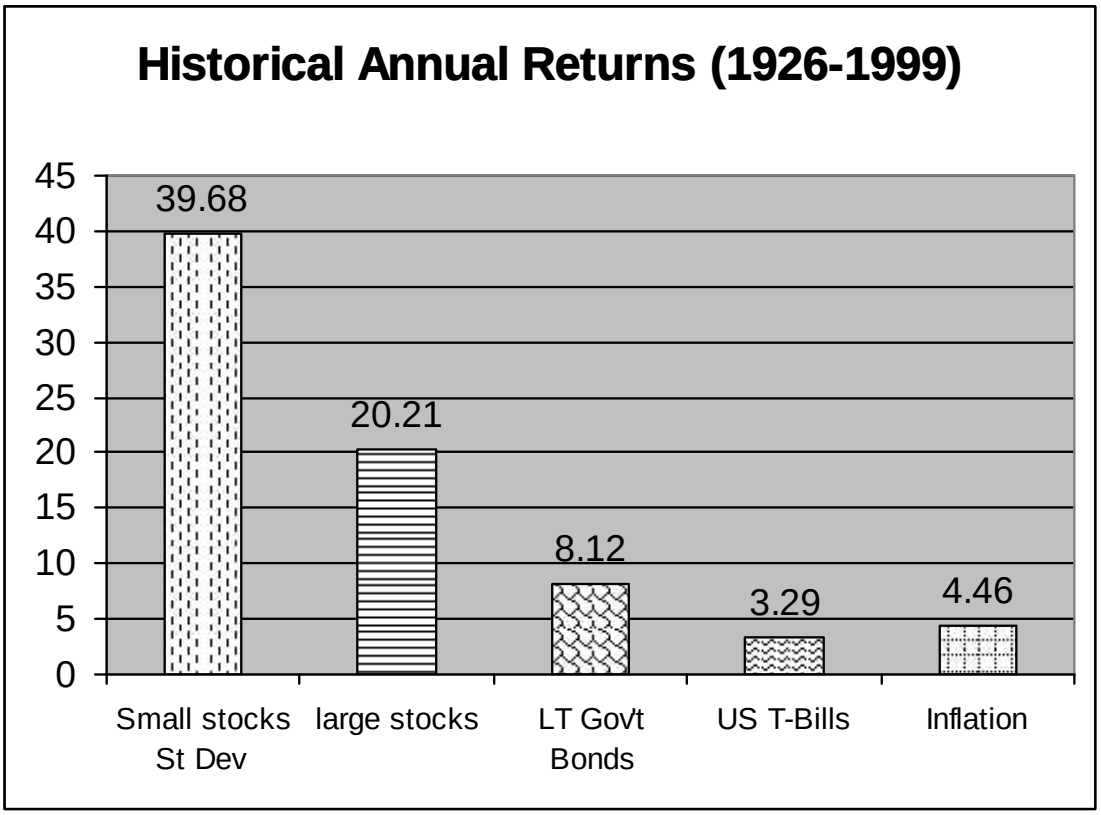

Figure No. 1

Source: Stocks, Bonds, Bills and Inflation 2002 Yearbook, 2002 Ibbotson Associates.

This case note was written under the direction of Kent Womack and Ying Zhang by Adam Borehert, Lisa Ensz, JoepKnijin, Greg Pope, and Aaron Smith. We would appreciate suggestions to make the exposition more clear or correct.

Volatility as a proxy for risk

One widely accepted measure of risk is volatility, the amount that an asset's return varies through successive time periods, and is most commonly quoted in terms of the standard deviation of returns. An asset whose return fluctuates dramatically is perceived to have greater risk because the asset's value at the time when the investor wishes to sell it is less predictable. In addition, greater volatility means that, from a statistical perspective, the potential future values of more volatile assets span a much wider range.

Diversification and Systematic Risk

Although somewhat counterintuitive, an individual stock's volatility in and of itself, is not the most important consideration when assessing risk. Consider a situation in which an

investor could, without incurring additional cost, reduce the volatility associated with her portfolio of assets. This is most commonly accomplished through diversification. Consider holding two stocks that have the same expected returns, instead of one stock. Because stock returns will not be perfectly correlate with each other, it is unlikely that both stocks will experience extreme movements (positive or negative) simultaneously, effectively reducing volatility of the overall portfolio. As long as assets do not move in lock step with one another (are less than perfectly positively correlate), overall volatility can be reduced, without lowering expected returns, by spreading the same amount of money across the multiple assets.

This concept of diversification is one of the main tenets of modern portfolio theory - volatility is reduced through the addition of more assets to a portfolio. It should be noted, however, that (lie rate of volatility reduction from adding assets decreases as (lie number of assets in the portfolio increases. As the chart below demonstrates for one potential scenario (20% volatility on each asset and zero covariance between assets), the general rule of thumb is that a portfolio containing 30 or more assets is considered well-diversified.

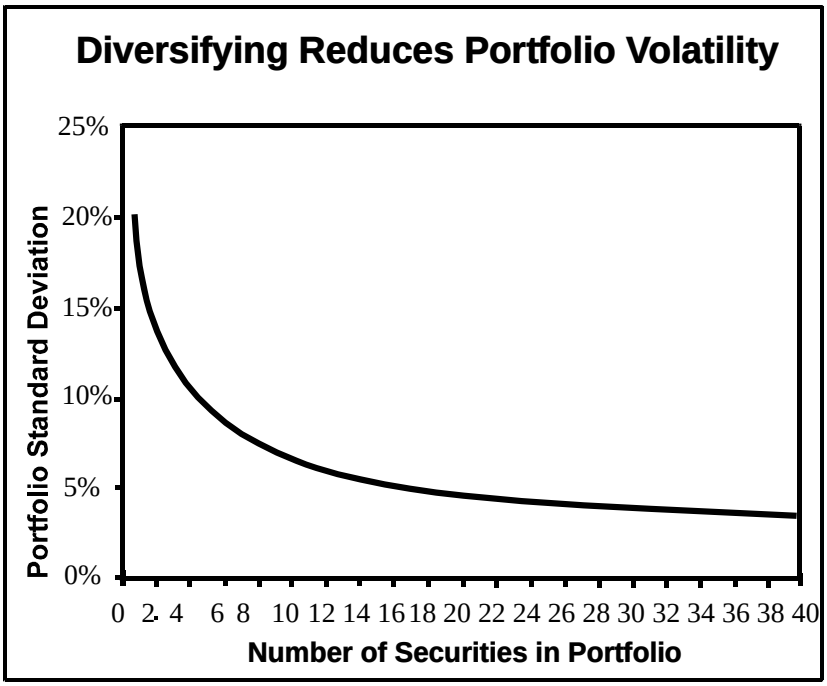

Figure : 2

Volatility can be effectively reduced without significant cost by diversifying, so it makes sense that investors should not be compensated for that portion of volatility which is merely stock specific and has no impact on a well diversified portfolio. This type of volatility is called unsystematic risk in the finance literature because it does not cover with the market as a whole, but is merely the additional random "noise" present in that specific asset's returns. Since this random noise has an expected return of zero, it can be diversified away by adding more securities to the portfolio. Its mean will be zero, and its standard deviation will be reduced as more assets are added.

The logical extension of this argument is that with enough assets in a portfolio, the portfolio volatility matches that of the overall market. Thus, investors should only expect to be compensated for the risk that cannot be diversified away (i.e. the systematic risk).

Beta as Measure of Systematic Risk

As mentioned above, an asset exhibits both systematic and unsystematic risk. The portion of its volatility which is considered systematic is measured by the degree to which its returns vary relative to those of the overall market. To quantify this relative volatility, a parameter called beta was conceived as a measure of the risk contribution of an individual security to a well diversified portfolio:

$$\beta j = \frac{COV\,(Rj\,Rm)^2}{\sigma^2 m}$$

Where,

βj = Beta coefficient of stock j

± 2m = Market variance.

COV (Rj Rm) = Covariance between return on stock j i.e. (Rj) and return of market i.e. (Rm) and is calculated as,

$$COV\,(Rj\,Rm) = \frac{\sum (Rj - \overline{Rj})\,(Rm - \overline{Rm})}{n - 1}$$

In practice, beta is calculated using historical returns for both the asset and the market, with the market portfolio being represented by a broad index such as the S&P 500 or the Russell 2000. This type of data is widely available from financial databases and can be downloaded into software packages like Excel or SPSS for easy manipulation.

2.1.4 Capital asset pricing model:

The capital asset pricing model (CAPM) is used in finance to determine a theoretically appropriate required rate of return (and thus the price if expected cash flows can be estimate) of an asset, if that asset is to be added to an already well-diversified portfolio, given that asset's non-diversifiable risk. The CAPM formula takes into account has asset's sensitivity to non-diversifiable risk. The CAPM formula takes into account the asset's sensitivity to non-diversifiable risk (also known as systematic risk or market risk), in a number often referred to as beta ( ) in the financial industry, as well as the expected return of the market and the expected return of a theoretical risk-free asset.

The model was introduced by Jack Treynor, William Sharpe, John Limner and Jan Mossin independently, building on the earlier work of Harry Markowitz on diversification and modern portfolio theory. Sharpe received the Nobel Memorial Prize in Economics (jointly with Harry Markowitz and Merton Miller) for this contribution to the field of financial economics.

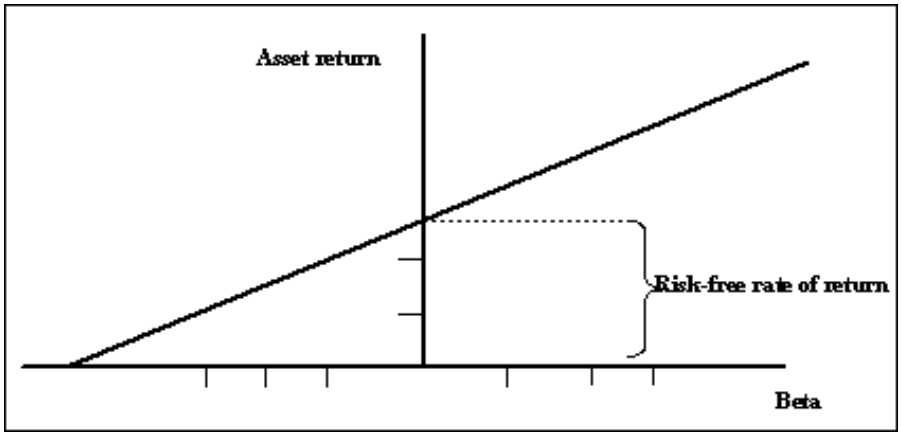

Figure: 3

The Security Market Line, seen here in a graph, describes a relation between the beta and the asset's expected rate of return.

According to the CAPM, the relation between the expected return on a given asset i, and the expected return on a proxy portfolio m (here, the market portfolio) is described as:

E (ri) = rf + im(E(rm) - rf)

where,

- E (rf) is the expected return on the capital asset
- rf is the risk-free rate of interest.
- im (the beta) the sensitivity of the asset returns to market returns, or also

$$im = \frac{Cov(rj, rm)}{Var(rm)}$$

- E(rm) is the expected return of the market
- E(rm) - rf is sometime known as the-market premium or risk premium (the difference between the. expected market rate of return and the risk-free rate of return).

Asset pricing

Once the expected return, E(ri), is calculate using CAPM, the future. Cash flows of the asset can be discounted to their present value using this rate to establish the correct price for the asset.

In theory, therefore, an asset is correctly priced when its observed price is the same as its value calculated using the CAPM derived discount rate. If the observed price is higher than the valuation, then the asset is overvalued (and undervalued when the observed price is below the CAPM valuation).

Alternatively, one can "solve for the discount rate" for the observed price given a particular valuation model and compare that discount rate with the CAPM rate. If the discount rate in (lie model is lower than the CAPM rate then the asset is overvalued (and undervalued or a too high discount rate).

Asset- specific required return

The CAPM returns the asset-appropriate required return or discount rate - i.e. the rate at which future cash flows produced by the assets should be discounted given that asset's relative riskiness. Betas exceeding one signify more than average "riskiness"; betas below one indicate lower than average. Thus a more risky stock will have lower betas and be discounted at a lower rate. The CAPM is consistent with intuition-investors (should) require a higher return for holding a more risky asset.

Since beta reflects asset-specific sensitivity to non-diversifiable, i.e. market risk, the market as a whole, by definition, has a beta of one. Stock market indices are frequently used as local proxies for the market-and in that case (by definition) have a beta of one. An investor in a large, diversified portfolio (such as a mutual fun) therefore expects performance in line with the market.

Assumptions of CAPM

- All investors have rational expectations.
- All investors are risk averse.
- There are no arbitrage opportunities.
- Returns are distributed normally.
- Fixed quantity of assets
- Perfect capital markets.
- Separation of financial and production sectors. Thus, production plans are fixed.
- Risk-free rates exist with limitless borrowing capacity and universal access.

2.2 Theories of stock Price Behaviour:

There are two theories of stock price behaviour, conventional approach and efficient market theory. Conventional approach includes technical analysis theory and fundamental analysis theory. Under efficient market theory there are three forms of efficient market hypothesis. Conventional theory assumes that the market is in efficient where as efficient market theory assumes that the market is efficient.

2.2.1 Conventional approach

One of the major divisions in the rank of financial analysis is between those who are sing fundamental analysis known as fundamentalist and with the technical analysis know as technicians.

Technical Analysis

Technical analysis is based on the widely accepted premise that security prices are determined by the supply and the demand for securities. The tool of technical analysis is therefore designed to measure certain aspects of supply and demand. Typically, technical analysis record historical financial on charts, study these chart in search of patterns that they find meaningful and endeavor to use the patterns to predict future price. Some charts are used to predict the movements of a single security; other are used to predict the action of both individual assets and the market. Some of these same charts are also used to predict the fluctuation in the price of commodity a foreign exchange or a rate of interest. Technical analysis is the study of interest stock exchange information as such. The technician lends to look backward. The technician thinks little about future earning and dividend, the technician usually attempts to predict short-term price movement and thus makes recommendations concerning the timing of purchases and sales of either specific stocks or groups of stocks or stock in general. It sometimes said that technical analysis is designed to answer the question "when?" (Sharpe, Alexander and Bailey, 1999: 344) 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 lies in the past produced, certain results nine times out often can assume a strong likelihood of the same outcome whenever this pattern appears in the future. It should be emphasized; however, that of the methodology of technical analysis lacks a strictly logical explanation.

The Technical Analysis theory of share price behavior is based on past market information. On the assumption that history tends to repeat itself, it is believed that knowledge of past patterns of share prices will help to predict future prices under similar circumstances. It involves the study of past market behavior with reference to various financial and economic variables to forecast the future. Financial and economic variables do change, but these variables are to be adjusted in the light of the present situation. Charles Dow is the greatest protagonist of this theory. Since the followers of this theory

anticipate future share prices on the basis of charts and graphs of past movements in prices, this approach is popularly known as Chartis Approach. Thus, under this approach technicians are interested to interpret the past trend to predict the future prices of equity shares.

Unlike fundamentalists, market technicians spend little time looking at a company's business history and financial records. Instead, they forecast future investment prices and the direction of the market by reviewing past price and volume movements (driving by looking in the rearview mirror). They say that the marketplace is so efficient that the average free-market price of its stock already reflects all one needs to know about a company's financial strength. Remind them of 1987 when they tell you about market efficiency. They also think one should seek quick profits by moving in mid out of (lie market quickly rather than holding on for lone-term growth. Hence the term, "traders."

Technicians use moving averages and other statistical models to try to predict future market movement. An average is simply the average closing price of a stock over a number of days. A moving average means that as each new day's closing price arrives, you drop the oldest day's price from the series and use the most recent price in its place. The statistical term for this process is "smoothing," because day-to-day up-and-down variations are smoothed into a less jagged line. When a stock price goes higher than its moving average, its price is increasing and vice versa.

Technical analysis leans heavily on crowd or mob psychology; i.e., everyone tends mindlessly to "follow the crowd." When the market average tops out, or hitsa high and does not move higher, traders say that it has hit a psychological "resistance level." When the market approaches that level, or ceiling, it is said to be "testing the resistance level." When the price moves above that level by some predetermined amount, the crowd then expects it to increase sharply in the short run until it hits another resistance level. The converse of the "resistance level" is the "support level." When the average starts to drop, it will eventually reach a "support level," a floor or bottom that it supposedly will not drop below. But if it does go lower, it may move further down quickly.

Dow Theory:

The Dow Theory is one of the most oldest and famous technical tools and was originated

by Charles Dow, who founded the Dow-Jones Company and was the editor of The Wall Street Journal around 1900. The Dow Theory is used to predict traversal and trends in the market as a whole or for individual securities. According to diaries Dow, the market is always considered as having three movement, all going at the same time. The first is the narrow movement from day to day. The second is the short-swing, running from two weeks to a month or more; the third is the main movement covering at leas) four years in duration.

Dow Theory practitioner refers to these three components as :

- Primary trend: They are commonly called hear or bull markets. Delineating primary trends is the primary goal of Dow theorists.
- Secondary Movement: Secondary movements are sometime called corrections which last only a few months.
- Tertiary Movement: These are simply the daily fluctuation. The Dow Theory asserts that daily fluctuations are essentially meaningless random wiggles. Never the less, the chartists should plot the assets price or the market average each day in order to trace out the primary and secondary trends.

J.E. Walter's Model:

As per the study of J.E. Walter on the relationship of dividend and stock price, dividend policy of a firm affects its stock price. The relationship between firm's internal rate of return and cost of capital are the determining factors to retain profits or distribution of dividend. The stock price will be increased with the increase in the retention ratio of the firm when the internal rate of return is greater than the cost of capital. Thus, as per J.E. Walter zero dividend policy will maximize the market value of stock for growth firms.

Assumption of Walter's Model:

- Retained earnings constitute the exclusive source of financing; the firm does resort to debt or equity financing.
- The firm's internal rate or return and its cost of capital are constant.
- Value of earning per share (EPS) and dividend per share (DPS) are remaining constant.
- The firm has perpetual life.
- The firm distributes its entire earnings or retains it for immediate reinvestment.

Fundamental Analysis Theory

Fundamentalists' forecast stock prices on the basis of economic, industry and Company statistics. The principal decision variables ultimately take the form of earnings dividends. The fundamentalist makes a judgment of the stock's value with a risk framework based upon earning power and the economic environment.

In the fundamental approach, the security analyst or prospective investor is primarily interested in analyzing factors such as economic influence, industry factors and pertinent company information such as product demand, earnings dividends and management in order to calculate an intrinsic value for the firm's securities. He reaches an investment decision by comparing this value with the current market price of the security. The fundamentalist tends to look forward. He is concerned with such matters as future earnings and dividends. It is sometimes said fundamental analysis is designed to answer to questions "what?"

A fundamentalist claims that at any point of time an individual stock has an intrinsic 'value, which is equal to the present value of the future cash flows from the security; discounted appropriate risk adjusted discount rate. "The value of the common stock is simply a present value of all the future income which the owner of the share will receive. (Francis, 1986:308). But in the world of uncertainly, it is difficult to know the stock's income in each future period and its appropriate discount rate. So, fundamentalist's estimate the intrinsic value of share by studying company's sales, profit factors. Fundamental analyses delve into companies' earnings their management, economic Outlook, firm's competition, market conditions and many other factors.

In the world of uncertainly, it is impossible to anticipate the values exactly so there will be disagreement on the opinion about the estimation among the market participants. The actual price of (lie security is considered to be a function of set of anticipation . price Changes as anticipation change which return, change as result of new information (Bhalla, 1983: 347). After extensive analysis, the investor derives an estimate of the "intrinsic" value of the security, which is then compared lo us market price. If the 'value' exceeds the market price, the security should be acquired and vice-versa (Reilly, 1986:347). Fundamental analysis use different model like lop down verses bottom up forecasting, probabilistic forecasting econometric models, financial statement analysis

etc. to estimate the value of the security (Sharpe, 1999:850-853). Although many investors use technical analysis, fundamental analysis is far more prevalent technical analysis is used as a supplement to fundamental analysis rather than as a substitute for it. Thus technical analysis can frequently does, confirm findings based on fundamental, the widespread availability of personal computers and "dial-up" services with stock prices and volumes has made it possible for individual investors to engage in technical analysis in the privacy of their own homes. Producers of software have been quick to provide programs to perform such analysis, complete with multicolored graphs. Nevertheless, the number of investors using fundamental analysis is much larger than the number using technical analysis.

Although many investors use technical analysis, fundamental analysis is far more prevalent. Furthermore, unlike technical analysis, it is an essential activity, if capital markets are to be efficient. Some of fundamental Analysts' tools are explained as follows:

2.2.2. Efficient Market Theories :

Market efficiency had been anticipated at the beginning of the century in the dissertation submitted by Bachelier (1900) to the Sorbonne for his Phi) in mathematics in his opening paragraph, Bachelier recognizes that "past, present and even discounted future events are reflected in market price, but often show no apparent relation to price changes". this recognition of the informational efficiency of the market leads Bachelier to continue, .in his opening paragraphs, that "if the market, in effect, does not predict its fluctuations, it does asses them as being more or less likely, and this likelihood can be valuated mathematically". This gives rise to a brilliant analysis that anticipates not only Albert Einstein's subsequent derivation of the Einstein-Wiener process of Brownian motion, but also many of the anlytical results that were rediscovered by finance academics in the second half of the century. Sadly, Bachelier's contribution was overlooked until it was circulated to economists by Paul Samuelson in the late 1950s(see Bernstein, 1992)-and subsequently published in English by Cootner (1964).

Although there could have been an emerging theory of speculative markets during the first half of the twentieth century, this was not to be. Instead, the early literature followed the path of accumulating a variety of empirical observations that did not sit easily alongside the paradigms of economics or the beliefs of practitioners. Bachelier had

concluded that commodity prices fluctuate randomly, and later studies by Working (1934) and Cowles and Jones (1937) were to show that US stock prices and oilier economic series also share these characteristics. These studies were largely overlooked by researchers until the late 1950s, there was, in addition, disturbing evidence about the difficulty of beating the equity market. Alfred Cowles III, founder of the Cowles Commission and benefactor of the Econometric Society, published in the launch issue of Econometrical a painstaking analysis of many thousands of stock selections made by investment professionals. Cowles (1933) found that there was no discernable evidence of any ability to outguess the market. Subsequently, Cowles (1944) provided corroborative results for a large number of forecasts over a much longer sample period. By the 1940s, there was therefore scattered evidence in favor of the weak and strong form efficiency of the market, though these terms were not yet in use.

The concept of efficiency is central to finance. Primarily, the term efficiency is used to describe a market in which relevant information is impounded into the price of financial assets. This is the primary focus of the articles reviewed here. Sometimes, however, economists use this word to refer to operational efficiency, emphasizing the way resources are employed to facilitate the operation of the market. Most of this review is concerned with the former definition, namely the informational efficiency of financial markets. At the end of this paper, we also consider the microstructure of financial markets.

If capital markets are sufficiently competitive, and then simple microeconomics indicates than investors this appears self-evident today, it was far from obvious for the majority of the century. Up to the end of the 1950s, there were few theoretical or empirical studies of securities markets; and until Cootner (1964) collated a selection of papers from a wide variety of sources, the literature was dispersed across journals in statistics, operations research, mathematics and economics.

Form of efficiency Set of information reflected in security prices

- Weak previous prices of securities
- Semi-strong All publicly available information
- Strong All information, both public and private

In an efficient market, investors should expect to make only normal profits and earn a normal rate of return on their investment. In such a market, any new information immediately and fully reflected in price. New information is just that new, meaning a Surprise. In a perfectly efficient market, price changes are close to random. The efficient market hypothesis has been sub divided into three categories, each dealing with a different type of information .In weak form test o the efficient market hypothesis, the information tested is the post sequence of security price movements .thus weak from test are tests of whether all information contained in historical are tests of whether publicly available information whether public of private, is fully reflected in security prices and whether any type of investor can make an excess profit.

The weak form efficient market hypothesis stales that stock prices fully relied all security market information, which includes all historical data the significant conclusion derived form the weak form hypothesis is that past rates of return and any other security market information should have no relationship with future stock prices or future rates of return. There have been a number of tests conducted to verify the weak form version of the EMH. While exceptions have been found the bulk of the evidence supports the notion that stock prices do indeed fully reflect all security market information.

The semi strong form EMH stated that stock ^prices fully reflect all public information Considered by the weak form is public. However public information also includes economies, the current political state abroad or specific, stock etc. the implication of the semi strong form EMH is that investors should not be able to derive above average rates of return form public information. A number of tests have been conducted to verily the semi strong form of the EMU with majority of tests providing mixed evidence. Some of the notable exceptions include a January effect, in which stocks that experienced losses during the prior year tended to provide abnormal rates of return around January 1 and 2 a Monday effect, a Friday effect, a July effect, a sue effect, neglected firms effect, and a book value to market value effect.

The strong form of the EMH states that stock prices fully reflect all public and private information. The strong-form encompasses both the weak form and the semi strong form. This version implies that no opportunities should exist for any investor to derive above-average rates of return. Like the semi-strong version, the tests of this hypothesis provided mixed results. However, the bulk of the tests were supportive. Two glaring anomalies

exist: corporate insiders and market specialists seem to be able to consistently earn above average rates of return, which implies that they possess monopolistic access to important information. In addition, there was evidence to support the notion that superior security analysts could also consistently earn above-average rate of return, although this group tends to be very small.

The Random Walk Model:

The problem of the optimal search procedure for finding a drunk left in the middle of a field was discussed early in the century by Karl Pearson (1905). If the drunk can be expected to stagger in a totally unpredictable and random fashion, he is likely to end up closer to where he had been left than to any other point.

In finance, this analogy has been applied to series whose successive returns are serially independent (a more precise definition is provided in Fama, 1965, reviewed below). In the early 1950s researchers were, for the first time, able to use electronic computers to study the behavior of lengthy price series. The assumption of economists was that one could "analyze an economic time series by extracting from it a long-term movement, or trend, for separate study and then scrutinizing the residual portion for short-term oscillatory movements and random fluctuations" (Kendall, 1953).

When Kendell examined 22 UK stock and commodity price series, however, the results surprised him. He concluded that "in series of prices which are observed at fairly close intervals the random changes from one term to the next are so large as to swamp any systematic effect which may be present. The data behave almost like wandering series." The near-zero serial correlation of price changes was an observation that appeared inconsistent with the views of economists. Nevertheless, these empirical observations came to be labeled the " random walk model" or event the "random walk theory".

If prices wander randomly, then this poses a major challenge to market analysts who try to predict the future path of security prices. Drawing on Kendall's work and earlier research by working (1934), Roberts (1959) demonstrated that a time series generated from a sequence of random numbers was indistinguishable form a record of US stock prices-the raw material used by market technicians to predict future price levels. "Indeed," he wrote, " the main reason for this paper is to call to the attention of financial

analyst's empirical results that seem to have been ignored in the past, for whatever reason, and to point out some methodological implications of these results for the study of securities."

Whereas Roberts was throwing the gauntlet to practitioners, Osborne (1959) analyzed US stock price data out of pure academic interest, presenting his results to other physicists at the US Naval Research Laboratory. Osborne shows that common stock prices have properties analogous to the movement of molecules. He applies the methods of statistical mechanics to the stock market, with a detailed analysis of stock price fluctuations from the point of view of a physicist.

Despite the emerging evidence on the randomness of stock price change, there were occasional instances of anomalous price behavior, where certain series appeared to follow predictable paths. Tins includes a subset of the stock and commodity price series examined by working (1934), Cowles and Jones 91937), and Kendall 1935).

In 1960, however, there was a realization that autocorrelation could be induced into returns series as a result of using time-averaged security prices. Working (1960) and Alexander (1961) independently discovered this. Once returns series are based on end-of-period prices, returns appear to fluctuate randomly. The problem of time-averaging identified by Working is the first research on thin trading and a precursor to studies of market microstructure.

The mid-1960s was a turning point in research on the random character of stock prices. In 1964, Cootner published his collection of paper on that topic; while Fama's (1965) doctoral dissertation was reproduced, in its entirety, in the Journal of Business. Fama reviews the existing literature on stock price behavior, examines the distribution and serial dependence of stock market returns, and concludes that "it seems safe to say that this paper has presented strong and voluminous evidence in favor of the random walk hypothesis."

Market Efficiency

With a better understanding of price formation in competitive markets, the random walk model came to be seen as a set of observations that can be consistent with the efficient markets hypothesis. The switch of emphasis began with observations such as that of

Samuelson (1965), who's Proof That Properly Anticipate Price Fluctuate Randomly, began with the observation that "in competitive markets there is a buyer for every seller. If one could be sure that a price would rise, it would have already risen." Samuelson asserted that "arguments like this are used to deduce that competitive prices must display price changes ... that perform a random walk with no predictable bias."

Samuelson explains that "we would expect people in the market place, in pursuit of avid and intelligent self-interest, to take account of those elements of future events that in a probability sense may be discerned to be casting their shadows before them." By presenting his proof in a general form, Samuelson added rigor to our notion of a well-functioning market. It is not clear to us whether these results ought to be seen as obvious or surprising, nor was it clear to Samuelson who wrote that "the theorem is so general that 1 must confess to having oscillated over the years in my own mind between regarding it as trivially obvious (and almost trivially vacuous) and regarding it as remarkably sweeping. Such perhaps is characteristic of basic result."

Building on Samuelson's microeconomic approach, together with a taxonomy suggested by Harry Roberts (1967), Fama (1970) assembled a comprehensive review of the theory and evidence of market efficiency. Though his paper proceeds from theory to empirical work, he notes that most of the empirical work preceded development of the theory.

The theory involves defining an efficient market as one in which trading on available information fails to provide an abnormal profit. A market can be deemed to be efficient, therefore, only if we posit a model for returns. Form this point on, tests of market efficiency become joint tests of market behavior and models of asset pricing. We discuss this issue later.

The weak form of the efficient market hypothesis claims that prices fully reflect the information implicit in the sequence of past prices. The semi-strong form of the hypothesis asserts that prices reflect all relevant information that is publicly available, while the strong form of market efficiency asserts information that is known to any participant is reflected in market prices. The literature begins, therefore, with studies of weak form market efficiency.

In Scholes' (1972) study of the price effects of secondary offerings, he examines stock

price movements when the seller may be in possession of non-public information. On average, share prices fall by an amount that reflects the value of this information. The impact of a secondary distribution on the stock price is largely unaffected by the size of the transaction, which confirms the depth of the market and the substitutability of one security for another. Note, however, that there is some indication of post-event price drift, which may constitute a violation of market efficiency.

2.3 Review of Previous Studies:

This section deals with the previous studies relating to the stock price behavior weather in foreign and Nepalese context separately.

2.3.1 Foreign Context:

All of the empirical work on efficient markets can be considered with in the context of the general expected return or "fair game" model. In deed, in the context of the early literature, discussion of the efficient markets model were Phrase in terms of the even more special random walk model though most of the early authors were in fact concerned with more general versions of the "fair game" model. There are large numbers of studies most of much are briefly reviewed below.

Research on security price did begin with the development of a theory of Price formation, which was then subjected to empirical tests. The momentum for the development of theory fame from the accumulation of evidence in the middle 1950s and early 1960's that the behavior of common stock and other speculative prices could be well approximated by a random walk. Much of the theory on the random walk model can he traced to French Mathematician Louis Rachelier whose Pli. D. dissertation titled "The Theory of Speculation" conducted in 1900. Included some remarkable insights and commentary. He came to the conclusion that "The Mathematical Expectation of the Speculator is zero" and he described this went largely unnoticed for over 50 years until his paper was rediscovered and eventually translated into English and published 1964.

After Bachelier, research on the Behavior of security price lagged until the coming of tin computer. In 1953, Kendall examined the behavior of weekly changes in nineteen indices of British industrial share prices and in spot prices for cotton (New York) and when

(Chicago). After extensive analysis of serial correlation, he suggest, in quite graphic terms: the series looks like a wandering one, almost as if once a week the demon o chance drew a random number from a symmetrical population of fixed dispersion and added it to the current price to determine the nest week's price.

Kendall's conclusion had in fact been suggested earlier by working though his suggestion lacked the force provide by kendall's empirical results. Roberts's later underlined implication of the conclusion for stock market research and financial analysis. But the suggestion by Kendall, Working and Roberts that series of speculative prices may be well described by random walks was based on observation. None of these authors attempted to provide much economic rationale for the hypothesis and indeed, Kendall felt that economists would generally reject it. Osborne suggested market conditions, similar to those assumed by Bachelier that would lead to a random walk. But in his model independence of successive price changes derives from (be assumption that the decision; of investors in an individual security are independent from transaction to transaction hid) is little in the way of an economic model.

In 1960, however, there was a realization that autocorrelation could be induced into returns series as a result of using time-averaged security prices. Working (1960) and Alexander (1961) independently discovered this. Once returns series are based on end-pf -period prices, returns appear to fluctuate randomly. The problem of time-averaging identified by Working is the first research on thin trading (see Dimson, 1979) and a precursor to studies of market microstructure.]

Ball and Brown (1968) had already noted evidence of post-earnings announcement "drift" in the direction indicated by an earnings surprise. Ten years later, the first published paper to draw together literature on earnings-related anomalies was the survey by Ball (1978). In an appendix, he summarized twenty studies of earnings and dividends, and concluded that the collective evidence of anomalous behavior was strong.

Fama (1970) summarizes the early random walk literature, his own contributions and oilier studies of the information contained in the historical sequence of prices, and concludes that "the results are strongly in support" of the weak form of market efficiency. He then reviews a number of semi-strong and strong form tests, highlighting those that we cover in the next two sections, and concludes that "much remains to be done", and

indeed, Fama (1991) subsequently returned to the fray with a reinterpretation of the efficient markets hypothesis in the light of subsequent research.

Event studies : Studies of the semi-strong form of the efficient markets hypothesis can be categorized as tests of the speed of adjustment of price to new information. The principal research tool in this area is the event study. An event study averages the cumulative performance of stocks over time, from a specified number of time periods before an event to a specified number of periods after. performance for each stock is measured after adjusting for market-wide movements in security prices. The first event study was undertaken by Fama, Fisher, Jensen and Koll (1969), though the first to be published was by Ball and Brown (1968).

Using the market model or capital asset pricing model as the benchmark, these event studies provide evidence on the reaction of share prices to stock splits and earnings announcements respectively, in both cases, the market appears to anticipate the information, and most of the price adjustment is complete before the event is revealed to the market. When news is released, the remaining price adjustment takes place rapidly and accurately. The Fama, Fisher, Jensen and Roll study, in particular, demonstrates that prices reflect not only direct estimates of prospective performance by the sample companies, but also information that requires, more subtle interpretation.

Grossman and Stiglitz (1980) observed that in a world with costly information, it is impossible for markets to be informational efficient. They resolve this paradox by drawing on Treynor's idea of assuming that the market also entertains transactions from uninformed noise traders. This focus on the way that markets function has grown into an extensive literature on the microstructure of financial markets. The bagehot (1971) article provided an early insight into (lie way information is incorporated into security prices through the activities of investors, and how market structure can have an impact on the efficiency of the stock market. The intuitive story told by Bagehot is formalized in the price formation model presented By Kyle (1985). Kyle develops a model in which multiple orders of variable size are processed at a single price his model has three types' of traders: a single informed trader, several competing market makers, and uninformed noise traders who transact randomly. Noise trader's camouflage the activities of the informed trader, whose transactions arc organized in such a way that his private information is reflected gradually in market prices. The market makers compete and

therefore break even while informed transistors achieve a profit at the expense of noise traders.

Shiller (1981) examines the variation in stock market prices, and finds that price fluctuations are too large to be justified by the subsequent variation in dividend payments. Shiller finds that "measures of stock price volatility over tha past century appear to be far too high - five to thirteen times too high -to be attributed to new information about future real dividends .... The failure of the efficient markets model is thus so dramatic that it would seem impossible to attribute the failure to such things as data errors, price index problems, or changes in tax laws." This extension to the equity market of Shiller's (1979) earlier work on the bond market suffers from a similar limitation to the anomalies outlines earlier. That is his procedure is a joint test of market efficiency and the validity of his model of the dividend process. This literature has attracted considerable controversy (e.g., Kleidon, 1986) as well as generating "second generation" variance bounds tests such as those reviewed in Gills and LeRoy (1991). One of the difficulties of interpreting the variance bounds literature is the central assumption that excess price volatility implies market inefficiency. This assertion would seem to be bound up with the question of the survivorship of markets. The fact that the US market survived 1929, or the UK survived 1947, may well imply excessive price volatility, on an ex post basis, over the sample period. But as Brown, Goetzmann and Ross (1995) and Goetzmann and Jorion (1999) point out, most stock markets fail to survive. For the latter, dividend volatility may have been infinite, and the (pre-failure) variance of stock prices was therefore too low to be justified by subsequent dividend Behaviour.

Basu's study of low P/E stocks was followed by publication of Banz's (1981) work on the long-run rate of return from investing in smaller companies. Banz analyses monthly returns over the period 1931-75 on shares listed on the New York Stock Exchange . over this interval, the fifty smallest stocks outperformed the fifty largest by an average of one percentage point per month, on a risk-adjusted basis. I lie small firm effect documented by Banz gave rise to a plethora of papers examining this phenomenon and has been corroborated in many different countries.

Glosten *and* Milgrom (1985) showed that the very possibility of trading on information can be sufficient to induce a positive bid-ask spread. Building on earlier work by Copeland and Galai (1983), Glosten and Milgrom identify the element of the spread that

is attributable to adverse selection Taken together with Demsetz' (1968) order processing costs, and Ho and Stoll's (1981) measure of inventory control costs, this has provided a framework that this is now used widely for analyzing the bid-ask spread confronted by investors. The concept of noise traders has had an impact on financial modeling that goes beyond the field of market microstructure. We alluded to their role in the context of DeBondt and Thaler (1985) and Poterba and Summers (1988) studied of predictability in stock price Behaviour, and they are discussed further in Black's (1968) address. The basis ideas, developed in Bagehot(1971), are in fact employed in many applications.

Similar considerations may apply to Mehra and Prescott's (1985) equity premium puzzle. Mehra and Prescott consider a simple model based on consumers' preferences and the economic process generating consumption. Calibrating the key statistical characteristics of their assumptions, they cannot reproduce the long-run equity premium generated by the market, given interest rates. They show that, in their version of the model, with average risk-free interest rates in the range zero to four percent, the mean premium would not exceed 0.35 percent per year. Apart from focusing on survivor-type arguments, in which mehra and Prescott's model is modifies to include a small probability of catastrophic events (Rietz, 1988), there have also been other approaches to modifying the underlying model, generalizing the assumed preferences of consumers, and revising the empirical analysis. The equity risk premium puzzle continues to attract research interest.

In additions to earnings-and size-related regularities in returns, there are a number of other puzzling observations that present a challenge to the efficient markets hypothesis. A phenomenon that has not yet been explained satisfactorily is the negative long-run performance of new issues, documented by **Ritter** (1991) and Loughran and Ritter (1995). Using a sample of 1526 initial public offerings over the period 1975-84, Ritter finds that an initial investment in these shares at the end of the first day of trading would have generated substantial underperformance over the following three years, relative to a wide variety of benchmarks including a detailed matching procedure that controls for the market capitalization and industry of each security. A central difficulty in interpreting studies such as these is the joint hypothesis problem. The magnitude of over-ro under-performance depends critically on the choice of benchmark (see Dimson and Marsh, 1986), and this makes it difficult to interpret the results. On the one hand, anomalous behaviour may be an indication of market inefficiencies. On the other hand, even if there

is no bias or misestimating in computed abnormal returns, the regularity in returns may be indicative of shortcomings in the underlying asset pricing model.

DeBondt and Thaler (1985) In addition to the regularities discussed in this section, there is also a literature on Stock market seasonably, including month-of-the-year, week-of-the-month, day -or-the-week, and hour-of-the-day- effects (see Rozeff and Kinney (1976)and Keim (1983), Ariel (1987), French (1980), and Harris (1986) respectively). As discussed in Dimson (1988), some of these patterns, notably the January seasonal of small stock returns, may be consistent with either market. inefficiencies or seasonality in asset pricing. Other patterns, notably those observed over very short periods, may be explained better by market microstructure.

Fama and French (1992) show that two variables, closely related to Basu's earnings and Banz's size variables, capture much of the cross-sectional variation in stock returns over the period 1963-1990. These results have been confirmed for a wide variety of non-US markets as well; see, for example, Arshanapalli, Coggin and Doukas (1998). The main finding of Fama and French is that market capitalization and book-to-market equity subsumes the impact not only of these two variables but also of price/earnings ratios and leverage. The fama and French result may be consistent with asset pricing theory, in which case the model can be regarded as an empirical model in the spirit of arbitrage pricing theory. Alternatively, the influence of book-to-market equity, the most powerful explanatory variable, may result from market overreaction, though the authors report that simple tests do not confirm that size and book-to-market effects are due to the type o market overreaction posited by, amongst others.

In Indian context, Kao and Mukherjee (1971) first conduct the study to test random walk model of stock price behaviour of only one aluminum company's share. They examined weekly average share price for sixteen years from 1955 to 1970 by employing spectral methods. The conclusion confirmed the RMH.

In another study, **Sharma and Kenedy (1977)** investigated on the monthly indices of the Bombay (BVD1SI or BSE), London and New York for 11 years period, from 1963 to 1973. The data covering 11 year consists 132 observations as of last Friday of each month. They applied runs and spectral analysis and sound that BDISI is statistically indistinguishable from the of London/F.T.-A and S & P 525. So, they conclude that the

Bombay Stock Exchange obey a random walk.

Gupta (1978) carried out comprehensive test of the random walk hypothesis by employing serial correlation and runs analysis in two sets of time series data. First set time series data used were: The Economic Time Index Number of daily share prices and financial Express Index Number of Equity price one day and other weekly series. The second was weekend closing prices of 39 equity shares. Statistical results from both the methods comply with the random walk hypothesis. On the basis of these test, Gupta concluded that random walk model appeared to be an appropriate model even for the less developed country like India to describe stock price behavior, thus suggesting that Indian stock exchange were 'efficient' in the weak sense in pricing stocks (Ibid.p.53-54).

Rao (1998) conducted the study on the weekend prices of the eight blue-clip stocks for five years from July 1982 to June 1987. Fie applied serial correlation analysis, run test and filter rule. The result from the entire test supported the random walk hypothesis.

2.3.2 Nepalese Context:

There are few studies/ researches on the stock market price of Nepal compared to the capital market elsewhere. More of the studies are concentrated on the lest of influence of certain financial variables on the stock price. For example **Radhe Shyam Pradhan (1993)** conducted the study entitle "Stock Market Behaviour on small market : a case in Nepal, " the study was based on the data collected from seventeen enterprises from the year 1986 through 1993. Mr. Pradhaan has summarized the findings as follows:

- Dividend per share and market price per share was positively correlated.
- There are positive relationship between dividend pay out and liquidity.
- Higher the earning on stocks, larger the ratio of dividend per share to market price per share.

Professor Dr. Manohar Krishna Shrestha (1995) conducted a study entitled "Shareholders Democracy and Annual General Meeting (AGM) feed back. "-This study has analyzed the situation of common stock investors and the situations are not improved significantly till now. In his study, he argued for the safeguarding investor's interest. "The encouraging confidence of shareholders over their investment seeks an independent

inquiry of disclosed contents of prospectus, which could reasonably influence the mind of the prudent investor. Various annual general meeting held by different public limited companies reveal a gap between disclosures made in prospectus and the actual result, which were reported. In this context the expression of disclosure philosophy and investigation of frauds in prospectus need to be reconciled to check and growing problems in the development of the capital market in Nepal.

Yogendra Timilsina (1997) has conducted a study entitle "Capital market development and stock price behaviour in Nepal." In his study he concluded that expected both on the basis of earning per share as well as dividend per share. The results are statistically tested and found to have their close relationship with observed values. Expected market price of share are also computed capitalizing the EPS of individual company by the risk-adjusted cost of capital. It has been found that the market price of share depends on EPS as well as on DPS, but DPS is more price sensitive and it will have direct and immediate response in the market.

However market vales of share computed on the basis of EPS are near to the observed vales. Therefore the observed market prices of equity share reveal that the stock market is not inconsistent. the market value of share is the function of various financial and economic variables as well as internal and external factors. The company's financing and investment policy, product development, market expansion policy and competition would largely determine the value of its share. Macro economic variables like monetary and fiscal policies, money supply, and rate of inflation and GDI' growth rate would determine the economic growth of a nation. The upward swings in the economy would suppress the market value of shares.

The world has been launching towards economic integration and globalization. The economic depression in one corner of the globe can spread its impact all over the world. As such, not only the domestic factors, but also the external factors to a larger extent, are responsible in affecting the equity prices. It is practically impossible in the uncertain and inefficient market environment to anticipate in advance all the future opportunities of an equity investment and the risks associated with it. Changes n some of the variables affect the share prices immediately and changes in other variables can affect share prices after a certain time lag. Further, some factors impose direct impact while other factors affect the share prices indirectly.

The money supply and bank credits, however, indulge a direct impact on the capital market. When money supply increases, the interest rate may fall causing the share prices to move upwards, but inflation may also creep up side, as a result the real increase of capital gain is neutralized. Money supply could become the leading indicator in the short period, but it is only a coincident indicator to help further growth in the long run.

Market reacts to the dissemination of such news whether good or bad, which can affect the investors risk and return in the immediate, future; may it be capitalization of profits of the company, issue of bonus shares or issue of right shares, declaration of higher rate of dividend, change in the market interest rates, availability of alternative investment opportunities of publication of the auditors report regarding the bad financial position of the company.

Review of Unpublished Masters Degree Thesis

Bhatta (1995) has conducted a study on assessments of the performance of listed companies in Nepal. His study was based on ten listed companies with a data from 1990-1995. Me focused on the performance of the listed companies in terms of market, in PR multiplies, dividend yield, liquidity, leverage, and profitability. And also he focused on expected risk and return and internal rate of return, systematic risks and diversification of risks in terms of portfolio. He analyzed the companies' performance in the market in relation to the market price of the shares and found that there was high positive correlation between risk and return of the companies. Investors expected higher return form those stocks which associates higher risk. Nepalese stock market is not efficient so the stock prices do not contain all the information relating to market and company itself. Investors in Nepal have not yet participated to invest in portfolio of securities. An analysis of two securities portfolio shows that risk can be minimized if the correlation and some have positive. Negative correlation between securities return is preferred for diversification of risk. On the basis of findings he concluded that many companies have higher unsystematic risk. There is a need of expert institution, which will provide consultancy services to the investors to maximize their wealth through rational investment decision.

Khagcndra Prasad Ojha (2000) in this research paper," Financial performance and common stock pricing." Concluded that an investment in common stock of a corporate

firm neither ensures annual return nor the return of principle. Therefore, the investment in common stock is very sensitive a ground of the risk. Dividend to common stockholders is paid only if the firms make an operating profit after tax and preference dividend. The company can return principle in case of its liquidation only to extent of the residual asset after satisfying to all its creditors and preferential shareholders. Beside tins, investors have to sacrifice the return on their investment in common stock, which could be earned investing fund elsewhere in the next best opportunity. Thus, his study was focused on financial performance where financial activities involve decision regarding:

- Forecasting the planning of financial requirement.
- Investment decision.
- Financial decision.

Further, Mr. Ojha added that the stock price in Nepal is determined more by other factors rather than financial performance of the concerned company.

Bishnu Dcv Upadhyay (2001), conducted a study entitle, "Share price behaviour in Nepal."

His study mainly focused on following issues:

- Do share price over the short period, such as a day, or a week, or a month, display random phenomenon. Whether the successive price changes are correlated of one another.
- Is it possible to predict price of a given share from historical price changes?
- Can valuable information be received from reading charts of past price movement.
- Is stock market efficient or inefficient in pricing shares and whether share price show any systematic patterns or they are indistinguishable from those of random walks?
- Is there any existence of EMM in any of its weak and other forms ? Do economic and non economic factors affect the share prices of financial and non financial sectors differently?

Sharmilia chandi Shrestha (2003), conducted a study entitle "Capital market development and stock price behaviour in Nepal." Her study mainly deals with the following issues:

- To discuss theoretically the movements of stock market prices as predicted by fundamental analysis theory.
- To evaluate the relationship between dividend payout and changes in stock price.
- To observe the variation of actual market price from computed fair prices.
- To evaluate the trend in paid up value, market capitalization, trading turnovers, behaviour of NEPSE Index and other stock market performance indicators.

Kiran Dhamala (2004) in his study on "Determinants of share price in Nepalese financial market "studied the relationship of MPS with various financial indicator like EPS, NWPS, ROE etc. In the same study he analyed the market trend of MRS with various financial indicators like companies under his consideration out of the 5 were commercial banks and .....five were finance companies. He had used various ratios to find the results related to his objectives. On the other hand coefficient of determination, regression analysis & t-test were applied under his study.

In his study, he concluded that the Nepalese stock market is not efficient enough to determine MRS in accordance with the respective financial performance. The market price per share in Nepal is not indicative of a company's financial performance in stock market. The share market is imperfect and is not efficient and is liable to manipulation. basically, share price is, to be determined by the future prospects of the company on the basis of financial indicators, unfortunately, our stock market does not run on the basis of proper information about the company. He further recommended that:

- The Nepalese stock market [NEPSE & SEBO] should take some effective initiation to control random flucation of MPS and establish the system of regular monitoring and evaluation of stock market.
- There is necessity of separate body to analyze strength and weakness of public companies which should disclose right information and suggestion to public investor about investment risk. This will help the investor to take proper investment decision at the right time to avoid or minimize the level of risk.

- People in Nepal have shown the tendency to run after those companies which have allocated higher bonus, probably at the cost of future growth and opportunities. People invest their hard money on the basis of rumor and hearsay that spread in financial market rather than intuitive rational financing thinking. Therefore, there is a need of a credit rating agencies and investment banks to analyze the companies.

Thus, previous studies, unable to cover some of the aspect of the stock price behaviour so this study is conducted to bridge the gap created by the previous studies. It also stress at providing valuable information to the investors regarding the stock price as well as for conducting future studies on the related topic.

CHAPTER -III
RESEARCH METHOGOLOGY

Research methodology refers to the overall research processes, which a researcher conducts during his/her study. It is the systematical way to solve the research problem, which includes many techniques and tools, as it is necessary for every study. Research is the systematic and refers to the various steps to be adopted by the researcher.

3.1 Research Design:

Research design is the plan, structure and strategy on investigation conceived so as to obtain answer to research question and to control variances. It is the arrangement of conditions for collection and analysis of data. An effective research design links abstract and stylized concepts and question with the empirical world's complexities and challenges. The present study has followed the descriptive as well as analytical research design to achieve the objective of the study along with some financial & statistical tools.

3.2 Nature and Source of Data:

This study is based on the secondary data. The primary source of secondary data on this study is the annual reports of NEPSE. In addition, supportive data and information have been collected from articles, newspaper and published records of NEPSE & SEBO/N. supplementary data and information are collected from number of institutions and authorities like NRB, Security Board Nepal, Stock Exchange Ltd, Ministry of Finance. Moreover, the relevant literatures were collected from Central Library of T.U., British Council, Library of NEPSE, People' campus Library, Economic Journals, and unpublished reports and documents from various sources.

3.3 Population and Sample:

There are all together 20 commercial banks functioning all over the kingdom and most of their stocks are traded actively in the stock market. For my study propose I have taken sample from the following total population of commercial banks in Nepal.

1. Nepal Bank Ltd.
2. Rastriya Banijaya Bank
3. Nabil Bank Ltd.
4. Nepal Investment Bank Ltd.
5. Standard Chartered Bank Nepal Ltd.
6. Himalayan Bank Ltd.
7. Nepal SBI Bank Ltd.
8. Nepal Bangladesh Bank Ltd.
9. Everest bank Ltd.
10. Bank of Kathmandu Ltd.
11. Nepal Industrial and Commercial Bank Ltd.
12. Machhauchhare Bank Ltd.
13. Laxmi Bank Ltd. H.Kumari Bank Ltd.
15. Lumbini Bank Ltd.
16. Nepal Credit and Commerce Bank Ltd
17. Siddhartha Bank Ltd.
18. Global Bank Ltd.
19. Bank of Asia Nepal Ltd.
20. Citizen Bank Ltd.

Thus, from above population, six commercial banks are selected which covers 30% of the total population:

1. Nabil Bank Ltd.
2. Nepal Investment Bank Ltd.
3. Standard Chartered Bank Nepal Ltd.
4. Himalayan Bank Ltd.
5. Nepal SBI Bank Ltd.
6. Nepal Industrial & Commercial Bank Ltd.

3.4 Analysis of Data:

In this study, various accounting, financial and statistical tools have been used to achieve the objectives of the study. The analysis of data is done according to the pattern of data available.

3.4.1 Ratio Analysis:

For the purpose of analysis the market shares of each individual bank the following indicators have been used:

- Market Share of Deposit: Individual bank Deposit / Total deposit.
- Market Share of Investment : Individual hank Investment / Total Investment.
- Market Share of Total Assets: Individual bank Assets/ Total assets.

3.4.2 Financial and Statistical Tools:

Financial tools are used to examine the financial strengths and weaknesses of the banks.

Following are the different financial tools:

Market price of stock (DPS)

One of the Major data of this study is the market price of the stock. As we follow the market price of selected sample of the commercial banks, we get three types of prices high low and closing. Among high, low and closing price, each year's closing price has been taken ;is the market price of the stock which have specific time span of one year and the study has focused in yearly basis of MPS.

Dividend per share (MPS)

Dividend is relevant factor during the computation of rate of return, which is a reward to the shareholders for the investment. If a company declares only the-cash dividend, there is no problem to take the dividend amount, but if the company declares stock dividend (i.e. bonus shares) then it is difficult to obtain real amount of shareholders gain. So, in such conditions following models are considered:

In case of stock Dividend:

Total Dividend = Cash Dividend + Stock Dividend % X Next year's MPS.

But for our study purpose only cash dividend have been considered.

Return on common stock Investment (Rj)

Return is the income received in an investment plus any change in the market price, usually expressed as a percent of the beginning market price of the investment.

Symbolically,

$$Rj = \frac{Dt + (Pt - Pt - 1)}{Pt - 1}$$

where,

Rj = Realized Rate of Return on common stock at a time t.

Dt = Cash Dividend or Stock Dividend (if any).

Pt = Current market price of the Stock.

Pt-1 = Market Price of Previous Year.

Expected Rate of Return ($\overline{Rj}$)

One of the major tasks of this study is to determine the expected return of the stocks of various commercial banks. Generally, this rate is obtained by the arithmetic mean of the past years returns.

Symbolically,

$$\overline{Rj} = E(Rj) = \frac{\sum Rj}{n}$$

where,

$\overline{Rj}$ = E (Rj) Expected rate of return on stock j.

n = Number of Years.

$\sum$ = Sign of summation

Standard Deviation (±)

It is the statistical measures of the variability of a distribution of return around its mean. It is the square root of the variances of the returns. Standard deviation is the measure of the total risk of the stocks, i.e. it measures dispersion of return.

Symbolically,

$$\pm j = \frac{\sum(Rj - \overline{Rj})}{n}$$

Where,

$\pm j$ = Standard Deviation of return on stock j during the time period n.

Coefficient to Variation (C.V.)

The coefficient of variation, CV is a measure of relative dispersion. It is applicable to calculate the risk per unit of the expected return. It is the ratio of standard deviation returns to the mean of distribution.

Symbolically,

$$C.Vj = \frac{\pm j}{Rj}$$

Where,

CVj= Coefficient of Variation of stock j.

$\pm j$ = Standard Deviation of return on stock j.

$\overline{Rj}$ = Expected rate of return on stock j.

Market Return (Rm)

Market return is the overall return of the market portfolio, which is obtained by taking difference between market index i.e. NEPSE Index.

Symbolically,

$$\text{Rm} = \frac{NIt - NIt - 1}{NIt - 1}$$

Where,

NI t = NEPSE Index at time t.

NI t - 1 = NEPSE Index at time t-1.

Beta Coefficient ( )

Market sensitivity of stock is explained in terms of beta coefficient. Higher the beta, greater the sensitivity or reaction to the market movement. Logically, the systematic risk is the covariance between the returns of individual stock returns and market returns, 'the measure of systematic risk is represented by beta. It is an index of systematic risk, which cannot be eliminated through the means of diversification. Beta measures the sensitivity of a stock's return on market.

Symbolically,

$$j = \frac{Cov(R_j R_m)2}{\pm 2m}$$

Where,

j = Beta coefficient of stock j.

$\pm 2m$ = Market variance.

COV (Rj Rm) = Covariance between return on stock j. i.e. (Rj) and return of market i.e. (Rm) and is calculated as,

$$\text{Cov}\ (R_j, R_m) = \frac{\sum(R - \overline{R})(R_m - \overline{R_m})}{n-1}$$

Market Beta serves as a benchmark or a scale for the evaluation of risk of individual stocks. For an individual stock, beta could be less than, equals to or more than 1, depending upon the volatility of the stocks return relative to market returns.

The stock with a beta greater than 1 is considered to be aggressive (i.e. more risky than the market). The stock with a beta less than 1 is considered to be defensive (less risky than the market). And beta coefficient of market is always equals to 1.

Capital Asset Pricing Model (CAPM)

The relationship between the stack's return and its systematic risk can be expressed by the CAPM, which is also called the security market line (SML). Comparison of required rate of return expected rate of return gives the result whether the stock is overpriced or under priced. For the analysis risk free return is needed i.e. Rf. Here for our study porous return on the Treasury bill issued by the Nepal Rastra Bank is taken as the risk free rate. The equation for the CAPM is:

Symbolically,

$$E(ri) = Rf + [E(rm)-Rf]bi$$

Where,

E (ri) =Expected rate of return.

Rf= Risk free rate of return.

E (rm) = Expected market return.

bi = Beta

CHAPTER - IV
PRESENTATION AND ANALYSIS OF DATA

This chapter deals with the data presentation and analysis the results of the study. It contains three sections. The first section deals with the performance of the securities market (i.e. whether it is developing or not). The second section analysis the market shares of each individual commercial bank with the help of various indicators. And the third section evaluates the stocks of individual's bank with the help of financial and statistical tools.

4.1 Performance of Securities Market:

The major indicators that indicate the performance of securities market are: Number of issues approved. Total amount of issue approved, paid-up value of listed securities. Market capitalization amount, Annual turnovers, Total number of listed companies and NEPSE index. As a result of above factors, securities market performance in Nepal has witnessed a lot of change.

In the last fiscal year i.e. 2004/05 total listed companies in Nepal Stock Exchange Ltd. were 114, which have increased to 125 till the end of this fiscal year. Total market capitalization of the listed companies at the end of this fiscal year is recorded to be Rs. 61365.89 million, which is 48 percent higher than that of the last fiscal year. The price index of the listed securities (NEPSE Index) has closed at 286.67 points in the fiscal year. It is 64.63 points higher than that of the last fiscal year. Thus, Securities market indicators in the fiscal year 1995/96 to 2005/06 are given in Table 2.

Table 2: Performance of Securities Market
Securities Market Indicators
(Fiscal Year 1999/96 - 2005/06)

(Rs. in million)

Securities Market Indicators	Fiscal Year										
	1995/96	**1996/97**	**1997/98**	**1998/99**	**1999/00**	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**
Number of Issue Approved	1	12	5	12	*5*	*9*	9	16	17	16	12
Total Amount of Issue approved (Rs.)	254.21	293.74	332.20	462.36	258.00	630.31	717.20	1555.11	853.63	1547.79	1315.8
Total Amount of Public Issue (Rs.)	173.96	226.74	302.20	462.36	258.00	420.11	493.40	1579.81	696.63	1090.37	1476.82
Paid-up Value of Listed securities (Rs.)	2961.8	3358.5	4476.5	4959.8	6487.4	7347.4	8165.2	9685.04	12560.07	13404.90	16771.9
Market Capitalization (Rs.)	12963.0	12295.0	12698.0	14289.0	23508.0	43123.3	46349.4	34703.9	35240.4	41424.77	61365.9
Annual Turnover (Rs.)	1054.27	215.61	416.23	202.61	1499.98	1157.03	2344.16	1540.63	575.80	2144.27	4507.7
% of 'Turnover on Paid up Issue	5.60	6.42	9.30	4.09	23.12	15.75	28.71	15.91	4.58	16.00	23.00
% of Turnover on Market Capitalization	8.13	1.75	3.28	1.42	6.38	2.68	5.06	4.44	1.63	5.18	7.00
% of Market capitalization on Nominal GDP at Market price	6.17	5.14	4.71	4.93	7.12	11.77	11.78	8.56	8.09*	8.77	12.17#
Market Day	242	240	239	237	231	240	231	246	238	243	236
Average Daily Turnover (Rs.)	4.36	0.90	1.74	0.85	6.49	4.82	10.14	6.26	2.42	8.82	19.10
Total Number of Listed Companies	79	89	95	101	107	110	115	96	108	114	125
Number of Company Traded	53	59	67	68	69	69	67	69	81	92	102
Number of Shares Traded. ('000)	3901	2954	9443	1195	4857	7674	4989	6005	2428	6468	18434
Number of Transaction	21472	17943	12428	15483	15814	29136	46095	42028	69163	85533	106246
Number of Listed Securities (' 000)	58247	65880	85193	90107	105632	114057	124971	122685	159958	161141	194673
NEPASE Index (points)	195.48	185.61	176.31	163.35	216.92	360.70	348.43	227.54	204.86	222.04	286.67

Source SEBO/N * Revised Estimate of GDP # Preliminary Estimate of GDP

4.1.1 Number of Public Issue Approval

In this fiscal year 2005/06, 13 companies consisting of four commercial banks, two development banks, six finance companies and one hydropower company issued their securities to the public. The amount of issue was Rs. 1476.82 million. In the last fiscal year, 14 companies had issued securities amounting to Rs. 1027.50 million. Detail on securities issue in the fiscal year 2005/ 06 is given in table 3

Table 3: Securities Issue

S,N.	Name of the Company	Types of	Issued Amount	Subscription
1	Nepal Bangladesh Bank Ltd.	Rights Share	359.92	-
2	National Hydro Power Co. Ltd.	Ordinary Share	140.00	-
3	World Merchant Banking and Finance	Ordinary Share	24.00	9.65
4	Annapurna Finance Co. Ltd.	Rights Share	20.00	-
5	Birgunj Finance Co. Ltd.	Ordinary Share	24.00	7.04
6	Deprosc Development Bank Ltd.	Ordinary Share	3.48	2.59
7	Everest Bank Ltd.	Debenture	300.00	-
8	Nirdhan Uthan Bank Ltd.	Right Share	15.00	-
9	Nepal SBI Bank Ltd.	Right Share	215.93	-
10	Nepal Investment Bank' Ltd.	Right Share	295.29	-
11	Everest Finance Ltd.	Ordinary Share	8.00	5.40
12	Capital Merchant Banking and Finance Ltd.	Ordinary Share	28.00	2.02
13	National Finance Co. Ltd.	Right Share	43.20	-

Excluding additional sale of units of Citizen Unit Scheme amounting Rs. 45.49 million.

4.1.2 Paid-up Value

The total paid-up value of the listed securities at the end of this fiscal year reached Rs. 16771.85 million. The paid-up value in the last fiscal year was Rs. 13404.90 million.

Table 4: Paid-up Value

S.N.	Sector	Paid up value (Rs. in Million)	Percent
1	Commercial Bank	6987.34	41.66
2	Development Bank	669.48	3.99
3	Finance Company	2009.89	11.98
4	Insurance Company	1228.00	7.32
5	Hotel	1552.88	9.26
6	Manufacturing & Processing Company	2756.96	16.44
7	Trading Company	76.64	0.46
8	Other Company	1490.66	8.89
		16771.85	**100.00**

4.1.3 Market Capitalization

By the end of this fiscal year, the market capitalization value of the listed securities reached to Rs. 61365.89 million. In the last fiscal year, this value was Rs. 41424.77 million. During this year, the highest value of market capitalization was Rs. 63806.13 million and the lowest was Rs. 41539.32 million. The percentage contribution of market capitalization on GDP is estimated to be 12.17.

Table 5: Market Capitalization

S.N.	Sector	Market Capitalization Value (Rs in Million)	Percent
1	Commercial Bank	40119.88	65.38
2	Development Bank	1050.07	1.71
3	Finance Company	3666.13	5.97
4	Insurance Company	3966.10	6.46
5	Hotel	2308.38	3.76
6	Manufacturing & Processing Company	5024.83	8.19
7-[7]	Trading Company	635.88	1.04
8	Other Company	4594.62	7.49
Total		**61365.89**	**100.00**

4.1.4 Turnover

The total amount of securities traded in this fiscal year is Rs. 4507.68 million. In the last fiscal year, it was Rs. 2144.27 million.

Table 6: Annual Turnover

S.N.	Sector	Trading Amount (Rs. in Million)	Percent
1	Commercial Bank	4021.83	89.23
2	Development Bank	22.01	0.48
3	Finance Company	216.37	4.80
4	Insurance Company	67.62	1.50
5	Hotel	4.48	0.10
6	Manufacturing & Processing Company	114.90	2.55
7	Trading Company	7.99	0.18
8	Other Company	52.48	1.16
	Total	**4507.68**	**100.00**

In this fiscal year, the percentage turnover to market capitalization is 7.35, while that of

the last fiscal year was 5.18. The number of traded companies in this fiscal year is 102, which were 92 in the last fiscal year. Monthly turnover during this fiscal year is given in figure 4.

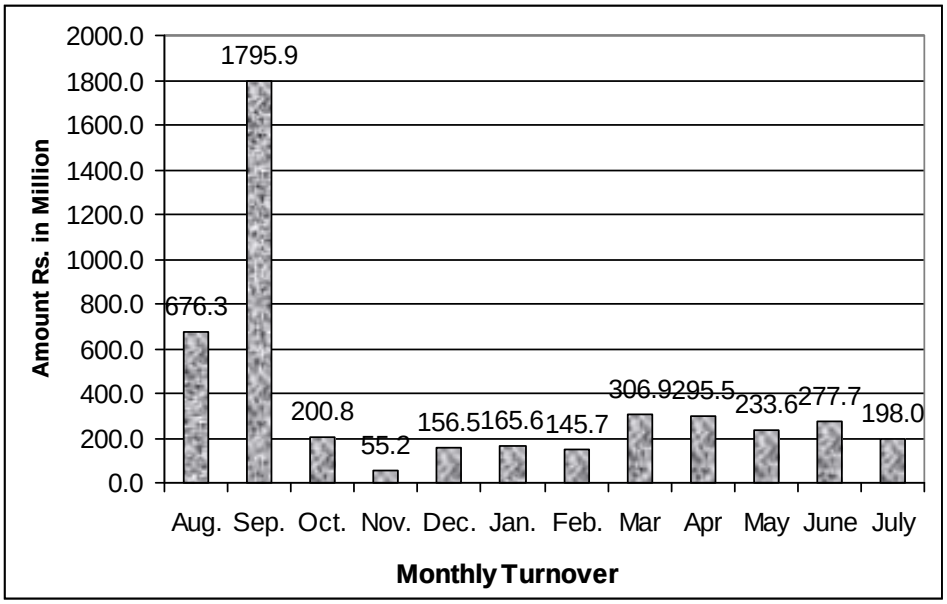

Figure: 4

* Including block transaction of shares of Standard Chartered Bank Nepal Ltd. amounting to Rs. 1660.10 million.

4.1.5 Listing of Securities

In this fiscal year 2005/06, 26 companies listed their securities amounting to Rs. 3428.3 in NEPSE. The detail on listing is given in table 7.

Table 7: Listing of Securities

S.N.	Name of the Company	Types of Securities	Amount (Rs in Million)
1	Kumari Bank Ltd. *	Ordinary Share	500.00
2	Fewa Finance Ltd. *	Ordinary Share	20.00
3	Narayani Finance Ltd.	Bonus Share	4.72
4	Sagarmatha Insurance Co. Ltd.	Bonus Share	5.10
5	Lumbini Bank Ltd.*	Ordinary Share	500.00

6	Prudencial Insurance Co. Ltd. *	Ordinary Share	100.00
7	Laxmi Bank Ltd**	Ordinary Share	60.00
8	Rastriya Beema Sansthan	Bonus Share	13.85
9	Pashchimanchal Bikash Bank Ltd.*	Ordinary Share	20.00
10	Kist Merchant Banking and Finance Ltd.*	Ordinary Share	50.00
11	Chhimek Bikash Bank Ltd.*	Ordinary Share	10.00
12	Butwal Power Co. Ltd. ***	Ordinary Share	839.06
13	Nepal Credit & Commerce Bank Ltd. *	Ordinary Share	700.00
14	World Merchant Banking & Finance Ltd. *	Ordinary Share	60.00
15	Everest Insurance Co. Ltd.	Bonus Share	30.00
16	National Finance Co. Ltd.	Bonus Share	7.20
17	Birgunj Finance Ltd. *	Ordinary Share	60.00
18	Pashchimanchal Finance Co. Ltd.	Bonus Share	4.00
19	Narayani Finance Ltd.	Bonus Share	5.62
20	Nepal Bangladesh Bank Ltd.	Right Share	359.93
21	Peoples Finance Ltd.	Right Share	8.67
22	N.B. Finance and Leasing Co. Ltd.	Rights Share	20.05
23	Annapurna Finance Company Ltd.	Rights Share	30.00
24	Central Finance Co. Ltd.	Bonus Share	4.00
25	Deprose Development Bank Ltd.*	Ordinary Share	11.60
26	Nepal Housing & Merchant Finance Ltd.	Bonus Share	4.50
	Total		**3428.30**

* New company listing securities

** Securities of HISEF Finance Ltd. re-listed in the stock exchange in the name of Laxmi Bank Ltd. after the merger of these two companies

*** Promoters Share

Of the 26 companies listing securities in NEPSE, 12 are new companies. In this fiscal year, EPSE de-listed the shares of Nepal Bank Ltd. As at the end of this fiscal year, number of listed companies in NEPSE reached to 125.

Table 8: Listed Companies by the end of the Fiscal Year 2005/06

S.N.	Sector	Number of Listed Company	Percent
1	Commercial Bank	14	11.20 .
2	Development Bank	7	5.60
3	Finance Company	44	35.20
4	Insurance Company	14	11.20
5	Hotel	4	3.20
6	Manufacturing & Processing Company	29	23.20
7	Trading Company	8	6.40
8	Other Company	5	4.00
Total		**125**	**100.00**

4.1.6 Price Index

By the end of this fiscal year, the price index of the listed securities (NEPSE Index) remained at 286.67 points, which is 64.63 points higher than that of the last fiscal years' index 222.04 points. In this fiscal year, the highest index of 298.78 was noted and the lowest index of 222.65 was noted.

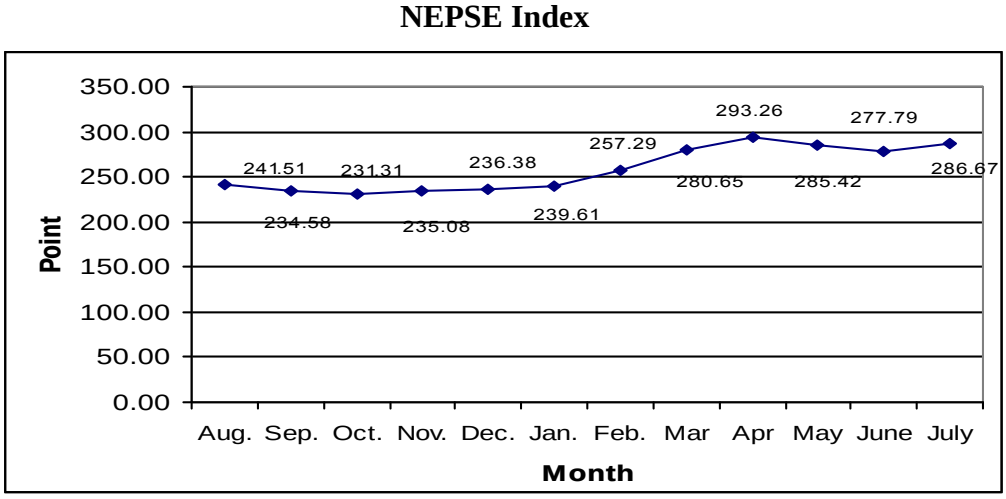

Figure: 5

4.2 Market Share of Deposits

The market Shares of deposits of individual bank in penetrating the market of individual savers. Hence higher the shares of the deposits in the market, the bank's performance can be regarded as better in comparison. It is known that, higher share in the deposits give market better opportunity for the investment and flow of loans to the selected sectors. The market shares of the deposit in the market, the bank's performance can be regarded as better in comparison.

Table 9: The market shares of each of these banks are shown in the following Table-9 Market Share of Deposits

Banks	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**Average**
Nabil Bank Limited	12779.51	15839.00	15506.44	13447.65	14119.03	14586.61	12326.32
Nepal Investment Bank Limited	2983.30	4256.20	4174.80	7922.80	11525.40	14254.60	6446.16
Standard Chartered Bank Nepal Limited	12568.48	15430.05	15853.74	18755.64	21161.44	19335.09	14730.06
Himalayan Bank Limited	14043.09	17532.40	18619.38	21007.38	22010.33	24814.01	16861.80
Nepal SBI Bank Limited	4535.73	6612.29	5572.47	6522.82	7198.35	8654.77	5586.06
Nepal Industrial & Commercial Bank Limited	2025.50	3575.83	3165.32	3144.33	5146.48	6241.38	3329.26
Total	**48935.61**	**63245.77**	**62892.15**	**70800.62**	**81161.03**	**87886.46**	**59279.66**

(Source: ***Annex 1-6)***

The above table shows that Nabil bank's market share of deposit in comparison to its average figure in the year 2001 is just above its average, whereas in the year 2002 and 2003 it was in good position. But in the 2004, 2005 and 2006 it has been in moderate level. It should be noted that Nabil bank is in the third position in total average up to the year 2006 in ranking with other banks status.

The Nepal investment bank's market share of deposit in comparison to its average figure in year 2001, 2002 & 2003 was in poor condition, whereas in the year 2004, it was moderate in the year 2005 & 2006 it was in good condition. it should be noted that Nepal investment bank is in the fourth position in total average up to the year 2006 in ranking with other banks status.

The above table shows that Standard Chartered bank Nepal ltd market share of deposit in comparison to its average figure is in poor condition in the year 2001 but it is in moderate level after the year 2002, and it is in good position after the period of 2005. It should be noted that Standard chartered bank is in the second position in total average up to the year 2006 in ranking with other banks status.

The above table shows that Himalayan bank ltd market share of deposit in comparison to its coverage figure is in poor condition in the year 2001 & 2002 but it is in moderate level in the years 2003 & 2005 and it is in best position during the period of 2004, & 2006. It should be noted that Himalayan bank is in the first position in total average up to the year 2006 in ranking with other banks status.

Average result of others remaining bunks shows that they are in the surviving condition in the comparison to the total average but they are doing their best to their internal performance.

Market Share of Percentage of Deposit of each Bank

Banks	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**Average**
Nabil Bank Limited	26.11	25.04	24.66	18.99	17.40	16.60	20.79
Nepal Investment lank Limited	6.10	6.73	6.64	11.19	14.20	16.22	10.87
Standard Chartered lank Nepal Limited	25.68	24.40	25.21	26.49	26.07	22.00	24.85
Himalayan Bank Limited	28.70	27.72	29.60	29.67	27.12	28.23	28.44
Nepal SBI Bank Limited	9.27	10.45	8.86	9.21	8.87	9.85	9.42
Nepal Industrial & Commercial Bank Limited	4.14	5.65	5.03	4.44	6.34	7.10	5.62
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Nabil bank percentage of market share of deposit have increased in 2001 but then after it has been decrease steadily from 2002 to *2006.* Nepal investment bank percentages of market share of deposit have steadily increased from 6.10 in 2001 to 16.22 in 2005. On the other hand, Standard Chartered bank and particularly Himalayan bank, the percentage

increased in the year 2001, and fell markedly in 2002 but from 2003 to 2005 it have been increased steadily. Whereas in 2006 Standard Chartered Bank Percent decreased from 26.07 to 22.and Himalayan bank percent increased from 27.12 to 28.23. Nepal SBI bank percentage of market share of deposit was 9,27, 10.45, 8.86, 9.21, and 8.87 in 2001, 03, 04, & 2005 . But in the year 200^ it was 9.85 percent. Nepal industrial & commercial bank have highest percent of market share of deposit in 2006 which is 7.10 percent.

Thus, it can be noted that Nabil bank. Standard chartered bank & Himalayan bank have leading market share of deposit. These three banks have more than one-fifth of market share of total deposit and rest of the banks have less than ten percent of market share over last six year period.

4.3 Market Share of Investments:

Commercial bank's investment in government securities provide a cushion against unanticipated deposits withdrawal from deposits previously they were required to place a certain % of their deposits into government securities, however, under existing regulatory provisions. It is not mandatory to place certain % of their total deposits in specified securities such as government securities and the NRB bonds. A major part of commercial banks investment comprises of investments made in government securities the remaining part of investment is made against share and debentures of public limited companies most of the banks have made priority sector program targets set by Nepal Rastra Bank. The market shares of investment of each of these banks are presented in the following table.

Table 10: Market Share of Investment

(In Rs. 000000)

Banks	2001	2002	2003	2004	2005	2006	Average
Nabil Bank Limited	1250.97	2752.78	4143.51	6031.17	5836.07	4267.23	3469.68
Nepal Investment lank Limited	1183.40	1970.30	1822.20	1705.24	3862.50	3934.20	2069.12
Standard Chartered lank Nepal Limited	3349.89	9559.17	9275.87	10357.70	11360.33	9702.55	7958.79
Himalayan Bank Limited	2216.42	4083.16	9157.11	10175.44	9292.10	11692.34	6660.37
Nepal SBI Bank Limited	192.85	364.69	503.17	1207.28	1907.52	2607.68	969.88
Nepal Industrial & Commercial Bank Limited	344.37	608.54	746.87	134.66	1760.72	1572.90	882.01
Total	**8543.90**	**19344.64**	**25654.73**	**3617.49**	**34025.24**	**33782.90**	**21715.84**

(*Source: Annex 1-6)*

The above table shows that Nabil bank's market share of investment in comparison to its average figure is in poor position in the years 2001, 2002 whereas in the year 2003 & 2006 it is in moderate level. But in the year 2004 & 2005 it is in good position. It should be noted that Nabil bank is in the third position in total average up to the year 2006 in ranking with other banks status.

The Nepal investment bank's market share of investment in comparison to its average figure in the year 2001, 2002, 2003, & 2004 was in poor condition, But in the year 2005 & 2006 it was in good condition. It should be noted that Nepal investment bank is in the fourth position in total average up to the year 2006 in ranking with other banks status.

The above table shows that Standard Chartered bank Nepal ltd market share of investment in comparison to its average figure is in poor condition in the year 2001 hut it is in moderate level in the year 2002, 2003 & 2006 and it is in good position after the period of 2004 & 2005 it should be noted that Standard chartered bank is in the first position in total average up to the year 2006 in ranking with other banks status.

The above table shows that Himalayan bank ltd market share of loan in comparison to its average figure is in poor condition in the year 2001 & 2002 but it is in moderate level in the years 2003 & 2005 and it is in best position during the period of 2004 & 2006. It should be noted that Himalayan bank is in the second position in total average up to the year 2006 in ranking with other banks status.

Average result of others remaining banks shows that they are in the surviving condition in the comparison to the total average but they are doing their best to their internal performance.

Percentage of market share of Investment of each Banks

(In Percent)

Banks	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	Average
Nabil Bank Limited	14.64	14.23	16.15	19.70	17.15	12.63	15.98
Nepal Investment Bank Limited	13.85	10.19	7.10	5.57	11.35	11.65	9.53
Standard Chartered Bank Nepal Limited	39.21	49.42	36.16	33.83	33.39	28.72	36.65
Himalayan Bank Limited	25.94	21.11	35.69	33.23	27.31	34.61	30.67
Nepal SBI Bank Limited	2.26	1.89	1.96	3.94	5.61	7.72	4.47
Nepal Industrial & Commercial Bank Limited	4.03	3.15	2.91	3.71	5.17	4.66	4.06
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Nabil bank percentage of market share of investment have increased from 14.64 percent in 2001 to 19.70 percent in 2004 but then after it has been decrease steadily from 17.15 percent in 2005 to 12.63 percent in 2006. Nepal investment bank percentages of market share of investment have steadily decreased from 13.85 in 2001 to 5.57 in 2004. But then after it has been increase steadily from 11.35 percent in 2005 to 11.65 percent in 2006. On the other hand, Standard Chartered bank in the year 2001 & 2002 was 39.21&49.42 percents and than after it was declined and reached up to 28.72 percent in 2006. Himalayan bank in the year 2001, 2002 & 2003 had 25.94, 21.11&35.69 percents and then after it declined 33.23 percent in 2004 to 34.61 percent in 2006. Nepal SBI bank percentage of market share of investment was 2.26, 1.89, 1.96, 3.94 and 5.61 in 2001, 02,

03, 04 & 2005. But in the year 2006 'it was 7.72 percent. Nepal industrial & commercial bank have highest percent of market share of investment in 2005 which is 5.17 percent.

4.4 Market Shares of Total Assets:

The total of year-end balance sheet figure has been used to analyze the market shares to total assets. The results are presented below.

Table 11: Market Share of Total Assets

(In Rs. 000000)

Banks	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**Average**
Nabil Bank Limited	15314.75	18745.87	17629.55	16562.60	16745.60	17186.33	17030.78
Nepal Investment Bank Limited	3796.70	5127.40	5123.00	9163.90	13463.90	16601.10	8879.33
Standard Chartered Bank Nepal Limited	17154.94	19703.42	18443.12	21000.00	23642.06	21893.58	20306.19
Himalayan Bank Limited	15863.70	19500.57	21315.85	24197.97	25729.79	28871.34	22579.87
Nepal SBI Bank Limited	5106.57	7284.79	7021.14	7566.33	8440.40	10345.37	7627.43
Nepal Industrial & Commercial Bank Limited	2719.46	4374.03	3768.87	4037.52	5939.37	7508.07	4724.55
Total	59962.12	74742.08	73307.53	82534.32	93967.12	102411.80	81154.16

(Source : Annex 1-6)

The above table shows that Nabil bank's market share of Total assets in comparison to its average figure is in poor position in the years 2001, 2004 &2005"whereas in the year 2003 &2006'it is in moderate level. But in the year200^it is in good position. It should be noted that Nabil bank is in the third position in total average up to the year 2006 in ranking with other banks status.

The Nepal investment bank's market share of investment in comparison to its average figure in the year 2001, 2002 & 2003, was in poor condition. But in the year 2004 2005 & 2006 it was in good condition. It should be noted that Nepal investment bank is in the

fourth position in total average up to the year 2006 in ranking with other banks status.

The above table shows that Standard Chartered bank Nepal ltd market share of investment in comparison to its average Figure is in poor condition in the year 2001, 2002 & 2003, but it is in moderate level in the year 2004 and it is in good position after the period of 2005 and 2006. It should be noted that Standard chartered bank is in the second position in total average up to the year 2006 in ranking with other banks status.

The above table shows that Himalayan bank ltd market share of loan in comparison to its average figure is in poor condition in the year 2001 but it is in moderate level in the years 2002, 2003 & 2004 and it is in best position during the period of 2005 & 2006. lt should be noted that Himalayan bank is in the first position in total average up to the year 2006 in ranking with other banks status.

Average result of others remaining banks shows that they are in the surviving condition in the comparison to the total average but they are doing their best to their internal performance.

Percentage of market share of total assets of each Banks

(In Percent)

Banks	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**Average**
Nabil Bank Limited	25.54	25.08	24.05	20.07	17.82	16.78	20.99
Nepal Investment Bank Limited	6.33	6.86	6.99	11.10	14.33	16.21	10.94
Standard Chartered Bank Nepal Limited	28.61	26.36	25.16	25.44	25.16	21.38	25.02
Himalayan Bank Limited	26.46	26.09	29.08	29.32	27.38	28.19	27.82
Nepal SBI Bank Limited	8.52	9.75	9.58	9.17	8.98	10.10	9.40
Nepal Industrial & Commercial Bank Limited	4.54	5.85	5.14	4.89	6.32	7.33	5.82
Total	100	100	100	100	100	100	100

Nabil bank percentages of market share of total assets have decreased from 25.54 percent in 2001 to 16.78 percent in 2006. Nepal investment bank percentages of market share of investment have steadily increased from 6.33 in 2001 to 16.21 in 2006. On the other hand, Standard Chartered bank in the year 2001 & 2002 was 28.61 & 26.36percents and

than after it was declined and reached up to 21.38 percent in 200o' Himalayan bank in the year 2001, 2002, 2003 & 2004 had 26.46, 26.09, 29.08&29.32percents and then *after* it declined 27.38 percent in 2005 and increased to 28.18 percent in 2006. Nepal SBI bank percentage of market share of total assets was 8.52, 9.75, 9.58, 9.17&8.98 in 2001, 02, 03, 04 & 2005. But in the year 2006 it was 10.10 percent. Nepal industrial & commercial bank have highest percent of market share of total assets in 2006, which is 7.33 percent.

4.5 Implication of the Market Shares Analysis on Share Price Behavior:

Now it is attempted to make a comparison of the banks under study on the basis of the indicators examined above and ranked their performance to understand their strength and weaknesses towards the status of the bank in the market. The following table represents the ranking of the banks on the basis of market share analysis.

Table 12: Ranking of the Banks on the basis of Market Share

Banks	Deposits	Loan	Investments	Total Assets
Nabil Bank Ltd.	3	2	3	3
Nepal Investment Bank Ltd.	4	4	4	4
Standard Chartered Bank Nepal Ltd.	2	3	1	2
Himalayan Bank Ltd	1	1	2	1
Nepal SB! Bank Ltd	5	5	5	5
Nepal Industrial & Commercial Bank Ltd.	6	6	6	6

(Source; Table 9-12)

The market share analysis may be a good tool of ranking the performance of an individual corporate entity. Ranking may give the glimpse of understanding of the overall performance, strength and weaknesses of the particular company. And such strengths and weak points of the company can be used for the implication of share price behavior as is done by the fundamental analysts. Here, it is attempted to evaluate the individual banks overall performance on the basis of their market occupancy and rank these banks in order as per the penetration of the market by them in several aspects during the period of the sample. From the above presented table it is clear that the Himalayan Bank ltd. dominates the market share in the sects of deposit, loans and total assets. At investment Standard

Chartered Bank Nepal ltd. have higher performance then remaining banks. From the above presentation it can concluded that NBL, SCE3NL and HBL dominates the market share in the above sects but remaining banks have weak performance. Among the weaker banks Nepal Industrial & Commercial Bank Ltd has the poorest performance and Nepal SBI bank ltd. came in second in weakest position and Nepal Investment Bank ltd has average performance.

4.6 Risk and Return Analysis

Risk and return analysis is considered to be one of the best ways of analyzing the behavior of prices of the shares in the market. It involves the analysis of capital gain from the investment in the securities and the dividend yield, increased there of as well. In this analysis it is attempted to find out periodical realized return to the investment, its expected return or average rate of return over the period of the review, the standard deviation of the return over the period co-efficient of variation and Beta.

4.6.1 Expected Rate of Return analysis of Individual Banks

It is very useful of analyze the individual returns patterns and risk involvement of any company while investigating the causes and the path of movement of the share price behavior. The following table depicts the statistical facts through manual and excel spread sheet. For all individual banks under the study having its base in the year end closing prices of shares of banks and dividend announcement during the year of well.

4.6.2 Standard Deviation

Standard deviation is a strong statistical device to measure the total risk involved in an investment which consists of both market risk and diversifiable liable risk. Moreover it denotes the volatility or the expected rate of return. The calculated value of expected return and standard deviation are presented in the below table.

Table 13: Standard Deviation of Individual Banks

Banks	Expected Return ($\overline{Rj}$)	Standard Deviation (±)	Ranking based on standard
Nabil Bank Ltd.	0.2968	0.5333	2
Nepal Investment Bank Ltd.	0.0591	0.3822	4
Standard Chartered Bank Nepal Ltd.	0.2268	0.3426	6
Himalayan Bank Ltd.	0.0472	0.3732	5
Nepal SBI Bank Ltd.	0.4199	0.8783	1
Nepal Industrial & Commercial Bank Ltd.	0.0321	0.3968	3

Source: NEPSE, Annex 8-13

Based on the implicit assumption of the standard deviation investment in the common stocks of Nepal Industrial & commercial Bank are more risky followed by Nabil Bank Ltd .The Stock of Standard Chartered Bank could be considered as less risky as the standard deviation which is lower than that of other banks though it has 22.68 percent of expected realized return. The common stock of Nepal Industrial & commercial Bank is associated with 87.83% of the highest risk which indicated that the expected return can be deviated by 87.83% in case of common stock investment. Hence, there exists less volatility or risk level in the market return than in the individual common stock investment.

4.6.3 Co-efficient of Variation (CV)

The standard deviation may not be appropriate measure of risk when the realized rates or returns are not same in all of the companies taken under consideration. Here also the average realized rate 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 banks. The coefficient of variation measures the risk per unit of return. The coefficients of variation of the realized rate of return of the sample are shown in-the

following table.

Table 14: Coefficient of variation of Individual Banks

Banks	Co-efficient of variation
Nabil Bank Limited	1.80
Nepal Investment Bank Limited	6.47
Standard Chartered Bank Nepal Limited	1.51
Himalayan Bank Limited	7.91
Nepal SBI Bank Limited	2.09
Nepal Industrial & Commercial Bank Limited.	12.42

Source: NEPSE, Annex-8-13

On the basis of the coefficient of variation common stock of Nepal Industrial & Commercial Bank seems to be most risky. The common stock of Standard Chartered Bank Nepal seems to be less risky. Among remaining sample Nabil Banks and Nepal SBI Bank have average risk for invest in common stock. Whereas, Himalayan Bank and Nepal Investment Bank seem to be risky for invest in common stock.

4.6.4 Beta Coefficient

Analysis of market sensitivity gives a very useful insight in the analysis and the selection procedures of the common stock in the secondary market. In this beta co-efficient of the particular security is computed and compared with the market as a whole and the similar companies in the same industry market sensitivity of stock is explained by its beta coefficient. Higher beta indicates the greater reaction by the individual common stock with the given movement in the market status. Beta as the measurement of systematic risk cannot be reduced by diversification. This presumption can be proved in the following way.

$$\beta j = \frac{COV\,(Rj\,Rm)}{\sigma m^2}$$

For the analysis of Beta following statistical equation is attempted

Where,

COV (Rj Rm) = Covariance between return on stock j i.e. (Rj) and return of market i.e. (Rm) and is calculated as,

$$\text{COV (Rj Rm)} = \frac{\sum (\text{Rj - Rj}) (\text{Rm - Rm})}{\text{n - 1}}$$

Hence, Beta, co-efficient of market is always equal to 1. Hence the analysis of market sensitivity gives on image of the stock regarding its change attitude along with the changes in the market status.

Following tables and paragraphs gives the computation and analysis of the beta co efficient of individual hanks under study.

Table 15: Beta Co-efficient of Individual Banks

Banks	Beta ( )	Ranking
Nabil Bank Ltd.	1.50	1
Nepal Investment Bank Ltd.	0.90	4
Standard Chartered Bank Nepal Ltd.	0.97	3
Himalayan Bank Ltd.	1.03	2
Nepal SBI Bank Ltd.	0.36	6
Nepal Industrial & commercial Bank Ltd.	0.81	5
Market	1	

(Source: NEPSE, Annex-14-19)

By analyzing the above table, most of the banks have beta coefficient less than 1, except "Nabil Bank & Himalayan Bank, which indicates that they are less sensitive to the market in comparison to the other commercial banks. Therefore the stocks are compared to the average stock in the market. From above analysis the systematic risk (undiversifiable risk) is less than except Nabil bank & Himalayan bank. According to ranking Nabil bank has higher level of risk i.e. 1.50 and Nepal SBI bank has low level of risk i.e. 0.36. Based on above analysis commercial banks are almost free from systematic risk or it is

acceptable risk which exit within banks. So we can conclude that banks are going to improve their performance as well as reducing systematic risk.

4.6.5 Security Market Line Analysis:

In market equilibrium the relationship between individual securities expected return and its systematic risk is measured by beta will be linear. The relationship is known as security market line analysis. This analysis gives another idea to understand the future returns of the stock price based on pure economic aspect of one price. It helps to distinguishing the over and under price of stock among the stocks listed with any stock exchange.

In security line analysis following equation is applied to find out the rate of return from the convention of capital assets pricing model. The equation can be depicted as follows:

$$E(ri) = Rf + [E(rm) - Rf]\, bi$$

It should be noted that risk free rate of return is taken from the interest rate of Treasury bill issued by Nepal Rastra bank. NRB issues Treasury bill of 91 days and 364 days duration. As suggested by the Treasury bill section of NRB, the interest rate of T- Bill is taken as risk tree rate, which is approximately 6.00 percent.

Under priced

Stock that the above the security market line are under priced indicating rates of return being higher than what actually are required for the level of risk involved. In other word, these stocks are over rewarded and accepted. According to Van Home "under priced proved on expected return in excess or that required by the market for the systematic risk involved. As a result, the security will be attractive to investors. According to the theory the expected demand will cause the price to rise consecutively."

Over priced

Stocks that lie below the security market line are over priced indicating rate of return being lower than what actually are required for the level of risk involved in handling the security of this category. In other word these stocks are under rewarded and normally

they are rejected for the investment. An over priced security is unattractive and investors holding it will avoid it and consequently the price fall.

$\overline{Rj} > E(ri) \rightarrow$ Under Priced

$\overline{Rj} < E(ri) \rightarrow$ Over Priced

Where,

$\overline{Rj}$ = Expected Return

E (ri) = Required Rate of Return

Table 16: Security Market Line Analysis

Banks	**Rf**	**Rm**	**bi**	**E (ri)**	$\overline{Rj}$	**Results**
Nabil Bank Ltd.	0.06	0.0929	1.50	0.1423	0.2968	Under Price
Nepal Investment Bank Ltd.	0.06	0.0929	0.90	0.1225	0.0591	Over Price
Standard Chartered Bank Nepal Ltd.	0.06	0.0929	0.97	0.1248	0.2268	Under price
Himalayan Bank Ltd.	0.06	0.0929	1.03	0.1268	0.0472	Over Price
Nepal SBI Bank Ltd.	0.06	0.0929	0.36	0.1047	0.4199	Under Price
Nepal Industrial & Commercial Bank Ltd.	0.06	0.0929	0.81	0.11.95	0.0321	Over price

(Source: NRB, Annex- 7-19)

4.7 Major Findings of the Study:

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

- Market share analysis of different banking indicates used is not completely captured by the market value of these banks but the firms under the study grow mature market share of the bank in the different key business areas play a greater roles in the share price representation by the historical information.

- The risk and return analysis is the other major tool used in this study. It was observed that this analysis can give better results only when the long range of post information is available for the analytical purpose. But the case in different in present context as most of the banks do not have long history in the security market the result of the analysis could not fully explain the behavior of the stock price in the market.
- Based on the implicit assumption of the standard deviation investment in the common stocks of Nepal Industrial & commercial Bank are more risky followed by Nabil Bank Ltd .The Stock of Standard Chartered Bank could be considered as less risky as the standard deviation which is lower than that of other banks though it has 22.68 percent of expected realized return. The common stock of Nepal Industrial & commercial Bank is associated with 87.83% of the highest risk which indicated that the expected return can be deviated by 87.83% in case of common stock investment. Hence, there exists less volatility or risk level in the market return than in the individual common stock investment.
- On the basis of the coefficient of variation common stock of Nepal Industrial & Commercial Bank seems to be most risky. The common stock of Standard Chartered Bank Nepal seems to be less risky. Among remaining sample Nabil Banks and Nepal SB1 Bank have average risk for invest in common stock. Whereas, Himalayan Bank and Nepal Investment Bank seem to be risky for invest in common stock.
- Most of the banks have beta coefficient less than 1, except Nabil Bank & Himalayan Bank, which indicates that they are less sensitive to the market in comparison to the other commercial banks. Therefore the stocks are compared to the average stock in the market. From above analysis the systematic risk (undiversifiable risk) is less than lexcept Nabil bank & Himalayan bank. According to ranking Nabil bank has higher level of risk i.e. 1.50 and Nepal SB I bank has low level of risk i.e. 0.36.
- The comparison between expected rate of return and required rate of return identify whether the stock is overpriced or under priced. If required rate of return is lower than expected rate of return stock is said to be under priced and if the required rate of return is greater than expected rate of return, stock is over priced. This study shows that Nepal Investment bank, Himalayan bank & Nepal Industrial & Commercial banks stocks are over priced this means their stock value will be decreased in near future so investors should sell their stock where as other banks have their stock under priced. This means that their value will be increased in near future. All the stock is in demand so; investors can buy the stock of those banks whose stock is under priced.

CHAPTER -V
SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter consists of three sections: the first section covers the summary of the study, the second section provides conclusion of the Study and the third section provides recommendation to solve the problem observed on the basis of the study.

5.1 Summary:

Development of securities market is essential to develop the national economy. It requires the development of various infrastructures to smooth out the transactional procedures. It is the developed securities market that can mobilize domestic as well as international funds. So the development cannot be done within short period of time. It is the outcome of long patient and continuous effort. In our context, present stage of the market is also the outcome of nearly 3 decades efforts.

Despite its history of nearly 3 decades, the securities market in Nepal has barely entered the first stage of development. Due to political & economic instability, absence of growth oriented policies and weak regulatory framework of stock market, securities market have failed to gain investor's confidence. Unavailability of timely information and weak supervision & monitoring has made the securities market highly risky for general investors.

The main aim of this study is to synchronize the development of securities market in Nepal and analyze the stock price behavior of commercial banks. Specifically, the objectives of the study are set as: to evaluate the trend in paid up value, market capitalization, trading turnovers and behavior of NEPSE Index; to analyze the market stock price behavior of commercial banks in the Nepalese securities market and to analyze the sensitive of the stock in relation with the market by the help of beta co-efficient.

This study is totally based on the secondary data. For the purpose of the first objectives, the data on securities market performance indicators such as paid up value, annual turnover, amount of public issues approval, number of issue approval, market

capitalization, number of listed companies and NEPSE index and others were collected from the year 1995/96 to 2005/06. And also a comparative study is conducted between 2005 and 2006 based on above securities market performance indicators.

For the second objectives, market share analysis have been employed to know the Nepal stock exchange is a weak form of the market and the stock price of commercial banks walk randomly. And for Final objectives of the study the risk and return of commercial banks have been analyzed. Out of twenty commercial banks operating in Nepal, only six banks namely, Nabil bank Ltd; Nepal investment bank Ltd; Standard Chartered bank Ltd; Himalayan bank Ltd; Nepal SBI bank Ltd and Nepal Industrial & Commercial bank Ltd are taken as sample for this study. While, analyzing the risk and return of each individual banks following calculation were conducted. Expected return, required rate of return, CAPM model and statistical tools like percentage, mean, standard deviation, coefficient of variation were analyzed and interpreted.

5.2 Conclusion:

Securities market plays a vital role in the development of the financial & economic of a country. They provide an alternative for Financial resource mobilization. In the past decades, many developing countries have established securities market. In Nepal, the stock exchange was establish in the year 1994, providing a marketplace for securities trading by private brokers. The objective of this paper is to provide a synthesis of the process of development of securities market and analyze the stock price behavior of commercial banks in Nepal. The amendment in the Securities Exchange Act allowed the entry of private intermediaries and set up an oversight agency-the Securities Exchange Board. Following this change, the securities market in Nepal witnessed high growth. The primary and secondary market showed a good performance. At present Nepalese securities market is showing a sign of improvement for the development; it has been seen over last couple of years that there is a significant improvement terms of market capitalization, percent of market capitalization on nominal GDP at market price, annual turnovers, number of transaction, number of listed companies and NEPSE index.

The number of listed companies has been increasing expect in the year 2001/02 where it decreased. In addition, the number of secondary market intermediaries has also increased. These facts imply that there is an expansion in the securities market. Total paid up value

of 1 securities is in increasing tended; which indicates the number of listed companies has increased in each year. Paid up value indicates the actual investment value in assets. NEPSE from the year 1994/95 upto 2001/02 was in increasing trend but in the year 2002/03 & 2003/04 it was decreased, however in the year 2004/05 & 2005/06 it showed a sign of improvement and was increased significantly. The number of issue approval has been fluctuating during the years. Initially market was bullish, it was may be due to the political instability, immature liberalization and privatization policy of HMG/Nepal. However at it, the market is totally changed into bearish situation.

In regards to, the stock price behavior of commercial banks in Nepal; the market share of commercial banks under the studies give the glimpse of understanding of the overall performance, strength and weaknesses of the particular company. The Himalayan *Bank* ltd. dominates the market share in the sets of deposit, loans and total assets. On the investment Standard Chartered Bank Nepal ltd. has higher performance then other banks. However, Bank Ltd, Standard Chartered Bank Nepal Ltd and Himalayan Bank Ltd. dominate the share whereas remaining banks have weak performance. Among the weaker banks Industrial & Commercial Bank Ltd has the poorest performance and Nepal SB I bank me in second in weakest position. However, Nepal Investment Bank ltd has average performance.

The risk and return analysis is the other major tool used in this study. It was observed that this analysis can give better results only when the long range of post information is available for analytical purpose. But the case in different in present context as most of the banks do not have long history in the security market the result of the analysis could not fully explain the behavior pf the stock price in the market.

Based on the implicit assumption of the standard deviation investment in the common stocks of Nepal Industrial & commercial Bank are more risky followed by Nabil Bank Ltd .The Stock of Standard Chartered Bank could be considered as less risky as the standard deviation which is lower than that of other banks. The common stock of Nepal Industrial & commercial Bank is associated with the highest risk which indicated that the expected return can be deviated in case of common stock investment. Hence, there exists less volatility or risk level in the market return than in the individual common stock investment.

On the basis of the coefficient of variation common stock of Nepal Industrial & Commercial Bank seems to be most risky. The common stock of Standard Chartered Bank Nepal seems to be less risky. Among remaining sample Nabil Banks and Nepal SBI Bank have average risk for investment in common stock. Whereas, Himalayan Bank and Nepal Investment Bank seem to be risky for invest in common stock.

Most of the banks have beta coefficient less than 1, except Nabil Bank & Himalayan Bank, which indicates that they are less sensitive to the market in comparison to the other commercial banks. Therefore the stocks are compared to the average stock in the market. From above analysis the systematic risk (undiversifiable risk) is less than 1 except Nabil bank & Himalayan bank. According to ranking Nabil bank has higher level of risk and Nepal SBI bank has low level of risk.

The comparison between expected rate of return and required rate of return identify whether the stock is overpriced or under priced. If required rate of return is lower than expected rate of return stock is said to be under priced and if the required rate of return is greater than 'expected rate of return, stock is over priced. This study shows that Nepal Investment bank, Himalayan bank & Nepal Industrial & Commercial banks stocks are over priced this means their stock value will be decreased in near future so investors should sell their stock where as there banks have their stock under priced. This means that their value will be increased in near future. All the stock is in demand so; investors can buy the stock of those banks whose stock is under priced.

5.3 Recommendation:

Recommendation is the final output of whole study. It helps to convey positive information and proper way of improvement to concerned people and to other interested researchers in the upcoming days. Various analysis have been done till these steps. On .the basis of these analysis and findings of the study, following suggestions and recommendations can be advanced to overcome weakness.

In general following recommendation are been suggested for the overall development of Securities market.

- **Develop Self Regulatory Structure:** An important element of the securities market

regulation is the presence of self regulatory bodies such as a Stock Exchange which is owned by brokers. It has developed its own rules and standards. Similarly, self regulatory organizations like Merchant Bank's Association and Institute of Chartered Accountants should be encouraged. This level of regulation is conspicuously absent in Nepal. This is vital to develop the quality and integrity of the profession.

- **Information Disclosure:** There are many disclosure issues like; the prospectus issued to the public at the time of floating shares is not presenting fair and true information disclosure since there is a lot of deviation between projected figures and actual results shown in the financial statements, the fraudulent and worthless securities are often issued in the securities market without actual investigation on the track record of the promoters in terms of their integrity, moral standings and professional background also it has been seen that the regulating authorities often by pass the disclosure affecting the interest of the investors without actual making through scrutiny of the prospectus submitted for approval of issues and the unfair securities market practices often go undetected without compliance of the disclosure norms etc, so such are need to be improve. The regulators should think of undertaking significant measures for upgrading the quality and contents of disclosure standards that help in promoting the securities market of the country. Efforts should be made for encouraging the listed companies to comply with legal provision such as submitting the financial reports timely, conducting the annual general meeting timely, making access to price sensitive information to investors, discourage inside trading on information, presenting true information in the prospectus, need for having good corporate governance and ensure compliance of the listing guidelines & securities marker regulations.

- **Corporate Governance:** corporate governance is an emerging problem in the corporate world. Good corporate governance is essential in creating healthy corporate culture, development and growth. Overall corporate governance practice is poor in Nepal. However, in the banking and financial sectors, corporate governance practice to a certain extent is considered satisfactory. The practices of good banking governance is very essential for smooth running of banking sector, and building up the investors confidence required for long run existence in these days of competition. But, lots of efforts still needed in making manufacturing companies practice the good

corporate governance. In this direction, HMG/N has recently issued Security Board Ordinance, 2005. 'This ordinance has empowered the SEBO/N for the supervision ot NEPSE to regularize and make compliance of rules and regulations effective. The ordinance also empowered the SEBO to bind the listed companies to fallow internationally accepted accounting standards, maintain investors' protection fund, raise paid up capital to Rs. 10 million to stock exchange companies, and to form Investment Advisory Service Committee for dissemination of important and fundamental information relating to stock exchange trading and investment in stock. In fact this ordinance has given more power to SEBO/N than before to monitor and supervise the companies listed in the stock exchange. With these amendments in the regulation, let us hope that corporate governance practice of listed companies will improve which has become much more important to face with future challenges likely to arise from WTO membership.

On the basis of the different financial and statistical tools following recommendation has been forwarded.

- On the basis of Coefficient of Variation (C.V) it has been suggested that Standard Chartered bank Nepal ltd. seems to be best bank for the investment because of lowest CV and highest expected return. So, it is recommended to potential investors to select Standard Chartered bank Nepal ltd for individual stock investment.

- Market sensitivity is explained by beta coefficient. Beta is known as systematic risk measure. The beta of market is always equals to 1. Stock having beta coefficient more than 1 is more risky than the market. If an investor is aggressive or risk taker than he or she can invest on such stock. Stocks having beta coefficient less than 1 is less volatile than the market, risk averter investors can invest in these type of common stock. So, it is recommended that, investors have to select Nepal SB1 bank ltd. whose beta is lower than the beta coefficient of the market i.e. 1; hence it is less risky or defensive common stock.

- The comparison between expected rate of return and required rate of return identify whether the stock is overpriced or under priced. If required rate of return is lower than expected rate of return, stock is said to be under priced and if the

required rate of return is greater than expected rate of return, the stock is said to be overpriced. This study reflects that the stocks of Nepal Investment bank, Himalayan bank and Nepal Industrial & Commercial bank are overpriced so it is recommended to investors to sell the common stock of these banks because stock value will decrease in near future and the stock of Nahil bank, Standard Chartered bank and Nepal SBI bank are underpriced so for these stocks investors are recommended to purchase the common stock because stock value will be increased in the future and these stocks are in the demand.

BIBLIOGRAPHY

- Bachelier, Louis (1900); Trans, James Boness. "*Theory of Speculation",* in Cootner (1964) pp. 17-78
- Baidhy Shakeaspeare (*\'997); "Banking Management",* Monitor Nepal.
- Bhalla; V.K. (1983); *"Investment Management",* S. Chand and Company, New Delhi.
- Coonter, Paul H, ed. (1964); *"The Random Character of stock Market Price",* Cambridge Mass; M.I.T Press.
- Donal E. Fisher and Ronal J. Jordan (1990); *"Security Analysis and Portfolio Management",* Prentice- Hall of India Pvt. Ltd. New Delhi.
- Graham Benjamin, Dodd L. David and Cottle Sidney (1992); "Security Analysis, Principles and Techniques", International Student Edition; Mc-Grahill book company INC; New Delhi.
- Gupta O.P (1989); *"Stock Market Efficiency and Price Behaviour",* The Indian Experience Edition; Anmol Publications; New Delhi.
- Mahat R.S, (1989); *"Capital Market, Financial Flows and Industrial Finance in Nepal",* Sajha Prakashan; Kathmandu.
- Shrestha M.K and Manadhar K.D, (2056); *"Statistics and Quantitative*
- *Technique for Management",* Valley Publisher Third Edition; Kathmandu.
- Shrestha M.K (1995); *"Shareholders Democracy and Annual General Meeting Feedback",* Ratna Pustak Bhandar, Kathmandu.
- Van Horne, James C. (2000); *"Financial Management and Policy",* Prentice Hall of India Pvt. Ltd. New Delhi.
- Weston J.F and T.E. Copeland (2004); *"Managerial Finance",* The Dryden Press. New York.

Journals, Official Publications and Relevant Study

- Annual Report; Nabil Bank Ltd. (1999/00 to 2004/05)
- Annual Report; Nepal Investment Bank Ltd. (1999/00 to 2004/05)
- Annual Report; Standard Chartered Bank Nepal Ltd. (1999/00 to 2004/05)
- Annual Report; Himalayan Bank Ltd: (1999/00 to 2004/05)
- Annual Report; Nepal SBI Bank Ltd. (1999/00 to 2004/05)
- Annual Report; Nepal Industrial & Commercial Bank Ltd. (1999/00 to 2004/05)
- Annual Report; Nepal Stock Exchange Ltd. Kathmandu; Various Volumes.
- Ariel, Robert (1987); *"A Monthly Effect in Stock Returns",* Journal of Financial Economics, 18, Pp 161-174.
- Ball, Ray and Philip Brown (1968); *"An Empirical Evaluation a/Accounting Income Numbers",* Journal of Accounting Research, 6, Pp. 159-178.
- Banz, Rolf (1981); *"The Relationship between Return and Market Value of Common Stock",* Journal of Financial Economics, 9. Pp.3-18.
- Basu, Sanjoy (1977); *"The Investment Performance of Common Stock in Relation to their Price to Earnings Ratio: A test of the Efficient Hypothesis",* journal of Finance, 32, Pp. 663-682.
- DeBondt, Werner and Richard Thaler (1985); *"Dose the Stock Market Overreact? "* Journal of Finance, 40, Pp. 793-805.
- Directives Issued by Nepal Rastra Bank to Commercial Banks.
- Fama, Eugene (1965); *"The Behavior of Stock Market Prices",* Journal of Business, 38, Pp.34-105.
- Fama, Eugene (1970); *Efficient Capital Market: A Review of Theory and Empirical Work",* Journal of Finance, 25, Pp.383-417.
- Fama, Eugene, Lawrence Fisher, Michael Jenson and Richard Roll (1969); *"The Adjustment of Stock Price to New Information ",* International Economic Review,

10,Pp.l-21.

- Fama, Eugene and Kenneth French (1992); *"The Cross-Section of Expected Returns",* Journal of Finance, 47, Pp.427-465.

- *Glosten, Lawrence and Paul Milgrom (1985);* "Bid, Ask and Transactions Price in a Specialist Market with heterogeneously informed Traders", *Journal of Financial Economics, 14, Pp. 71-100.*

- Grossman, Sanford and Joseph Stiglitz (1980); "On the impossibility of Informationally Efficient Market", American Economic Review, 70, pp. 393-408.

- *Kendall, Maurice (1953);* "The Analysis of Economic Time Series", *Journal of Royal Statistical Society, Serial A, 96, Pp. 11-25.*

- *Mehra, Rajnish and Edward Prescott (1985);* "The Equity Risk Premium: A Puzzle", *Journal of Monetary Economics, 15, Pp. 145-161.*

- *Manadhar, K.D (2006);* "An Empirical Analysis in Nepalese Context", *a Journal, people's The Management Review, Vol.1, Pp. 16-23.*

- *Nepal Stock Exchange [2005], a SEBON Journal Volume II, Thapathali, Kathmandu, Pradhan, Radhe S. (1993);* "Stock Market Behaviour in a Small Capital Market:

- "Case of Nepal", *the Nepalese Management Review, Vol. IX-No. Pp.2.*

- *Samuelson, Paul (1965);* "Proof that properly anticipated price fluctuates randomly". *Industrial Management Review, 6, Pp. 41-49.*

- *Scholes, Myron (1972);* "The Market for Securities: Substitution verses Price Pressure and the Effect of Information on Share price ", *Journal of Business, 45, Pp. 179-211.*

- Shiller, Robert (1981); "Do Stock Price Move Too Much to be Justified by Subsequent Changes in Dividends?" *American Economic Review, 71, Pp.421-436.*

- Shrestha, M.K (2006); "Impact of regulation on Capital Market in Nepal", *a Journal, people's The Management Review, Vol.1, Pp. 1-14.*

Unpublished Master Degree Thesis

- Bhatta, Gopal. P. (1995); *"Assessments of the performance of listed companies in Nepal"*, MBA Dissertation, T.U, Kirtipur.
- Dhamal, Kiran (2004); *"Determinants Of share price in Nepalese financial market"*, MBS Dissertation, Shanker Dev Campus, Kathmandu.
- Ojha Khagendra P. (2000); *"Financial performance and common stock pricing"*, MBS Dissertation, T.U, Kirtipur.
- Shrestha, Sharmilia Chandi, (2004); *"Capital market development and stock*
- *price behavior in Nepal"* MBS Dissertation, People's Campus, Paknajol.
- Timilsina, Yogendra (1997); *"Capital market development and stock price behaviour in Nepal"*, MBA Dissertation, T.U, Kirtipur.
- Upadhyay Bishnu Dev (2001); *"Share price behaviour in Nepal"*, MBS Dissertation, T.U, Kirtipur,

Websites

- www.encycogov.com
- www.google.com
- www.hbl.com
- www.nic.com.np
- www.nabilbank.com
- www.nibl.com.npi
- www.nrb.org.np

- www.nepalstock.com. A
- www.sebo.com.np
- www.standardcharteredbank.com
- www.ssrn.com
- www.wikipedia.com

Annex — 1

Nabil Bank Limited Comparative Balance Sheet

(In Rs. '000000')

Capital & Liabilities	2001	2002	2003	2004	2005	2006
Share Capital	392.79	491.65	491.65	491.65	491.65	491.65
Reserve Fund	998.70	1077.22.	739.60	910.30	990.03	1165.93
Borrowings	285.20	-0-	417.30	961.46	229.66	17.06
Deposits	12779.51	15839.00	15506.44	13447.65	14119.0	14586.61
Bills payable	89.44	108.62	181.93	253.67	173.50	119.75
Other Liabilities	769.11	1229.38	292.63	497.87	741.73	805.27
Total	15314.75	18745.87	17629.55	16562.60	16745.6	17186.33

(In Rs. – 'OOOOOO')

Assets	2001	2002	2003	2004	2005	2006
Cash & Bank Balance	1088.75	812.90	1051.82	1144.77	970.49	559.38
Money at Call & Short Notice.	4631.83	5411.07	4087.67	670.19	919.14	868.44
Investments	1250.97	2752.78	4143.51	6031.17	5836.07	4267.23
Fixed Assets	219.17	235.12	237.63	251.91	338.13	361.23
Other Assets	789.27	1209.56	671.02	708.61	491.78	543.88
Total	**7979.99**	**10421.43**	**10191.65**	**8806.65**	**8555.61**	**6600.16**

Indicators	2001	2002	2003	2004	2005	2006
EPS	83.79	59.26	55.25	84.66	92.61	105
Market value per share	1400.00	1500.00	735.00	735.00	1000.00	1505.00
Dividend	55.00	40.00	30.00	50.00	65.00	70.00

* Market value per share is the closing price.

Annex-2

Nepal Investment Bank Limited

Comparative Balance Sheet

(In Rs. '000000'

Capital& Liabilities	2001	2002	2003	2004	2005	2006
Share Capital	135.40	170.00	170.00	295.30	295.30	587.80
Reserve Fund	274.60	299.10	353.40	343.20	433.10	592.30
Borrowings	140.00	120.00	98.60	6.80	361.50	350.00
Deposits	2983.30	4256.20	4174.80	7922.80	11525.40	14254.60
Bills payable	95.70	110.20	149.10	149.70	208.40	327.10
Other Liabilities	167.40	171.90	177.10	446.10	640.20	489.30
Total	3796.70	5127.40	5123.00	9163.90	13463.90	16601.10

(In Rs. '000000')

Assets	2001	2002	2003	2004	2005	2006
Cash & Bank Balance	362.90	522.90	338.90	926.60	1226.90	1340.50
Money at Call & Short	-0-	-0-	-0-	40.00	310.00	140.00
Investments	1183.40	1970.30	1822.20	1705.24	3862.50	3934.20
Fixed Assets	39.90	34.00	35.80	191.10	249.80	320.60
Other Assets	139.80	171.20	212.50	379.16	476.20	412.70
Total	**1726.00**	**2698.00**	**2409.50**	**3242.10**	**6125.40**	**6148.00**

Indicators	2001	2002	2003	2004	2005	2006
EPS	53.68	33.18	33.59	39.56	51.70	39.50
Market value per share *	1401.00	1150.00	760.00	795.00	940.00	800.00
Dividend	25.00	0.00	0.00	20.00	15.00	12.50

* Market value per share is the closing price.

Annex-3

Standard Chartered Bank Nepal Limited

Comparative Balance Sheet

(In Rs. '000000')

Capital& Liabilities	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Share Capital	374.64	374.64	374.64	374.64	374.64	374.64
Reserve Fund	783.82	968.95	1051.93	1175.18	1121.10	1207.77
Borrowings	2430.21	1666.71	684.72	79.16	78.28	55.93
Deposits	12568.48	15430.05	15853.74	18755.64	21161.44	19335.09
Bills payable	71.88	77.78	143.55	196.48	59.02	56.30
Other Liabilities	925.91	1185.29	352.54	418.89	847.57	863.84
Total	17154.94	19703.42	18443.12	21000.00	23642.06	21893.58

(In Rs. '000000')

Assets	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Cash & Bank Balance	953.05	961.06	825.12	1511.78	2023.16	1111.12
Money at Call & Short Notice	7243.16	2612.00	2061.96	1657.91	2218.60	2259.69
Investments	3349.89	9559.17	9275.87	10357.70	11360.33	9702.55
Fixed Assets	170.72	121.81	101.06	191.71	136.23	71.41
Other Assets	580.95	686.25	815.11	1585.08	1493.49	605.60
Total	**12297.77**	**13940.29**	**13079.12**	**15304.18**	**17231.82**	**13750.37**

Indicators	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
EPS	115.62	126.88	141.13	149.30	143.55	143.93
Market value per share *	1985.00	2144.00	1575.00	1640.00	1745.00	2345.00
Dividend	100.00	100.00	100.00	110.00	110.00	120.00

* Market value per share is the closing price.

Annex - 4
Himalayan Bank Limited

Comparative Balance Sheet

(In Rs. '000000')

Capital& Liabilities	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Share Capital	240.00	300.00	390.00	429.00	536.25	643.50
Reserve Fund	570.50	808.27	1072.53	1360.63	1648.43	1796.19
Borrowings	128.65	79.53	534.01	654.84	659.01	506.05
Deposits	14043.09	17532.40	18619.38	21007.38	22010.33	24814.0
Bills payable	60.00	90.00	39.00	107.25	107.25	128.70
Other Liabilities	821.46	690.37	660.93	638.87	786.52	982.89
Total	15863.70	19500.57	21315.85	24197.97	25729.79	28871.3

(In Rs. '000000')

Assets	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Cash & Bank Balance	901.90	1435.18	1264.67	1979.21	2001.18	2014.47
Money at Call & Short Notice	4682.76	4057.65	352.35	150.10	368.90	441.08
Investments	2216.42	4083.16	9157.11	10175.44	9292.10	11692.34
Fixed Assets	193.05	201.68	318.84	229.87	299.64	295.82
Other Assets	644.88	707.56	665.74	818.76	848.33	976.46
Total	**8638.97**	**10485.22**	**11758.71**	**13353.37**	**12810.69**	**15420.17**

Indicators	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
EPS	83.07	93.57	60.26	49.45	49.05	47.91
Market value per share *	1700.00	1500.00	1000.00	836.00	840.00	920.00
Dividend	50.00	27.50	25.00	1.32	.000	11.58

* Market value per share is the closing price.

Annex - 5

Nepal SBI Bank Limited

Comparative Balance Sheet

(In Rs.'000000'

Capital& Liabilities	2001	2002	2003	2004	2005	2006
Share Capital	119.95	143.94	424.89	425.16	426.88	431.87
Reserve Fund	105.00	94.61	135'.45	144.70	199.76	257.15
Borrowings	-0-	-0-	558.79	65.83	117.15	496.63
Deposits	4535.73	6612.29	5572.47	6522.82	7198.35	8654.77
Bills payable	7.45	6.15	0.09	-0-	-0-	31.12
Other Liabilities	338.62	427.80	329.45	407.83	498.26	500.83
Total	5106.57	7284.79	7021.14	7566.33	8440.40	10345.37

(In Rs.'000000')

Assets	2001	2002	2003	2004	2005	2006
Cash & Bank Balance	890.02	1945.14	1619.96	1333.52	864.42	723.75
Money at Call & Short Notice	120.00	390.00	-0-	-0-	-0-	123.11
Investments	192.85	364.69	503.17	1207.28	1907.52	2607.68
Fixed Assets	63.51	68.28	65.58	71.03	62.35	66.45
Other Assets	280.78	328.27	533.18	485.76	462.45	610.50
Total	**1547.43**	**3096.38**	**2721.89**	**3097.61**	**3296.74**	**4131.49**

Indicators	2001	2002	2003	2004	2005	2006
EPS	41.74	8.69	9.61	11.47	14.26	13.29
Market value per share *	562.00	1500.00	401.00	255.00	307.00	335.00
Dividend	15.01	0.00	0.00	8.00	0.00	0.00

* Market value per share is the closing price.

Annex - 6

Nepal Industrial & Commercial Bank Limited

Comparative Balance Sheet

(In Rs.'000000')

Capital &	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Share Capital	325.00	491.47	499.73	499.95	499.95	500.00
Reserve Fund	20.22	19.38	26.21	52.15	120.45	184.19
Borrowings	301.38	135.10	6.38	274.75	69.32	450.37
Deposits	2025.50	3575.83	3165.32	3144.33	5146.48	6241.38
Bills payable	-0-	31.51	37.36	24.35	32.92	28.33
Other Liabilities	47.36	120.74	33.87	41.99	70.25	103.80
Total	**2719.46**	**4374.03**	**3768.87**	**4037.52**	**5939.38**	**2508.07**

(In Rs. '000000')

Assets	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Cash & Bank Balance	234.39	539.45	559.53	318.06	328.61	1005.55
Money at Call & Short Notice	284.38	352.03	46.81	29.90	129.66	89.88
Investments	344.37	608.54	746.87	1134.66	1760.72	1572.90
Loans (including Bills)	1655.51	2617.76	2279.00	2419.52	3561.14	4711.71
Fixed Assets	33.75	45.47	54.76	50.21	43.29	59.50
Other Assets	167.06	210.78	81.90	85.17	115.95	68.53
Total	**1063.95**	**1756.27**	**1489.87**	**1618.00**	**2378.23**	**2796.36**

Indicators	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
EPS	4.94	9.66	1.36	5.19	13.65	22.75
Market value per share *	550.00	399.00	245.00	220.00	218.00	366.00
Dividend	0.00	10.00	0.00	0.00	0.00	10.00

* Market value per share is the closing price.

Annex-7

NEPSE Index

Calculation of market return, standard deviation (SD) & coefficient of variation (CV)

Year	NEPSE Index (N1)	Rm= $\frac{NI_t - NI_{t-1}}{NI_{t-1}}$	(Rm - $\overline{Rm}$)	(Rm - $\overline{Rm}$)^2
2001	360.70	0.6628^{ilt}	0.5699	0.3248
2002	348.43	-0.0340	-0.1269	0.0161
2003	227.54	-0.3469	-0.4398	0.1934
2004	204.86	-0.0997	-0.1926	0.0371
2005	222.04	0.0839	-0.0090	0.0001
2006	286.67	0.2911	0.1982	0.0393
	Total	**0.5572**		**0.6108**

* NI_{t-1} = 216.92

We have,

Expected Return ($\overline{Rm}$) = $\frac{\sum Rm}{n} = \frac{0.5572}{6}$ = 0.0929

Standard Deviation (SD) = $\sqrt{\frac{\sum(Rm - \overline{Rm})^2}{n-1}}$

= $\sqrt{\frac{0.6108}{5}}$ = 0.3495

Coefficient of Variation (CV) = $\frac{\pm}{\overline{Rm}} = \frac{0.3495}{0.0929}$ = 3.76

Annex-8

Nabil Bunk Limited

Calculation of market return, standard deviation (SD) & coefficient of variation (CV)

Year	Market value per share (P)	Dividend per share (D)	**Rj=** $\frac{D_t[P_t - P_{t-1}]}{P_{t-1}}$	**(Rj -** $\overline{Rj}$ **)**	**(Rj -** $\overline{Rj}$ **)^2**
2001	1400	55	1.0786*	0.7818	0.6112
2002	1500	40	0.1000	-0.1968	0.0387
2003	735	30	-0.4900	-0.7868	0.6191
2004	735	50	0.0680	-0.2288	0.0523
2005	1000	65	0.4490	0.1522	0.0232
2006	1505	70	0.5750	0.2782	0.0774
		Total	1.7806		1.4219

* $P_{t-1 = 700}$

We have,

Expected Return $\overline{Rj} = \frac{\sum Rj}{n} = \frac{1.7806}{6} = 0.2968$

Standard Deviation (SD) = $\sqrt{\frac{\sum(Rj - \overline{Rj})^2}{n - 1}}$

$= \sqrt{\frac{1.4219}{5}}$ **= 0.5333**

Coefficient of Variation (CV) = $\frac{\pm}{\overline{Rj}} = \frac{0.5333}{0.2968}$ **= 1.80**

Annex-9

Nepal Investment Bank Limited

Calculation of market return, standard deviation (SD) & coefficient of variation (CV)

Year	Market value per share(P)	Dividend per share (D)	Rj= $\frac{D_t[P_t - P_{t-1}]}{P_{t-1}}$	(Rj - $\overline{Rj}$)	(Rj - $\overline{Rj}$)^2
2001	1401	25	0.7348*	0.6757	0.4566
2002	1150	-0-	-0.1792	-0.2383	0.0568
2003	760	-0-	-0.3391	-0.3982	0.1586
2004	795	20	0.0724	0.0133	0.0002
2005	940	15	0.2013	0.1422	0.0202
2006	800	12.50	-0.1356	-0.1947	0.0379
		Total	0.3546		0.7302

* Pt-1 =-822

We have,

Expected Return $\overline{Rj} = \frac{\sum Rj}{n} = \frac{0.3546}{6} = 0.0591$

Standard Deviation (SD) = $\sqrt{\frac{\sum(Rj - \overline{Rj})^2}{n-1}}$

$= \sqrt{\frac{0.7302}{5}} = 0.3822$

Coefficient of Variation (CV) = $\frac{\pm}{\overline{Rj}} = \frac{0.3822}{0.0591} = 6.47$

Annex -10

Standard Chartered Bank Nepal Limited

Calculation of market return, standard deviation (SD)& coefficient of variation (CV)

Year	Market value per share(P)	Dividend per share (D)	**Rj=** $\frac{D_t[P_t - P_{t-1}]}{P_{t-1}}$	**(Rj -** $\overline{Rj}$ **)**	**(Rj -** $\overline{Rj}$ **)²**
2001	1985	100	0.7943*	0.5675	0.3221
2002	2144	100	0.1305	-0.0963	0.0093
2003	1575	100	-0.2188	-0.4456	0.1986
2004	1640	110	0.1111	-0.1157	0.0134
2005	1745	110	0.1311	-0.0957	0.0092
2006	2345	120	0.4226	0.1858	0.0345
		Total	1.3608		0.5870

*$P_{t-1} = 1162$

We have,

Expected Return $\overline{Rj} = \frac{\sum Rj}{n} = \frac{1.3608}{6} = 0.2268$

Standard Deviation (SD) = $\sqrt{\frac{\sum(Rj - \overline{Rj})^2}{n-1}}$

$= \sqrt{\frac{0.5870}{5}} = 0.3426$

Coefficient of Variation (CV) = $\frac{\pm}{\overline{Rj}} = \frac{0.3426}{0.2268} = 1.51$

Annex-11

Himalayan Bank Limited

Calculation of market return, standard deviation (SD) & coefficient of variation (CV)

Year	Market value per	Dividend per share	Rj= $\frac{D_t[P_t - P_{t-1}]}{P_{t-1}}$	(Rj - $\overline{Rj}$)	(Rj - $\overline{Rj}$)^2
2001	1700	50	0.7500*	0.7028	0.4939
2002	1500	27.50	-0.1015	-0.1487	0.0221
2003	1000	25	-0.3167	-0.3639	0.1324
2004	836	1.32	-0.1627	-0.2099	0.0441
2005	840	-0-	0.0048	0.0001	0.0000
2006	920	11.58	0.1090	0.0618	0.0038
		Total	0.2829		0.6963

* Pt-i = 1000

We have,

Expected Return $\overline{Rj} = \frac{\sum Rj}{n} = \frac{0.2829}{6} = 0.0472$

Standard Deviation (SD) = $\sqrt{\frac{\sum(Rj - \overline{Rj})^2}{n-1}}$

$= \sqrt{\frac{0.6963}{5}}$ **= 0.3732**

Coefficient of Variation (CV) = $\frac{\pm}{\overline{Rj}} = \frac{0.3732}{0.0472}$ **= 7.91**

Annex -12

Nepal SBl Bank Limited

Calculation of market return, standard deviation (SD) & coefficient of variation (CV)

Year	Market value per	Dividend per share (D)	Rj= $\frac{D_t[P_t - P_{t-1}]}{P_{t-1}}$	(Rj - $\overline{Rj}$)	(Rj - $\overline{Rj}$)^2
2001	562	15	0.0285	-0.3914	0.1532
2002	1500	-0-	1.6690	1.2491	1.5603
2003	401	-0-	-0.7327	-1.1526	1.3285
2004	255	8	-0.4190	-0.8389	0.7038
2005	307	-0-	0.3644	-0.0555	0.0031
2006	335	-0-	0.0912	-0.3287	0.1080
		Total	2.5196		3.8568

* $P_{t-1} = 562$

We have,

Expected Return $\overline{Rj} = \frac{\sum Rj}{n} = \frac{2.5196}{6} = 0.4199$

Standard Deviation (SD) = $\sqrt{\frac{\sum(Rj - \overline{Rj})^2}{n-1}}$

$= \sqrt{\frac{3.8568}{5}}$ = 0.8783

Coefficient of Variation (CV) = $\frac{\pm}{\overline{Rj}} = \frac{0.8783}{0.4199}$ = 2.09

Annex -13

Nepal Industrial & Commercial Bank Limited

Calculation of market return, standard deviation (SD) & coefficient of variation (CV)

Year	Market value per	Dividend per share (D)	**Rj=** $\frac{D_t[P_t - P_{t-1}]}{P_{t-1}}$	**(Rj -** $\overline{Rj}$ **)**	**(Rj -** $\overline{Rj}$ **)²**
2001	550	-0- •	0.2222	0.1901	0.0361
2002	399	10	-0.2564	-0.2885	0.0832
2003	245	-0-	-0.3868	-0.4189	0.1755
2004	220	-0-	-0.1020	-0.1341	0.0180
2005	218	-0-	-0.0091	-0.0412	0.0017
2006	366	10	0.7248	0.6927	0.4798
		Total	0.1927		0.7944

* Pt-l - 1000

We have,

Expected Return $\overline{Rj} = \frac{\sum Rj}{n} = \frac{0.1927}{6} = 0.0321$

Standard Deviation (SD) = $\sqrt{\frac{\sum(Rj - \overline{Rj})^2}{n-1}}$

$= \sqrt{\frac{0.7944}{5}} = 0.3986$

Coefficient of Variation (CV) = $\frac{\pm}{\overline{Rj}} = \frac{0.3986}{0.0321} = 12.42$

Annex-14

Nabil Bank limited

Computation of Beta Coefficient

Year	**Rj-** $\overline{Rj}$	**Rm-** $\overline{Rm}$	**(Rj-** $\overline{Rj}$ **) (Rm-** $\overline{Rm}$ **)**
2001	0.7818	0.5699	0.4456
2002	-0.1968 '	-0.1269	0.0250
2003	-0.7868	-0.4398	0.3460
2004	-0.2288	-0.1926	0.0441
2005	0.1522	-0.0090	-0.0014
2006	0.2782	0.1982	0.0551
		Total	0.9144

We have,

$$COV_{jm} = \frac{\sum(Rj - \overline{Rj})(Rm - \overline{Rm})}{n-1}$$

$$= \frac{0.9144}{5} \qquad = 0.1829$$

$$\beta j = \frac{COV(RjRm)}{\sigma m^2} \qquad = \frac{0.1829}{0.1222} \qquad = 1.50$$

Where,

n = Number of observation (6)

± m2 = Variation of market return (0.1222)

Rj = Return of stock of Nabil Bank.

Annex-15

Nepal Investment Bank limited

Computation of Beta Coefficient

Year	**Rj-** $\overline{Rj}$	**Rm-** $\overline{Rm}$	**(Rj-** $\overline{Rj}$ **) (Rm-** $\overline{Rm}$ **)**
2001	0.6757	. 0.5699	0.3851
2002	-0.2383	-0.1269	0.0302
2003	-0.3982	-0.4398	0.1751
2004	0.0133	-0.1926	-0.0026
2005	0.1422	-0.0090	-0.0013
2006	-0.1947	0.1982	-0.0386
		Total	**0.5479**

We Have,

$$COV_{jm} = \frac{\sum(Rj - \overline{Rj})(Rm - \overline{Rm})}{n-1}$$

$$= \frac{0.5479}{5} \qquad = 0.1096$$

$$\beta j = \frac{COV(RjRm)}{\sigma m^2} \qquad = \frac{0.1096}{0.1222} \qquad = 0.90$$

Where,

n = Number of observation (6)

± m2 = Variation of market return (0.1222)

Rj = Return of stock of **Nepal Investment Bank limited.**

Annex-16

Standard Chartered Bank Nepal limited

Computation of Beta Coefficient

Year	**Rj-** $\overline{Rj}$	**Rm-** $\overline{Rm}$	**(Rj-** $\overline{Rj}$ **) (Rm-** $\overline{Rm}$ **)**
2001	0.5675	0.5699	0.3234
2002	-0.0963	-0.1269	0.0122
2003	-0.4456	-0.4398	0.1960
2004	-0.1157	-0.1926	0.0223
2005	-0.0957	-0.0090	0.0009
2006	0.1858	0.1982	0.0368
		Total	0.5916

We Have,

$$COV_{jm} = \frac{\sum(Rj - \overline{Rj})(Rm - \overline{Rm})}{n-1}$$

$$= \frac{0.5916}{5} \qquad = 0.1183$$

$$\beta j = \frac{COV(RjRm)}{\sigma m^2} \qquad = \frac{0.1183}{0.1222} \qquad = 0.97$$

Where,

n = Number of observation (6)

± m2 = Variation of market return (0.1222)

Rj = Return of stock of Standard Chartered Bank Nepal limited.

Annex-17

Himalayan Bank limited

Computation of Beta Coefficient

Year	**Rj-** $\overline{Rj}$	**Rm-** $\overline{Rm}$	**(Rj-** $\overline{Rj}$ **) (Rm-** $\overline{Rm}$ **)**
2001	0.7028	0.5699	0.4005
2002	-0.1487	-0.1269	0.0189
2003	-0.3639	-0.4398	0.1600
2004	-0.2099	-0.1926	0.0404
2005	0.0001	-0.0090	-0.0001
2006	0.0618	0.1982	0.0123
		Total	**0.6321**

We Have,

$$COV_{jm} = \frac{\sum(Rj - \overline{Rj})(Rm - \overline{Rm})}{n-1}$$

$$= \frac{0.6321}{5} \qquad = 0.1264$$

$$\beta j = \frac{COV(RjRm)}{\sigma m^2} \qquad = \frac{0.1264}{0.1222} \qquad = 1.03$$

Where,

n = Number of observation (6)

± m2 = Variation of market return (0.1222)

Rj = Return of stock of Himalayan Bank limited.

Annex-18

Nepal SBI Bank limited Computation of Beta Coefficient

Year	**Rj-** $\overline{Rj}$	**Rm-** $\overline{Rm}$	**(Rj-** $\overline{Rj}$ **) (Rm-** $\overline{Rm}$ **)**
2001	-0.3914	0.5699	-0.2231
2002	1.2491	-0.1269	-0.1585
2003	-1.1526	-0.4398	0.5069
2004	-0.8389	-0.1926	0.1616
2005	-0.0555	-0.0090	0.0005
2006	-0.3287	0.1982	-0.0651
		Total	**0.2223**

We Have,

$$COV_{jm} = \frac{\sum(Rj - \overline{Rj})(Rm - \overline{Rm})}{n-1}$$

$$= \frac{0.2223}{5} \qquad = 0.0445$$

$$\beta j = \frac{COV(RjRm)}{\sigma m^2} \qquad = \frac{0.0445}{0.1222} \qquad = 0.36$$

Where,

n = Number of observation (6)

± m2 = Variation of market return (0.1222)

Rj = Return of stock of Nepal SBI Bank limited

Annex-19

Nepal Industrial & Commercial Bank limited

Computation of Beta Coefficient

Year	**Rj-** $\overline{Rj}$	**Rm-** $\overline{Rm}$	**(Rj-** $\overline{Rj}$ **) (Rm-** $\overline{Rm}$ **)**
2001	0.1901	0.5699	0.1083
2002	-0.2885	-0.1269	0.0366
2003	-0.4189	-0.4398	0.1842
2004	-0.1341	-0.1926	0.0258
2005	-0.0412	-0.0090	0.0004
2006	0.6927	0.1982	0.1373
		Total	0.4927

We Have,

$$COV_{jm} = \frac{\sum(Rj - \overline{Rj})(Rm - \overline{Rm})}{n-1}$$

$$= \frac{0.4927}{5} \qquad = 0.0985$$

$$\beta j = \frac{COV(RjRm)}{\sigma m^2} \qquad = \frac{0.0985}{0.1222} \qquad = 0.81$$

Where,

n = Number of observation (6)

± m2 = Variation of market return (0.1222)

Rj = Return of stock of Nepal Industrial & Commercial Bank limited.