OUTPUT, STOCK RETURNS AND POLITICAL UNCERTAINTY: THE NEPALI EVIDENCE

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in partial fulfillment of the requirements for the

Degree of Master of Philosophy (MPhil) in Management

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We have conducted the viva-voce examination of the thesis **Output, Stock Returns and Political Uncertainty: The Nepali Evidence** submitted by Mr. Madhusudhan Adhikari and found the thesis to be original work of the candidate and written according to the prescribed format of the School of Management. We approve the thesis as the partial fulfillment of the requirements for the degree of Master of Philosophy (MPhil) in Management.

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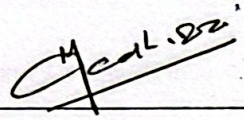
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DECLARATION

I hereby declare that this thesis entitled *Output, Stock Returns and Political Uncertainty: The Nepali Evidence* embodies the result of an original research work I carried out in partial fulfillment of the requirements for the degree of Master of Philosophy (MPhil) in Management of the Kathmandu University and that this thesis has not been submitted for candidature for any other degree.



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RECOMMENDATION

This is to certify that Mr. Madhusudhan Adhikari has completed his research work on **Output, Stock Returns and Political Uncertainty: The Nepali Evidence** under our supervision and that his thesis embodies the result of his investigation conducted during the period he worked as an MPhil candidate of the School of Management. The thesis is of the standard expected of a candidate for the degree of MPhil in Management and has been prepared in the prescribed format of the School of Management. The thesis is forwarded for evaluation.

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ABSTRACT

This study examines the effects of political uncertainty on stock returns in the Nepali stock market over a period 1994 to 2010. The secondary data (NEPSE index and stock indices of ten industries registered in stock market of Nepal) as well as responses of 116 individual investors and 42 officials of listed companies, have been used to analyze the effects by using descriptive, causal-comparative, and co- relational research designs. Results suggest that there is a strong relation between the political uncertainty and stock returns in the Nepali stock market and that ruling political parties have effects on stock returns. The Nepali Congress Party government under the prime minister-ship of Mr. Girija Prasad Koirala remained favorable to stock returns, whereas, at the times of other governments the effects were not significant. The national elections affected stock returns, but there were no clear patterns of movement of stock returns before and after the elections. It is concluded that stock returns are affected by important political events with the impact of varying degree at across to different industry groups. It is found that negative volatility matters, specifically output decreases with increase in negative stock market volatility. One unit decrease in negative volatility was matched with the 1.8% decrease in industrial productivity. Hence it can be concluded that volatility and industrial production has relation in Nepalese stock market. As political uncertainty is not good for stock returns, political parties need to work to avoid such uncertainty and try to form stable governments. Investors need to carry thorough analysis of the effect of the event on specific industries or firms as they plan to invest in stocks.

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LIST OF ABBREVIATIONS

AAR	Average Abnormal Return
ACF	Autocorrelation Function
ACAR	Average Cumulative Abnormal Returns
ADR	American Depository Receipts
APT	Arbitrage Pricing Theory
ASE	American Stock Exchange
BOD	Board of Directors
BSE	Bombay Stock Exchange
CAAR	Cumulative Average Abnormal Return
CAPM	Capital Asset Pricing Model
CD	Convertible Debt
CMER C	Cumulative Market Excess Return
DJIA	Dow Jones Industrial Average
EMH	Efficient Market Hypothesis
EPS	Earnings per Share
FCD	Fully Convertible Debentures
FFJR	Fama, Fisher, Jensen and Roll
GARCH	Generalized Autoregressive Heterscedasticity
GoN	Government of Nepal
IPO	Initial Public Offerings
KLSE	Kuala Lumpur Stock Exchange
NC	Nepali Congress

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NEPSE	Nepal Stock Exchange
NRB	Nepal Rastra Bank
NYSE	New York Stock Exchange
OLS	Ordinary Least Square
II	Individual Investors
OLC	Officials of Listed Companies
OTC	Over the counter
PBC	Political Business Cycle
PE	Price Earnings
RPP	Rastriya Prajatantra Party
RWH	Random Walk Hypothesis
SAD	Seasonal Affective Disorder
SAR	Standardized Abnormal Return
SD	Standard Deviation
SEBO/N	Security Exchange Board/Nepal
SRV	Security Returns Variability
SUE	Standardized Unexpected Earnings
TVA	Trading Volume Activity
UK	United Kingdom
UML	United Marxist Leninist
USA	United States of America
WEMH	Weak form Efficient Market Hypothesis
WPI	Wholesale Price Index

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CHAPTER I

INTRODUCTION

General Background

One of the main factors that affect investors' psychology is the political environment of the country. The uncertain political environment of the country creates confusion among investors and consequently affects stock prices. Political uncertainty takes different shapes and forms, e.g. government changes, change in domestic and foreign policies, national elections, and other important political events. Any one or a combination of these important events often lead to political uncertainty that creates some confusion among stock investors resulting in instability in the stock movement. For example, national elections, as a major political event with implications for re-distribution of political power in a democratic system; often result in the formation of a new government with the potential changes in the political and economic courses of a country. Consequently, it breeds uncertainty in the minds of both domestic and foreign investors (Anandanathan & Robbani, 2002).

In a democratic society, the voters elect political leaders of the parties which best represent their personal beliefs and interests. According to the partisan theory propounded by Hibbs (1977), leftist governments tend to prioritize the reduction of unemployment, whereas right-wing governments attribute higher social costs to inflation. Another influential theory presented by Nordhaus (1975) postulates that, irrespective of their political orientation, incumbents in the government pursue policies that maximize their chances of re-election. As a result, they try to formulate self-serving policies at the time of elections. The economy is stimulated by unsustainable expansionary policies before the elections, and harsh actions

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aimed at curbing the resultant inflation are followed at the beginning of the new term of office. However, it has to be noted that any policy-induced cycles in real activity will be ephemeral if the economic agents and voters have rational expectations (Alesina, 1987; Rogoff, 1990).

Political uncertainty and its effects on stock market formally entered in the literature with the pioneer work of Fama (1970). It has since become an issue of much discussion and a subject of many research studies on stock market. Empirical studies have ascertained a number of well-known stock market anomalies and effect of political uncertainties such as, effects of news, the weekend effects and the January effects to name a few.

There is a robust literature on the impact of political process on monetary policy and business cycles. Alesina (1987), Alesina and Sachs (1988), and Alesina and Cukierman (1990) studied the impact of political risks on financial markets. Several other studies looked at whether security returns are impacted by politics. Booth and Booth (2003) reported that the U.S. stock market tends to perform better in the second half of the presidential term. This phenomenon could be a reflection of the political business cycle but can also be explained behaviorally. The study argued that the investors may be over-optimistic about the implications of the impending elections, but their optimism wears off quickly once the new administration fails to keep its election campaign promises. Santa-Clara and Valkanov (2003) showed that in the United States the market excess return was higher under Democrat than Republican presidencies throughout the period from 1927 to 1998. This anomaly cannot be explained away by variation in business condition proxies. Additional evidence was provided by Nofsinger (2004), who contended that the stock market is a barometer of public sentiment and its movements can indicate whether incumbents will be re-elected or not. It is well

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established in the financial literature that the stock market movement is a function of economic news. But economic news is not the only factor that influences the stock markets. Political events too are often responsible for stock price movements.

Many economic factors are often influenced by political factors. This relationship is observed in well-developed financial markets where political events take place on the basis of systematic rules of democratic process. For example, in the United States of America, political decisions that are made by the Congress regarding the economy, tax, healthcare, regulation, deregulation, as well as the election of any political leader who may be on one or the other side of any economic issue directly influence stock market movement. Sometimes political decisions that may not have any apparent effects on the economy, may pose as a determining factor for long-term market movement. However, that may not necessarily be true in many emerging markets where abrupt political events take place frequently. These abrupt political events may have serious effects on the running of businesses that can be quickly reflected in the market whereupon investors would react accordingly.

Political risk is the perceived threat that politics or political players will have a negative impact on a firm's asset values, costs, or revenues. It is also well established that political events and economic behavior are closely inter-related. Study of political risk includes political reforms, such as democratization from a military or autocratic ruler, regulation/deregulation, and nationalization/denationalization of various industrial sectors and their impact on firm valuation. Political risk is a priced factor in firm valuation (Anantharaman & Robbani, 2002). This simply means that political risk is one of the determining factors in stock valuation and companies should pay close attention to any political events. Chan and Wei (1996) studied the impact of political news on the stock

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market volatility in Hong Kong and found that favorable (unfavorable) political news is correlated to positive (negative) returns for the Hang Seng Index. Traditionally, political risk has generally been viewed as a risk arising from international investment and the risk of expropriation of those investments without compensation. This traditional view assumes that political risk affects only those corporations that are involved in foreign investment.

In a broader perspective, political risk can be present for both multinationals as well as those corporations that are doing business only within their national boundaries. This is called 'domestic political risk' (DPR). One of the ways this domestic political risk may arise is that the politically weak group may be taxed disproportionately higher than the politically strong group. The proceeds of these extra taxes are transferred to those who are politically strong to their selected groups. Therefore, the weaker group faces a risk solely because of its political position. The other way DPR may arise is when political unrest takes place abruptly, as mentioned earlier. These kinds of DPR may affect all corporations in some form or the other. Therefore, domestic political risk has implications for firm valuation, *viz*, share price. From the asset pricing point of view it may either negatively affect the corporation's cash flow or increase investment risk, or both.

Studies have been conducted to carry critical analysis of the relationship between the political events and the movement of stock markets in some emerging markets. Stock markets have been developed in many Asian, Latin American, and African countries facing political unrests directly or indirectly affecting the stock market. Due to such unrests, corporations are facing two types of problems. First, business cash flows are being negatively affected as a result of which share price is reduced. This leads to hosts of other problems for corporations which will ultimately bring them to the brink of bankruptcy. Secondly, investors may become

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more skeptical about the well functioning of the market that may lead to the loss of trust on the market mechanism to price the share fairly.

As per the efficient market hypothesis, if the stock prices reflect the announcement of public information instantaneously and without bias, the market should be classified as semi-strong form of efficiency (Fama, 1970). The semi-strong form of market holds that the stock prices reflect all publicly available information. Thus, any significant new public information should be reflected immediately in the stock price. Furthermore, no time lag should exist between the information being available and the stock price adjustment. In connection with the semi-strong form of market efficiency, if security prices reflect all currently available information, then price changes must reflect new information.

It seems that one should be able to measure the importance of an event of interest by examining price changes during which the event has occurred. News about future economic policies can be derived from political events such as elections, the formation of new government, and changes in the composition of government. Changes in the outcome of elections and therefore in the composition of the government will most likely result in policy changes. This should affect economic variables such as unemployment, economic growth, and inflation.

Elections by definition always open a period of political uncertainty, as the winner remains to be determined. In this regard, the impact of political events on the stock market stresses uncertainty over the policies that the next government will pursue. Since stock prices anticipate and capitalize policy changes, the analysis of the effects of the political events on stock market could indicate the economic importance of expected changes in economic policy. National economy is affected by the policies of the government which are

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conceptually based on the political ideology of the ruling party. As a new government of different political party is formed, it generally comes up with some new policies which in turn affect economy. Similarly, major political events (good or bad) will also generally pass their effect into the national economy. The performance of the national economy affects stock market because stock market in fact is the mirror of the economy. The non-fundamental component of stock market index appears to be significantly influenced by the political orientation of the head of the government and his/her approval rating, election cycle and military conflicts (Wisniewski, 2007).

Fama (1981) proposed that higher inflation reduces real output: Geske and Roll (1983) argued that exogenous shocks cause stock returns to fall and to generate simultaneous expectations of future federal deficits and monetization by the Federal Reserve. Though political cycles in equity markets are well documented, no acceptable explanation of the systematic relationship between asset returns and politics has been provided. Riley and Luksetich (1980) found that the market responds favorably in the short-run to a Republican victory in the United States but there is no long-term response to political outcomes. Santa-Clara and Valkanov (2003) considered the possibility of election cycles serving as a proxy for normal business cycles but concluded that two were unrelated. Equally, they found that any differences in variance or expected returns fail to explain presidential election cycles. Cooper et.al. (2005) showed political cycles and election cycles were also independent of other observed market anomalies. The question of how election cycles persist in asset returns remained unanswered and a puzzle.

As discussed above, in the context of developed stock market volatility is an important area of study. Understanding of its degree, nature and association with other factors makes it

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easy for market participants and policy makers to develop and implement appropriate strategies to cope with volatility effectively. It is established empirically also that among the various factors that cause volatility political uncertainty is one of them. Thus in the developed stock market stock returns and industrial output are affected by the stock volatility which in turn is affected by the political situation of the country.

In the context of Nepal, where the stock market is in its early stage of development and only a few studies have been carried out in the stock market issues, very few issues of Nepalese stock market are tested empirically. Nepal is passing through a historical phase in political transformation as it has recently changed from a Kingdom to a Federal Republic. It is in the process of drafting a new constitution which will not only decide on the governing system but it will also restructure country into a number of states. In this situation, nation's economic activities, including stock market, are very much affected by the present and future courses of political process. Thus, in the present political situation, an empirical study on the effect of the political uncertainly on stock returns is very relevant as it brings to focus the first hand relation between political events and stock returns in Nepal. To address this need, this study explores the effect of political uncertainty on stock market. It analyzes effects of ten most important political events, fifteen government changes, and three national elections on the stock returns in the study period (1994-2010).

Statement of the Problem

The macro-economic results are not entirely the consequence of the economy itself but are also dependent on the long and short-term policy choices of the government. Therefore, political parties with differences in economic policies have the potential to move the economy along different time paths, which should manifest in different returns to stockholders (Li &

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Born, 2006). This suggests that there is a link between common stock returns and political outcomes.

Politics and financial markets share a common truth that nothing lasts forever. In the year following an election, voters can be euphoric as they look forward with anticipation to the achievements that the leaders hope to accomplish. Around this time, policy makers may begin to feel less restrained about introducing new programs that will put their agenda in place. This somewhat cynical view holds that the early days of a new administration are the best time to make big changes as the myopic electorate will forget about them over the next three years. These new programs and economic policies usually involve more taxes, more spending, and more regulations, which begin to eat into business profits. As a consequence, stock prices that follow corporate earnings will likely to fall. This negative environment reaches a nadir during the second year of a presidential term, following which policy makers begin to change their ways to be more "voter friendly" before the next election. Once again, they become more conservative and less prone to new tax-and-spend policies; such that market begins to recover before the next election (Wong & McAleer, 2009).

A number of studies have proposed several analyses to specify the effects of politics on stock market volatility. The most famous attempt to model the relationship between political and economic cycles is the "Political Business Cycle (PBC)" theory formulated by Nordhaus (1975) and McRae (1971). Three crucial assumptions underlie this approach (i) the parties are "office motivated," in the sense that they care only about winning the elections (ii) voters are not forward looking and have short memories, so that they can be systematically fooled and (iii) the economy is described by an exploitable Phillips curve and the rational expectations critique is not taken into account. The incumbent stimulates the economy and

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reduces unemployment close to election time in order to increase its chances of re-election. At the beginning of the new term, the inflationary effects of the pre-electoral expansion are eliminated with a recession.

Nordhaus (1975) provided suggestive empirical evidence in favor of the PBC hypothesis. This evidence appeared favorable for the United States but rather mixed for several other countries. Nordhaus wrote that the first Nixon administration is a "textbook example" of PBC because of the inflationary expansion skillfully placed close to the elections of 1972. However, the empirical works that followed have led to the conclusions that the first Nixon-administration was probably the only clear case of PBC in the post-Second World War period in the U.S. Hibbs (1985) concluded that there is no persuasive evidence that presidential election years, viewed together, generally have been occasions of unusual monetary and fiscal expansions or of short run surges in output, real incomes, and employment. On the other hand, Tufte (1978) found some support for the PBC

Beck (1984) found virtually no evidence in favor of the PBC and concluded that monetary policy has been looser under Democratic presidents than under Republican presidents; however, it is found that the Kennedy and first Nixon administration do not fit this pattern. Beck claimed that different administrations of the same party have behaved differently; therefore, "administrations" more than parties are what really count. Nevertheless, despites this important consideration the PT was not rejected by Beck's results.

This procedure makes it possible to estimate directly the parameters of the objective functions of the two parties. The sample used in US covers the nine completed administrations of the post World War II period, from President Truman through the first term of President Reagan. The data do not reject the assumption that there is a difference between

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the objective functions of the two parties. The Democratic administrations have been relatively more concerned about the output target rather than the inflation/money creation target than the Republican administrations. Furthermore, the empirical results do not reject the hypothesis that systematic differences in output growth have occurred in the first half of the administrations and not in the second, in accordance with the theory. Thus, these results supported a partisan view of monetary policy (and in general of macro policy) rather than a political business cycle view. Kiewiet (1985) tested the hypothesis that voters in the United States did recognize the Democratic Party as the one that tights unemployment and the Republican Party as the one that fights inflation. It is found that this hypothesis is supported by the empirical evidence.

Chapell and Keech (1986) referred to results on unemployment that are quite similar in magnitude to those reported by Hibbs (1977). Studies also suggested that differences in the rates of unemployment under the administrations of the two parties tend to become smaller in the latter part of the term. In the context of Nepal there are a numbers of political parties therefore here the PT may not be applicable like in US where only two major political parties are active. Moreover, in Nepal also basically there are two political systems, communist and democratic, are frequently exchanged government so it would be good to analyze the stock returns in the ruling of these different party systems.

Elections create an important source of uncertainty about the future; the economic agents do not know which party will win the following election. If the relevant expectations about monetary policy and inflation have to be formed before elections, they are based on the averages of the policies that the two parties are expected to follow once elected. Models predict that at the beginning of the term in office of the more expansionary party one should observe an output

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expansion above trend with high money growth. Instead, when the less expansionary party is elected, a recession with low money growth should be observed. There are no electoral surprises in the second part of any administration; hence, the models predict policy neutrality. Then, in the second part of both types of administrations, real variables should exhibit the same behavior (*ceteris paribus*). However, it is shown that even in the second part of the term in office the rate of money creation should be different depending on the party in office. Starting from an explicit maximization problem, it derives the reaction functions of the two parties and their time consistent policies and tests the nonlinear restrictions on the parameters imposed by the theory. Beaulieu et. al. (2006) investigated that the short run effect of the 30 October 1995 Quebec referendum on the common stock returns of Quebec firms. The results showed that the uncertainty surrounding the referendum outcomes had a impact on the stock returns of Quebec firms. It also found that the effect of the referendum varied with the political risk of exposure of Quebec firms, that is, the structure of asset and principally the degree of foreign involvement.

Gartner and Wellershoff (1995) came with the effect of general elections on stock returns. Other studies have documented the difference in stock returns under Republican and Democratic presidents, notably by Hensel and Ziemba (1995), Johnson and Jensen (1999), and Siegel (1998). Alesina et al. (1997) offered convincing evidence that political variables have an impact on the state of the macro economy. Alesina (1987), Alesina and Sachs (1988), and Alesina and Cukierman (1990) have studied the impact of political risks on financial markets, attention has been paid to cyclical patterns such as the four-year cycle in stock prices due to general elections. It is found that in the developed market the evidence of effect of the election cycle on the stock return and ruling of particular party or presidential cycles has effect on the economy which was also reflected in the country's stock market. However, in

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Nepal studies not empirically tested whether the national elections affects stock returns and is there any kind of pattern or cycle exist in the stock returns.

Schwert (1991a) and Pindyck (1991a) studied the causal linkage between volatility and business slumps. The impact of political risk on financial markets was not conclusive. Willard, Guinnane, and Rosen (1996) found some significant evidence that turning points in the US Civil War was reflected in the price of the Greenbacks.

Calendar anomalies and empirical results seemed to be inconsistent with maintained theories of asset-pricing behaviors (Schwert, 2002). The evidence of a growing number of these has led to a doubt on "Efficient Markets Hypothesis" Stock returns, especially returns on small stock, are on average higher in January than in other months (Haugen & Lakonishok, 1988).). Monday returns are on average lower than returns on other days (Cross, 1973; French, 1980). It is found that there were seasonal effects in stock returns in the developed stock markets but in Nepal not much is empirical tested whether stock returns are having any seasonal or festival effects.

In the United States, numbers of empirical evidence exist that high inflation, measured by consumer price index (CPI) was associated with a high equity risk premium and declining stock prices. Bodie (1976) studied the data from 1953-1972 and found that common stocks were poor hedges against inflation. Cohn and Lessard (1980) found that stock prices in many industrial countries were negatively related to nominal interest rates and inflation. Sometimes, political decisions that may not have any apparent effect on the economy, may pose as a determining factor for long-term market movement. Hence, studies were not conclusive on the relation between inflation and stock returns and have proposed mixed relationship of these two variables. No study has been carried out to find the relationship between stock returns

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and inflation in Nepali stock market, so it is not clear whether these two variables are related or not.

Cukierman (1980) and Bernanke (1983) provided formal model in the relation of political uncertainty and output. It was concluded that political uncertainty was negatively related to output. Studies extended investigations whether presidential election cycles observed in the broader market were also present in industry returns. After correcting for general market movements it is found that no evidence of election cycle effect. Unadjusted industry returns did exhibit the same phenomenon of higher relative returns under Democrats and higher returns during the last two years of an administration similar to that found in the general market indexes.

As discussed above, the studies have found that often times many economic factors are influenced by political factors. The relationship between politics and stock return was observed in well-developed financial markets. In the developed economies the effect of political uncertainty and its effect in the stock market were studied in the greater extent. However, it may not necessarily be true in many emerging markets where abrupt political events take place frequently. These abrupt political events may have serious effects on the running of businesses that can be quickly reflected in the market whereupon investors would react accordingly. Does politics drive stock returns or do stock returns drive politics? Thus, it was found that particular event, government decision or policy has different effect to different industries.

There are only a few studies available on the issues of the stock market in the case of developing economies like Nepal. A strong evidence of time varying volatility, a tendency of the period of high and low volatility cluster and a high performance and predictability of

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volatility in the Nepali stock market found by G.C (2008). Dangol (2008) found that good news (bad news) political announcement generated abnormal returns in the post event period and concluded that the Nepali stock market is efficient at semi-strong level but there is strong linkage between political uncertainty and common stock returns. Adhikari (2007), has considered political events as one of the variables in his study and concluded that stock market has not very consistent response to the political events. Nepali stock market has Kartik effect, when stock prices are, in general, higher than in other months as found by Joshi (2008).

Existence of weak form of efficiency in the market was found for temperature and seasonal disorder but not for the cloud covers (Bhattarai & Joshi, 2007). Nepali stock market is not efficient in weak form with regard to the day of the week anomaly but weakly efficient with respect to other anomalies (KC & Joshi, 2005). Though, the above mentioned studies analyze some issues of the Nepali stock market but, there exists no single empirical analysis which deals comprehensively on the effect of political uncertainty on the stock returns, output and stock market volatility. It is not clear in the context of the Nepali stock market whether happening of political events, national election and changes of government have any effect. These issues remain unanswered and are possible areas of research in the context of Nepali stock market. It is also not very clear whether political uncertainty causes stock market volatility and what is the relation between stock market volatility and industrial output. This study deals with the following issues:

1. Do stock returns get affected significantly by happening of major political events?

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2. Is there any effect of change in government on the stock return and stock market volatility? What are the changes in the returns of different industries with the changes of governments?
3. Does the stock market have different responses to different governments? Are the stock returns and stock volatility different for Nepali Congress (NC) ruling and other Non Nepali Congress (NNC) ruling?
4. What is the effect of national election on stock market? Are the stock indices significantly different before and after national elections?
5. How industrial output relates with volatility in the stock market?
6. Are there any relations between outputs, stock return and Inflation?
7. What is the perception of investors on the effect of different political events on the stock prices? In the perception of the investors, what are the main factors that affect stock market in Nepal?

Objectives of the Study

The main objective of this study is to examine the effect of political uncertainty on output and stock returns in Nepal. The specific objectives are as follows:

1. To determine the effect of major political events on stock returns and stock market volatility.
2. To analyze and compare the effect of government changes on stock returns and stock market volatility.
3. To compare the changes in stock returns and stock market volatility before and after national elections.

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4. To establish relations between stock return, stock market volatility and industrial output.
5. To survey the perception of investors on the effect of political uncertainty on output and stock returns.

Organization of the Study

This study is organized into six major chapters, each devoted to some aspects on effect of major political events in the stock market of Nepal. The rationale behind this organization is to follow a simple research methodology approach. Chapter I starts with general introduction on the issue and outline several evidences of political or government changes and their effects on the stock returns. It describes the statement of the problem and the major issues to be investigated, along with the objectives and scope of the study. Chapter II begins with conceptual framework of the study and presents review of the major literatures on the topics as main body and summarizes the major finding on the issues of investigation. It also identified the gap and need of a study on issue in Nepalese context. Chapter III explains the detail methodology employed in the study which includes the nature and sources of data, selection of the enterprises, models used, methods of analysis, limitation of the study. A comprehensive secondary data analysis is carried out and some useful conclusions are presented in Chapter IV. Chapter V analyzes the responses of the survey and presented the findings in table, graphs, charts etc. and it also compares finding of the secondary and primary data analysis to check the consistence of the findings. Finally, Chapter VI summarizes the major finding, discussions of the results and implications of the study.

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CHAPTER II

REVIEW OF LITERATURE

This chapter reviews theoretical and empirical literature on the effect of political uncertainty on stock returns. It is organized into four sections; viz. conceptual framework, review of major empirical studies, studies conducted in the Nepali stock market and a short conclusion of literature review and need to carry this study.

Theoretical Framework

In theoretical terms, the relationship between political uncertainty and stock returns is based and explained by the concepts of efficient market hypothesis, stock market volatility, investors' perception, event study, and expected and excess return calculation by using capital asset pricing model (CAPM). These concepts are briefly reviewed in this section.

Efficient market hypothesis

The primary hypothesis for Efficient Market is that the prices accurately and quickly reflect all available information in such a way that one cannot earn abnormal returns. The time for the adjustment for any new information is considered as a critical factor. As per Hadi (2006), if the market adjusts more rapidly and accurately after new information, it is considered to be more efficient. There may be various reasons for the market for not being able to adjust quickly and correctly, a phenomenon which Hadi (2006) referred to the security market being inefficient. In an efficient stock market stock prices do not accurately reflect the new information, this might result from the following: (1) the investors are unable to interpret the new information correctly, (2) the investors have no access to the new information, (3) the

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transaction cost in trading security is an obstruction for free trading, (4) the restriction on short sale and, (5) the investors might be misled by the change in accounting principles.

Using availability of information Fama (1970) classified market efficiency into three levels; (a) weak form efficiency where stock price fully reflects historical information of the past prices and returns; (b) semi-strong form efficiency where stock prices fully reflect all information known to all market participants i.e. public information; and (c) strong form efficiency where stock prices fully reflect all information including public and private, known to any market participant.

The weak form of efficiency occurs when the stock prices reflect information about the past share prices only. It means investors depend solely on past series of stock prices in selecting their portfolio. On the contrary, the strong form of market efficiency occurs if the stock prices reflect all public and private information. This form is the most comprehensive case and private information is difficult to observe.

In between the weak and strong forms of market efficiency, there is semi-strong form of efficiency. The market is efficient in a semi-strong form if the security prices reflect not only the information that contains the past time series of stock prices but also all publicly available information. This means that the stock price is adjusted rapidly and in an unbiased way to all-important public announcements in newspapers, annual reports, corporate forecasting and related notices.

Stock volatility and its measures

Volatility is basically the variation from the average value over a measurement period. If a price varies a great deal from day to day, the volatility will be high, and conversely if the day to day variation is low, the value of volatility will be low. Assets that have large and

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frequent price movements are said to be volatile or said to be of high volatility. Assets whose price movements are slow and predictable are said less volatile instruments. The higher the volatility, the more likely it is that the underlying asset will trade higher (or lower) than the exercised price. Implied volatility is the markets' view where volatility will be in the future. To determine an option's implied volatility, the trader must use a pricing model. Historically volatility is a statistical calculation that tells option traders how rapid price movements have been over a given time frame. The most common method of calculating historical volatility is called the standard deviation. Standard deviation measures the dispersion of a set of data points from its average. The more dispersed (spread out) the data is, the higher the deviation.

Stock prices volatility has received a great attention from both academicians and practitioners over the last two decades because it can be used as a measure of risk in financial markets. Over recent years, there has been a growth in interest in the modeling of time-varying stock return volatility. Many economic models assume that the variance, as a measure of uncertainty, is constant through time. However, empirical evidence rejects this assumption. Economic time series have been found to exhibit periods of unusually large volatility followed by periods of relative tranquility (Engle, 1982). In such circumstances, the assumption of constant variance (homoskedasticity) is inappropriate (Nelson, 1991). The time series are found to depend on their own past value (autoregressive), depend on past information (conditional), and exhibit non-constant variance (heteroskedasticity). It has been found that the stock market volatility changes with time (i.e., it is "time-varying") and also exhibits positive serial correlation or "volatility clustering". Large changes tend to be followed by large changes and small changes tend to be followed by small changes, which mean that volatility clustering is observed in financial returns data. This implies that the

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changes are non-random. When volatility clusters occurs, the random walk hypothesis is refuted (Mandelbrot, 1963).

Moreover, the volatility of returns can be characterized as a long-memory process as it tends to persist. The technical term given to this behavior is autoregressive conditional heteroskedasticity (ARCH). In a seminal paper, Engle (1982), for the first time, proposed to model time-varying conditional variance with the ARCH process that uses past disturbances to model the variances of the series and allows the variance of the error term to vary over time. Bollerslev (1986) generalized the ARCH process by allowing the conditional variance to be a function of prior period's squared errors as well as its past conditional variances. Following the introduction of models of ARCH by Engle (1982) and their generalization by Bollerslev (1986), there have been numerous refinements of the approach to modeling conditional volatility to better capture the stylized characteristics of the data. Empirically, the family of GARCH (generalized ARCH) models has been very successful in describing the financial data. ARCH and GARCH models treat heteroskedasticity as a variance to be modeled.

As per the traditional measure of volatility, most investors should be aware that standard deviation is the typical statistic used to measure volatility. Standard deviation is simply defined as the square root of the average squared deviation of the data from its mean. While this statistic is relatively easy to calculate, the assumptions behind its interpretation are more complex, which in turn raises concern about its accuracy. As a result, there is a certain level of skepticism surrounding its validity as an accurate measure of risk.

Standard deviation to be an accurate measure of risk, an assumption has to be made that investment performance data follows a normal distribution. In graphical terms, a normal

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distribution of data will plot on a chart in a manner that looks like a bell shaped curve. If this standard holds true, then approximately 68 percent of the expected outcomes should lie between ±1 standard deviations from the investment's expected return, 95 percent should lie between ±2 standard deviations, and 99 percent should lie between ±3 standard deviations (Ruben & Ruben, 2001 pp 259)

There is a much easier and more accurate way to measure and examine risk, known as the historical method. Risk can be captured and analyzed in a more informative manner than through the use of standard deviation. To utilize this method, investors simply need to plot a graph of the historical performance of their investments, by generating a chart known as a histogram. A histogram is a chart that plots the proportion of observations that fall within a host of category ranges (Ruben & Ruben, 2001, pp 33). The use of the historical method via a histogram has three main advantages over the use of standard deviation. First, the historical method does not require that investment performance be normally distributed. Second, the impact of skewness and kurtosis is explicitly captured in the histogram chart, which provides investors with the necessary information to mitigate unexpected volatility surprise. Third, investors can examine the magnitude of gains and losses experienced. The only drawback to the historical method is that the histogram, like the use of standard deviation, suffers from the potential impact of heteroskedasticity.

Theories on investors' perception

Prices are driven by the ever changing perceptions of buyers and sellers. Conflicting ideas between traders exist at all times, everywhere. That's why it is said that markets are grounded in human nature. It takes disagreement over value and price in order for a market to exist in the first place. Stock market mispricing of individual corporate strategies is subject of

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relentless debate. Executives of public companies often complain about investors' pressure to focus inefficiently on short term financial results while academics have failed to provide a consistent corpus of evidence supporting stock market myopia. Contradictory results in prior research suggest that investors have an ambivalent stance towards environmental firm performance. They clearly value higher financial performance, but it is unclear whether they regard environmental activities as conducive to such performance. This is somehow striking, taking into account that other studies (Russo & Fouts, 1997; Hart & Ahuja, 1996) strongly suggested that environmental and financial performance are positively linked, particularly for firms that are proactive (Sharma & Vrdenburg, 1998; Delmas, 2001).

The price action depends on how the players trading shares of a firm feel about the current earnings report, future earnings forecasts, current market environment, their personal financial situations and so on and so forth. Traders and investors' reactions to events and fundamentals drive prices. Real people move real money based on the difference between expectations and reality. Without differing perceptions one could never have a dynamic market. And for that reason, strategies have been developed in hopes of harnessing these perceptions. Two basic theories have tried to explain the market movements.

The Dow Theory

The Dow Theory was created by Charles Dow (1900) and further explained and improved upon by William Hamilton (1922), and finally culminating in a book titled, *The Dow Theory*, written by Robert Rhea (1932). The Theory is made up of six major tenets. In an effort to explain the make-up of major trends within markets, one of these tenets outlined three phases of price movements within a primary trend. These three phases are;

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Phase I- Rebound and Accumulation: After a primary downtrend expires, enter the smart money. Beaten-down prices slowly recover and buying interest grows. The primary uptrend builds from this turning point.

Phase II - Public Participation: Fundamentals begin to brighten and investors begin to feel that prices need to go higher. The public gets in on the action and powers the uptrend. This accounts for the largest and most rapid change in price.

Phase III - Speculation: This is the last hurrah for the primary trend. At this point, the only thing driving prices higher are those investors giving too much credit to lackluster fundamentals: The speculators are left buying even when conditions aren't necessarily improving.

These three phases make up basic stepping stones that help in understanding how investor sentiment drives prices. Charles Dow noticed that markets tend to move in an orderly fashion, repeating the same patterns over and over again. But Dow wasn't the only market follower who attempted to dissect the role of sentiment on markets. Ralph Nelson Elliot (1934) sought to develop a systematic approach to analyze investors' attitude.

Wave Theory

The concepts of the Elliot wave are taken from his essay, "The Basis of the Wave Principle," (1940), eventually to be known as Elliot Wave theory. A perfect understanding of the Elliot Wave is complicated; there are a few simple ideas that can guide one in analyzing market sentiment.

Practically, all developments which result from socio-economic processes follow a law that causes them to repeat themselves in similar and constantly recurring series of waves of definite number and pattern. In this basic pattern, one can also find the three phases

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described in Dow Theory as mentioned earlier. Elliott argued that because human beings are themselves rhythmical, their activities and decisions could be predicted in rhythms, too. Critics argued that the Elliott wave principle is pseudoscientific and contradicts the efficient market hypothesis. The wave principle posits that collective investor psychology (or crowd psychology) moves from optimism to pessimism and back again. These swings create patterns, as evidenced in the price movements of a market at every degree of trend. First, there are impulse and corrective waves that make up a trend. Impulse waves steer the trend, i.e. they move in the same direction as the primary trend. Corrective waves are a response to impulse waves and retrace pieces of the trend, i.e. they move against the primary trend. Second, these impulse and corrective waves typically join together to produce a 5-wave pattern.

Event study methodology

An event study attempts to measure the valuation effects of a corporate event, such as a merger or earnings announcement and happening of important political events by examining the response of the stock price around the announcement of the event. One underlying assumption is that the market processes information about the event in an efficient and unbiased manner. Thus, one should be able to see the effect of the event on prices.

Event study analysis is a branch of econometrics which attempts to measure the effects of economic events on the value of firms by examining stock market data. Providing that share prices reflect the underlying economic values of assets, changes in equity values properly capture expected changes in the economic profitability of the firm. This requires us to accept the hypothesis that stock markets are efficient and that prices reflect all publicly available information relevant to the prospects of the firm. Thus, the effect of an event is reflected almost

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immediately in asset prices. This immediate reaction makes any link easier to establish than if we were examining say, profitability, which might require months or years of observation before the effects of the event were fully felt.

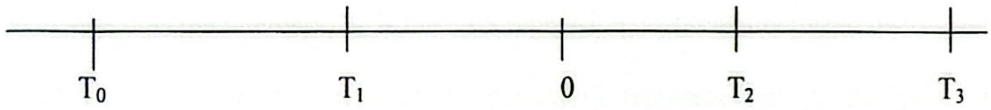
Campbell, Lo and MacKinley (1997) has identified seven key stages to a typical event study;

(i) Event definition. The initial task of conducting an event study is to define the event of interest and identify the period over which the prices of the relevant financial instruments will be examined. This period is called the "event window". The selection of the event window can have profound effects on the results of the study. Whilst in a perfectly efficient market one would expect all value effects to be reflected immediately in asset prices, in practice the market may acquire information prior to the event; speculate on the content of an announcement before it is made; or take time to assimilate information and react to it. For this reason it is common in studies of this type to use an event window of two or three days; encompassing the day itself as well as the following day, and possibly the day before. The choice of event window is somewhat arbitrary and there does not appear to be any sound empirical basis for choosing a particular time period around an event.

(ii) Selection criteria. The next task is to determine the selection criteria for the firms to be included in the study. A fundamental requirement for any event study is the availability of price data for at least one listed financial instrument that tracks the value of the firm under examination. A further requirement is for a suitably deep market for the instrument in question. If the instrument is seldom traded its posted price may not reflect changes in value on a sufficiently on time basis for our purposes. In addition the case had to involve a substantial part of the firm's business, so that it would be reasonable to expect the case to

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have measurable effects on the share price. It is hard to be exact about this question as it involves factors such as the profitability of the various components of the business and its future strategy. The time-line for a typical event study is shown below in event time:



- The interval T_0-T_1 is the estimation period
- The interval T_1-T_2 is the event window
- Time 0 is the event date in calendar time
- The interval T_2-T_3 is the post-event window
- There is often a gap between the estimation and event periods

(iii) Normal and abnormal returns. To assess the impact of a specific event on the return of a financial instrument, we must first establish what the return would have been in the absence of the event (the "normal return"). Since it is conventional to assume that asset returns are jointly multivariate normal and independently and identically distributed through time, the normal return can be estimated using one of two statistical models; the constant-mean-return model or the market model. The constant mean- return model assumes that the mean return of a given financial instrument is constant over time, whilst the market model assumes a stable linear relationship between the market return and the return on the financial instrument.

Estimated parameters using data in estimation window;

- $\check{R}_i$ and σ_e from the constant mean model
- α_i , β_i, σ_e from the market model

Measure abnormal returns in the event window:

- The constant mean model : $AR_{it} = R_{it} - \check{R}_i$

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- The market model : $AR_{it} = R_{it} - \alpha i - \beta_i R_{mt}$

Aggregate abnormal retuns : $CAR_i\ (T_1\text{-}T_2) = \sum_{t=T1}^{T2} ARit$

Where R_{it} and R_{mt} are the period-t returns on instrument i and on the market portfolio respectively, α_i is the intercept, β_i, is the OLS regression coefficient between instruments i and the market portfolio. In practice, the market portfolio is represented by an appropriate stock index.

(iv) Estimation procedure. Having selected a normal return model, the parameters of the model are obtained using a subset of the data referred to as the "estimation window". Campbell, Lo and MacKinley (1997) suggested an estimation window of 120 or 180 days prior to the event, but this is by no means a convention in the literature. Generally the event itself should not be included in the estimation window to avoid the event itself influencing the parameters of the normal performance model. In general, an event window of three days, from $t_{0\text{-}1}$ to t_{0+1}, where t_0 is examine from the event date but it can adjusted as per the requirements.

(v) Testing procedure. A testing framework needs to be defined for any abnormal returns calculated, including the definition of the null hypothesis and techniques for aggregating the results over time and across individual firms. For example, an equally weighted or value weighted portfolio may be constructed to test the effect of an event on several firms. It defines the Cumulative Abnormal Return (CAR) as the sum of the abnormal returns for each day in the event window i.e.

$CARi = \Sigma ARit$

Under the null hypothesis the given event has no impact on the mean or variance of returns hence the expectation of abnormal returns is zero. Inferences about the CAR can be drawn using a test statistic, t, where

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$t = CARi/(\sigma i/\sqrt{n})$

σi is the standard error of the distribution and n is the number of days in the event window. Salinger (1992) discusses statistical significance testing of ARs and CARs in further depth. To draw inferences from an event study we need to understand its ability to detect the presence of a non-zero abnormal return; in other words, the likelihood that an event study test correctly rejects the null hypothesis where there is a genuine effect to be found. To analyze this ability, one must examine the 'power' of the statistical test in question.

(vi) Presentation of empirical results. The presentation of profusion of data can often produce confusing and hard-to-interpret results. For example when looking at a portfolio of financial instruments it may be desirable to show aggregated results rather than those for individual instruments. In addition, abnormal returns for specific days in an event window may be of interest or the cumulative abnormal return alone may be presented. In the event study it generally present results for individual stocks as, given the limited number of companies involved, the benefits of examining a portfolio of instruments were not available. Generally results are presented for the entire event window of three days, except where the results on specific days were of particular interest.

(vii) Interpretation and conclusions. Perhaps the most important step for the current study is to determine the inferences that may be drawn from the results. In the current study we are considering whether inferences can be drawn about (a) the information content of the announcement in question and (b) the competitive effects of the transaction.

Capital asset pricing model

In finance, the capital asset pricing model (CAPM) is used to determine a theoretically appropriate required rate of return of an asset, if that asset is to be added to an already well-

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diversified portfolio, given that asset's non-diversifiable risk. The model takes into account the asset's sensitivity to non-diversifiable risk (also known as systematic risk or market risk), often represented by beta (β) in the financial industry.

The model was introduced by Sharpe (1964), Lintner (1965a,). The CAPM is a model for pricing an individual security or a portfolio. For individual securities, we make use of the security market line (SML) and its relation to expected return and systematic risk (beta) to show how the market must price individual securities in relation to their security risk class. The SML enables us to calculate the reward-to-risk ratio for any security in relation to that of the overall market. Therefore, when the expected rate of return for any security is deflated by its beta coefficient, the reward-to-risk ratio for any individual security in the market is equal to the market reward-to-risk ratio, thus the market reward-to-risk ratio is effectively the market risk premium. The CAPM enables to estimate un-diversifiable risk of a single asset and compare it with un-diversifiable risk of a well-diversified portfolio. The CAPM equation or Security Market Line (SML), is usually written as,

$E(R_j) = [E(R_m) - R_f]\,\beta_j$

$E(R_j)$ = expected return on the risky asset, j.

$E(R_m)$ = expected return on the market portfolio

R_f = rate or return on a riskless asset

β = $COV(R_j,R_m)/ Var (R_m)$,

β_j = a measure of the un-diversifiable risk of the security, j.

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Review of Major Empirical Studies

Different studies have approached the issues of effect of political events on the stock market differently. In light of the major studies available on the issue, studies are divided into three chronological orders as below.

Review of major studies till 1990s

Political change also affects national economic performance of a country. Empirical studies have ascertained a number of well-known stock market anomalies, effect of political uncertainty, effect of news, the weekend effect, the January effect, or means reversion tendencies. These issues were studied in this period and some interesting conclusions were drawn.

The review of the major studies and their findings on the issue of effect political uncertainty on the stock market till 1990s is summarized in Table 2.1. Fama's (1970) pioneer works on effect of political uncertainty on stock return, introduced this issue as an important issue to be studied in the stock market. Potter (1971) identified six factors: dividends, rapid growth, investment for saving purposes, quick profits through trading, professional investment management, and long-term growth, that affect individual investors' (ININ) attitudes towards their investment decisions. Baker and Haslem (1973) argued that investors are primarily concerned with expectations about the future, considering earnings projection and historical data to be of high interest to investors. On the other hand, research by Lee and Tweedie (1976) revealed that the general public faces problems in understanding financial reporting in the corporate sector. Lease et al. (1974) described ININ as "investors" rather than "traders" since they were long-term minded and give little interest to short-term yields.

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Table 2.1

Summary of the major studies till 1990

Study	**Major Findings**
Fama (1970)	Pioneer empirical study which indicated the presence of the effect of political uncertainty on stock prices.
Potter (1971)	Identified six factors: dividends, rapid growth, investment for saving purposes, quick profits through trading, professional investment management and long-term growth, that affect individual investors (ININ)' attitudes towards their investment decisions.
Baker and Haslem (1973)	Argued that investors are primarily concerned with expectations about the future, considering earnings projection and historical data to be of high interest to investors.
Lewellen et al. (1977)	Revealed that investors' main source of information was through fundamental or technical analysis.
Umstead (1977)	Shown evidence supporting that Stock market returns are higher in the 3rd and 4th year of presidency and lower in the 1st and 2nd year
Alesina (1997)	Reported ideological politicians concern on different policies, the left wing parties deliver high level of growth and employment, the right wing parties deliver lower inflation rate.
Blume and Friend (1978)	Provided evidence that both price and earnings volatility was the primary measures of risk employed by Individual investors.
Nordhaus (1975)	Developed Opportunistic Political Business Cycle (OPBC): Incumbents try to manipulate economic policy in order to increase its probability of re-election.
Hibbs (1977)	Developed Partisan Political Business Cycle (PPBC): Economic fluctuations arise as a result of policy change when different parties alternate in office.
Schlarbaum et al. (1978)	Compared ININs' performance with that of professional fund managers and found that the former exhibited considerable skill in their investment decision making.
Huang and Kracaw (1984)	Concluded that the causal link between volatility and business slumps is not clear.
Huang and Hansel (1985)	Looked at whether presidential trading strategies are able to improve investors' risk-return trade-off.
Chappell and Keech (1986)	Found that macroeconomic outcomes during Democratic administrations differed from those during Republican administrations.
Cutler (1988), Poterba, and Summers (1989)	Found that little evidence of political news having a significant impact on the U.S. market.
Alesina and Sachs (1988)	Found that the Presidential cycle in stock return coincided with the business cycle because inflationary and deflationary measures were often pursued through fiscal and monetary policies.
Antinodes and Van Der Sar (1990)	Argued that the perceived risk of an investment was lower if an asset has recently increased in value

Source: Researcher's own summary

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The majority of these studies used time aggregated data to study the real effects of general elections on the variability of stock returns. It is preferable for developments concerning most economic magnitudes to be analyzed on the highest level of time disaggregation. These studies discussed the effect of general election in the variability of the stock prices; the cyclic effect of the election on stock market is analyzed by these studies.

Moreover, Lewellen et al. (1977) revealed that investors' main source of information was through fundamental or technical analysis. Umstead (1977) first drew attention to this phenomenon as far back as one-and-a half decades ago – though without a great deal of convincing empirical evidence – the profession has so far failed to discuss this important and puzzling phenomenon in any depth. Blume and Friend (1978) provided evidence that both price and earnings volatility were the primary measures of risk employed by ININ, while Schlarbaum et al. (1978) compared ININs' performance with that of professional fund managers and found that the former exhibited considerable skill in their investment decision making. Stock volatility changes over time, it is higher in recession.

Huang and Kracaw (1984) found the causal link between volatility and business slumps to be unclear. There has been abundant literature on the impact of political process on monetary policy and business cycles. The impact of political risk on financial markets was not conclusive. However, Cutler (1988) and Cutler, Poterba, and Summers (1989) found little evidence of political news having a significant impact on the U.S. market. Antonides and Van Der Sar (1990) argued that the perceived risk of an investment was lower if an asset has recently increased in value. This is consistent with Blume and Friend's (1978) findings. Frankel and Froot (1990) have summarized the failure of existing literature to capture currency market movements. It is now widely accepted that standard observable

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macroeconomic variables are not capable of explaining the phenomena and the majority of short term changes in the exchange rate.

The studies before 1990 carried analysis on business slums and recession and their effect on the stock market but whether business slumps cause volatility or volatility cause business slump was not clear. Similarly, a number of studies on the political uncertainty and its effect on the stock price carried were also not conclusive. Thus, in the period before 1990s, the issue of political uncertainty, election cycles, and business slumps and their effect in the stock market were formally entered in the studies but findings were not conclusive.

Review of major empirical studies during 1990s

The summary of the major empirical studies on the immediate effect of political events on the stock return during 1990s are summarized in the Table 2.2. Exploring complicated relationship between stock market and political behavior using statistical methods was one of the most exciting issues for academicians and investors in this period. Politics and the economy are inextricably linked; that is, they have significant influence on each other, and cannot be separated.

Studies concerning professional investors in sophisticated capital markets, such as the UK (Taylor & Allen, 1992) and the US (Frankel & Froot, 1990; Carter & Van Auken, 1990), revealed that these groups of investors rely more on fundamental and technical analysis and less on portfolio analysis. Thorbeche (1997) discovered that monetary policy can help explain future stock returns. Rogoff (1990) argued that political budget cycles developed as government tended to increase spending, especially on projects with high immediate visibility, cut taxes, and raise transfers prior to and during election years. Gartner and Wellershoff, (1995) came with the effect of general elections on stock returns.

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Table 2.2.

Summary of the major studies during 1990s

Study	Major Findings
Frankel and Froot (1990)	Found that standard observable macroeconomic variables are not capable of explaining, much less predicting ex ante, and the majority of short term changes in the exchange rate.
Carter and Van Auken, (1990)	Revealed that investors rely more on fundamental and technical analysis and less on portfolio analysis.
Stovall (1992)	Found a pattern of low returns in the first two years of a President's term and high returns in the last two years in the stock market.
Nagy and Obenberger (1994)	Investigated the extent to which a listing of 34 variables influence shareholders' perception, and provided evidence of a role for a mix of financial and non-financial variables.
Gartner and Wellershoff, (1995)	Came with the finding effect of general elections on stock returns.
Gartner and Wellershoff (1995), Hensel and Ziemba (1995)	Found that the difference between the returns in the first half and those in the second half of the Presidential term are economically and statistically significant
Willard, Guinnane, and Rosen (1996)	Discovered some significant evidence that turning points in the U.S. Civil War was reflected in the price of the Greenbacks.
Foerster and Schmitz (1997)	Found both US and international stock returns were lower in the second year of the US Presidential term relative to those in years 1, 3, and 4.
Alesina et al. (1997)	Offered convincing evidence that political variables have an impact on the state of the macro economy.
Bittlingmayer (1998)	Found a significant impact of political uncertainty on recession and market volatility.
Radelet and Sachs (1998)	Found that economic and financial conditions explain about 24-37 percent of the recent financial crises.

Source: Researcher's own summary

Willard, Guinnane and Rosen (1996) discovered some significant evidence that turning points in the U.S. Civil War was reflected in the price of the Greenbacks. Other studies have documented the difference in stock returns under Republican and Democratic presidents, notably by Hensel and Ziemba (1995), Johnson, Chittenden, and Jensen (1999) and Siegel (1998). Radelet and Sachs (1998) found that economic and financial conditions explain about 24-37percent of the recent financial crises.

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Bittlingmayer (1998) found a significant impact of political uncertainty on recession and market volatility. The result that political risk resolved gradually was also consistent with the puzzling findings that privatization IPOs appeared to outperform matched control groups. Perotti and Huibers (1998) attributed this result to the greater sensitivity of these stocks to political risk. They confirmed that this effect vanishes after the IPO, as political risk gradually declines.

In the period of 1990 to 2000, a number of important studies were carried out in US stock market to study the effect of election cycle, presidential cycle, returns of democratic and republican president, monetary policies, and political uncertainty and their effect in the stock market volatility. The majority of the studies have concluded that political events have direct influences in the stock returns. Thus, the studies in this period have drawn major conclusions in support of the hypothesis that political events have effect on the stock market.

Review of the major empirical studies during 2000s

The summary of the major empirical studies on issue of the effect of political events on the stock market during 2000s are summarized in the Table 2.3. In this period the effect of the political events on stock market has become the subject of study in developing economies also. Often times many economic factors are influenced by political factors. Henry (2000) found that policy change such as stock market liberalization tends to move stock prices. Bekaert and Harvey (2000) also discovered that the cost of capital always decreases after capital market liberalization.

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Table 2.3

Summary of the major studies during 2000s

Study	Major Findings
Bekaert and Harvey (2000)	Discovered that the cost of capital always decreases after capital market liberalization.
Henry (2000)	Found that policy change such as stock market liberalization tends to move stock prices.
Shiller (2000)	Concluded twelve precipitating factors that have contributed to the extremely high level of the US stock market in the late 1990's.
Perotti and Oijen (2001)	Reported that changes in political risk in general tend to have a strong effect on local stock market development and excess returns in emerging economies.
Robbani and Anantharaman (2002).	Showed that political risk is a priced factor in firm valuation. This simply means that political risk is one of the determining factors in stock valuation.
Bilson, Brailsford, (2002)	Investigated the relation between political risk and stock returns within the context of emerging markets in the Pacific-Basin
Megna and Xu (2003)	Used indicators to forecast the economy and cycles for the USA presidential election.
Santa-Clara and Valkanov (2003)	Reported that U.S. stock market returns were higher under Democratic than Republican presidencies, with the difference being particularly large for small stock portfolios.
Nofsinger (2004)	Pointed out that the evidence of a better stock market performance during democrat presidencies is likely to be spurious
Sharma (2004)	Concluded that the Indian stock market exhibited some seasonality in daily returns.
Beaulieu et al. (2006)	The study found that the referendum outcome did affect portfolio returns of firms in Quebec.
Yakob, Beal and Delpachitra (2005)	Examined seasonal effects in ten Asian Pacific stock markets, including the Indian stock market, for the period January 2000 to March 2005.
Li and Born (2006)	They reported that the mean daily common stock return rises in the roughly three-month period before a US presidential election when the outcome of the election is uncertain. Similarly, the study provided weak evidence that the presidential election cycle is associated with higher return variability when outcome is uncertain.
Wong and McAleer (2007)	Explored the existence of the Presidential Election Cycle in the USA based on Presidential Elections that occur every four years.

Source: Researcher's own summary

Anantharaman and Robbani (2002) studied whether there was any direct correlation between the domestic political unrest and the stock price movement. For this purpose they focused on the markets from Asian countries where political instability is well known. The markets that they looked at were India, Pakistan, Indonesia and Sri Lanka. Of these four

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countries, even though India was more stable politically, other countries faced much political unrest. These unrests ranged from calling a nation-wide strike by the opposition party to the assassinations of political leaders, or sudden change of government due to loss of majority in the parliament, or the taking over of power by the military. The findings of this study can have various implications for corporations in emerging markets and also very relevant to Nepal.

Megna and Xu (2003) used indicators to forecast the economy and cycles for the USA. Booth and Booth (2003) confirmed the finding of the previous studies and found that the Presidential Cycle had explanatory power beyond the business condition proxies that have been shown to be important in explaining stock returns. Santa-Clara and Valkanov (2003) found that the difference in returns could not be explained by business cycle variables that were related to expected returns, and were not concentrated around election dates. There was no difference in the riskiness of the stock market across different president's ruling that could justify a risk premium. The differences in returns through the Presidential Cycle remain a puzzle. Studies have reported empirical evidence supporting the existence of a Democratic premium and a presidential cycle effect in U.S. stock returns. Nofsinger (2004) has pointed out that the evidence of a better stock market performance during Democrat presidencies is likely to be spurious. The modeling approach developed by Pesaran and Timmermann (1995, 2000) built on the assumption that an investor, in real time, can only use contemporary and historical information to forecast excess stock returns and to set up trading rules.

In the developing economies, Sharma (2004) added that very few studies have examined calendar effects during the post reform era in the Indian stock market. Sharma investigated the BSE 30, the BSE 100, and the BSE 200 stock indexes to detect the day-of-the-week effect. Utilizing Kruskal-Wallis test statistics, Sharma concluded that the Indian

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stock market exhibited some seasonality in daily returns over the period January 1, 1996 to August 10, 2002. However, they were unable to find any significant differences among individual months.

These studies examined seasonality in the Indian stock market as part of a broader analysis of seasonality in several major emerging stock markets. For the Indian stock market, they found August returns were significantly greater than April, May, October and November returns. However, they did not find evidence consistent with hypothesized tax-loss selling in the Indian stock market, as the tax-year in India commences in April.

Yakob, Beal and Delpachitra (2005) also examined seasonal effects in ten Asian Pacific stock markets, including the Indian stock market, for the period January 2000 to March 2005. They stated that this was a period of stability and is therefore ideal for examining seasonality as it was not influenced by the Asian financial crisis of the late nineties. Yakob, et al., concluded that the Indian stock market exhibited a month-of-the-year effect that statistically significant negative returns were found in March and April whereas statistically significant positive returns were found in May, November and December. Of these five statistically significant monthly returns, November generated the highest positive returns whereas April generated the lowest negative returns.

The non-fundamental component of stock market index appears to be significantly influenced by the political orientation of the head of the government and his approval rating, election cycle and military conflicts. The findings presented indicate that there is much more to the price formation process than the present value of future dividends Wisniewski (2007). Wong and McAleer (2007) explored the existence of the Presidential Election Cycle in the US based on Presidential Elections that occur every four years. One possible underlying reason is

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that stock prices may decline following a Presidential Election as the newly elected president takes unpopular steps to make adjustments to the economy. In mid-term, stock prices may begin to rise in anticipation of a stronger Election Day economy.

To sum up, on the issue of effect of political uncertainty, election, and presidential cycle on stock market is formally considered as an issue to study in the portfolio analysis. Few important studies were conducted in the period before 1990, but most of the effort remained inconclusive. During period of 2000s some of the very good studies concluded with the use of statistics that political uncertainty has bearing on the stock market volatility. In this period studies supported the hypothesis that political events have pronounced effect in the stock market. From the period after 2000, the issue has continued to get attention in the developed economies but in this period even the developing economies like India, China, Korea, Brazil also started to consider the issue as an important issue of study in the stock market. Now a day, the issue of political events and its effect on stock market have become one of the major fields of study in the portfolio analysis. Corporations will be able to set their policies on how to handle domestic political risk and will be able to minimize its effect on their share value. It also will help to understand how political events affect the stock prices in emerging markets and how investors should react to any expected or unexpected political events in any given emerging financial market. The issues of return and volatility have become increasingly important in recent times to the Indian investors, regulators, brokers, policy makers, dealers and studies with the increase in the FIIs investment and tussle between US and Iraq had negative impact on the stock market. It is important to consider the political risk associated with those investments and the effect that risk can have on your portfolio. From an investment portfolio perspective, unexpected changes in actions and policies taken

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by a country's leaders can greatly impact that country's financial markets. Nowadays, the actions taken in one country will often reverberate through other financial markets around the world.

Review of Major Nepalese Studies

The stock market of Nepal is in growing stage. In comparison with other developed and developing countries the stock trading activities in Nepal started fairly late. The interim government (1990/91) initiated financial reforms program and two indirect investment vehicles-Citizen's Investment Fund and NIDC Capital Markets Ltd. were established with the collective investment schemes in the corporate sector (Gurung, 1999). Then, due to the world trend of privatization and economic liberalization, the operation of Security Exchange Corporation (SEC) was felt to change to make it compatible with the changing economic system. As a result, the Government of Nepal brought about change in the structure of SEC by dividing it into two distinct entities-Securities Board of Nepal (SEBO/N) and Nepal Stock Exchange Ltd. (NEPSE) at the policy level in 1993. Since then they are operating as the main constituents of securities market in Nepal. Table 2.4 lists major studies in the stock market of Nepal and their major findings. G.C. (2008) in the study on Volatility Analysis of Nepalese Stock Market revealed that strong evidence of time varying volatility, a tendency of high and low volatility cluster and a high performance and predictability of volatility, in the Nepalese stock market. A study unanticipated political event and Stock Returns, an event study carried out by Dangol (2008) found that good news (bad news) political announcement have effect on stock returns and concluded that the Nepali stock market is efficient at semi-strong level but there is a strong linkage between political uncertainty and common stock returns.

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Table 2.4

Summary of the major studies in Nepalese stock market

Study	Findings
G.C. (2008)	The study revealed strong evidence of time-varying volatility, a tendency of the periods of high and low volatility to cluster and a high persistence and predictability of volatility in the Nepalese stock market.
Dangol (2008)	Found that Nepalese stock market is inefficient at a semi-strong level and there is a strong linkage between political uncertainty and common stock returns.
Adhikari (2007)	It is found that volatility is an indicator of increasing or decreasing stock prices and the rate at which the changes occur determines the magnitudes of volatility. But not every of the fluctuation is an idea can be allocated to the identifiable reason.
Bhattarai and Joshi (2006)	Indicated that the existences of weak form of efficiency in the market for temperature and seasonal affective disorder but not for the cloud cover.
Baral and Shrestha (2006)	Showed that there is no significant difference between expected and actual numbers of runs in a series of prices changes. It implies that the Random Walk Theory does not hold in the context of the Nepalese stock market.
K. C. and Joshi (2005)	Finding indicated that Nepalese stock market is not efficient in weak form with regard to the day of the week anomaly but weakly efficient with respect to the other anomalies.
Pradhan and Balapanki (2004)	Revealed that earnings yield and cash flow yield have significant positive impact on dividend yield and insignificant impact on book to market value.
Gurung (2004)	Revealed that there is no synchronization among different securities market performance indicators but it is true that they must have depicted an erratic trend during the observed period.

Source: Researcher's own summary

Joshi (2008) studied the monthly seasonality effect in Nepali stock market and found that Nepalese stock market has abnormal returns in the month of Kartik. Bhattarai and Joshi (2007) studied the efficiency in the stock market with seasons and found that Nepali stock market show the symptoms of weak form of efficiency seasonal disorder. Adhikari (2007) considered the political event as one of the variables of investigation and it has concluded that stock market does not have very consistent response to the political events.

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Baral and Shrestha (2006) showed that there is no significant difference between expected and actual numbers of runs in a series of prices changes. It implies that the Random Walk Theory does not hold in the context of the Nepali stock market. Gurung (2004) revealed that there is no synchronization among different securities market performance indicators but it is true that they must have depicted an erratic trend during the observed period.

Pradhan and Balapanki (2004) revealed that earnings yield and cash flow yield have significant positive impact on dividend yield and insignificant impact on book to market value.

However, there is a gap of a comprehensive empirical analysis on the effect of political event on the stock returns. This study is focused to analyze the effect of the political uncertainty on the stock returns. It especially tries to find out the changes in the NEPSE and other sub-sector indices before and after a political event.

Concluding Remarks

Exploring complicated relationship between stock market and political behavior using statistical methods is one of most exciting issues for academicians and investors. Politics and the economy are inextricably linked; that is, they have significant influence on each other, and cannot be separated. The economy has its own cycles in which market volatility can generates economic depression and uncertainty. Public via voting affirm the ruling party's candidate, policies, and achievements. The voting public however also has the power not to vote to the ruling or incumbent party and voters vote for which they like as a means of a new party committed to bring in reforms and improvements.

Stock markets in Asia, Latin America, and Africa are still facing political unrests that are directly or indirectly affecting the stock market. The results of these unrests, corporations

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are facing two types of problems. First, business cash flows are being negatively affected as a result of which share prices are reduced. This will lead to hosts of other problems that can be faced by the corporations and ultimately bring the corporations to the brink of bankruptcy. Second, investors may become more skeptical about the well functioning of the market that may lead to the loss of trust on the market mechanism to price the share fairly.

The formal dealing of the effect of political uncertainty in stock market started with the Fama (1970) pioneer works. A number of studies (Potter, 1971; Baker & Haslem, 1973; Rogoff, 1990, Stovall, 1992) were conducted before 1990s which discussed the various aspects of stock market, such as, investors' expectations, projections, political budget cycles, effect of monetary policies, effects of general elections, and civil wars on the stock prices. Studies in the period raised various arguments on the effects of political events on the stock market but not much conclusions were drawn.

In the context of developed economies, the issue of effect of political events on the stock market is studied in the greater extent after 1990. A large numbers of important studies (Bittlingmyer, 1998; Henry, 2000; Santa-Clara & Volanov, 2003; Nofsinger, 2004; Beaulieu, 2006) carried on the issue clearly brought forward that that political uncertainty affects stock market in developed economics and the issue also became an area of investigation in the developing World and similar conclusions were drawn as that was drawn in US and Germany.

In Nepal where only a few studies are available on stock market issues and especially in the area of political uncertainty and its events in stock market, no studies yet exist. A few studies those carried out in the stock issues has drawn useful some conclusions, such as, on the effect of political news (Dangol, 2008), seasonality effect (Joshi, 2008) efficient market hypothesis (Bhattarai & Joshi, 2007) found that the existences relation between stock returns

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and political news, existence of Kartik effect and Neapali stock market is weak form of efficiency.

In the study period (1994 to 2010) there have been a number of political events happened in Nepal, which created political uncertainty. In this situation, a comprehensive study which examines the effect of political uncertainty on the stock returns, stock market volatility and industrial output will be very relavent. Therefore, this study fills the gap of need of such study and it has brought forward some important findings on the effect of the political uncertainty on the stock returns in Nepal.

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CHAPTER III

RESEARCH METHODOLOGY

This chapter is divided into seven sections. Section 1 presents the research design; section 2 describes the nature and sources of data, section 3 deals on selection of the enterprises. Section 4 explains the method of analysis employed, section 5 on the regression models used in the study and section 6 gives the analysis of primary data and the last section lists some of the important limitations of the study.

Research Design

The research design adopted in the study consists of descriptive and causal comparative research designs to deal with the various issues raised. The descriptive research design has been adopted to undertake fact-finding operation searching for adequate information in the context of political uncertainty and its effect on stock returns in Nepali stock market. It also assesses the opinions and characteristics of investors and the executives of the listed companies on the issue. An attempt has also been made to describe the situation and events occurring during the study period.

It observed that the changes in one variable accompany changes in another, but the proper tests have not been conducted to show either variable actually influences the other or not. This study also has investigated the possible causes affecting a particular situation by observing existing consequences and searching for the possible factors leading to these results. The emphasis is thus on studying a situation in order to explain the relationship between two variables. Thus, it has also used causal comparative research design.

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Nature and Source of Data

This study has analyzed primary and secondary data. Secondary data of the daily, monthly, quarterly NEPSE index, sub-sector indices, industrial production index, and consumer price index were analyzed. NEPSE index and other sub indices were used as proxies for the stock returns. The standard deviation of the stock indices or change in excess return is used as proxy of stock volatility and the industrial production index is proxy for output.

The changes of government were extracted from official website of Barcelona Centre for Studies (www.cidob.org/np), and also from the prime-minister's office. The major political events were extracted from eKantipur, from website of IDEA International (www.idea.int/asia_pacific/nepal). The dates of national elections were extracted from the website of Election Commission of Nepal (www.election.gov.np). The industrial production indices were collected from Central Bureau of Statistics (CBS) and also from the CBS website(cbs.org.np). The data on quarterly consumer price indices (CPI) were downloaded from the website of Nepal Rastra Bank (NRB) (www.rnb.np/org).

Primary data were collected on the responses of individual investors and officials of the listed companies. Individual investors of different age groups, educational qualification, years of experiences in the stock market were selected using non-probabilistic convenience sampling method. Officials of the listed companies were selected and contacted personally for their responses. Questionnaire seeking the responses of the investors on effect of political event on stock market was designed and circulated to each group. In case of the officials of the listed companies, personal visit was paid to collect their responses. Altogether 116

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responses were received from individual investors and 42 responses from the officials of listed companies.

Selection of Enterprise and Respondents

For this study NEPSE index and the indices of the sub-sector were analyzed to see the effect of political events on individual subsector. The most important political events that happened in the study period were considered for the analysis. Secondary data of daily, monthly, quarterly NEPSE index and indices of the sub-sectors and their volatility with major political events, national elections and government changes were analyzed.

Monthly NEPSE indices for 194 months were collected from February 1994 to June 2010. Valid data before February 1994 were not available in SEBO/N and NEPSE. The daily data of around 1615 trading days (July 2003 to June 2010) were collected from NEPSE and SEBO/N's sites. The data before July 2003 were not really required for this study as most of the events selected fell in between 2005-2010. Only one event 'Royal Massacre' happened in June 2001 for which daily indices before and after 21 trading days were also collected. For analysis of output, stock returns and stock volatility, the industrial production indices, NEPSE indices and consumer price index were required. These indices were not available on annual basis so quarterly indices of these variables were taken from the NEPSE and CBS sites. Indices of 10 listed industrial sectors were considered to analyze the effect of political uncertainty on individual industry. The quarterly indices of industrial production, stock volatility and consumer price were used to test the relation between these variables. Table 3.1 gives detail of the industry and the data that were collected for the study.

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Table 3.1

List of Stock Price Data and Enterprises

S.No.	Enterprises, Indices	Data
1	NEPSE Index	1615 days
2	Commercial Banks	1615 days
3	Manufacturing and Production	1615 days
4	Hotel Industry	1615 days
5	Trading Sector	1615 days
6	Others Sector	1615 days
7	Insurance Companies	1615 days
8	Finance Companies	1615 days
9	Development Bank	1615 days
10	Hydropower	815 days
11	Monthly NEPSE index	194 months
12	Quarterly Industrial Production Index	26 quarters
13	Quarterly NEPSE Index	26 quarters
14	Quarterly Consumer Price Index	26 quarters

Source: Researcher's own summary

In order to compare the finding between the secondary data and the fresh opinions of the investors, two separate questionnaires were designed and circulated to individual investors and officials of the listed companies. Although the respondents were selected on convenience, efforts were made to include cross section of respondents from academic institutions, people working in different organizations, employees of listed companies, entrepreneurs, students, individual investors of different age, educational background and years of experience engaged in the share market. Out of 250 questionnaires circulated, only 116 usable responses were received. Some of the respondents did not respond to a few questions mostly in the ranking

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type. This has made total numbers of responses different for different questions. Similarly, to analyze the opinions of the officials of listed companies, questionnaires were circulated to 150 officials of various listed companies but only 42 responses were received where majority of the responses were from banking and insurance industries.

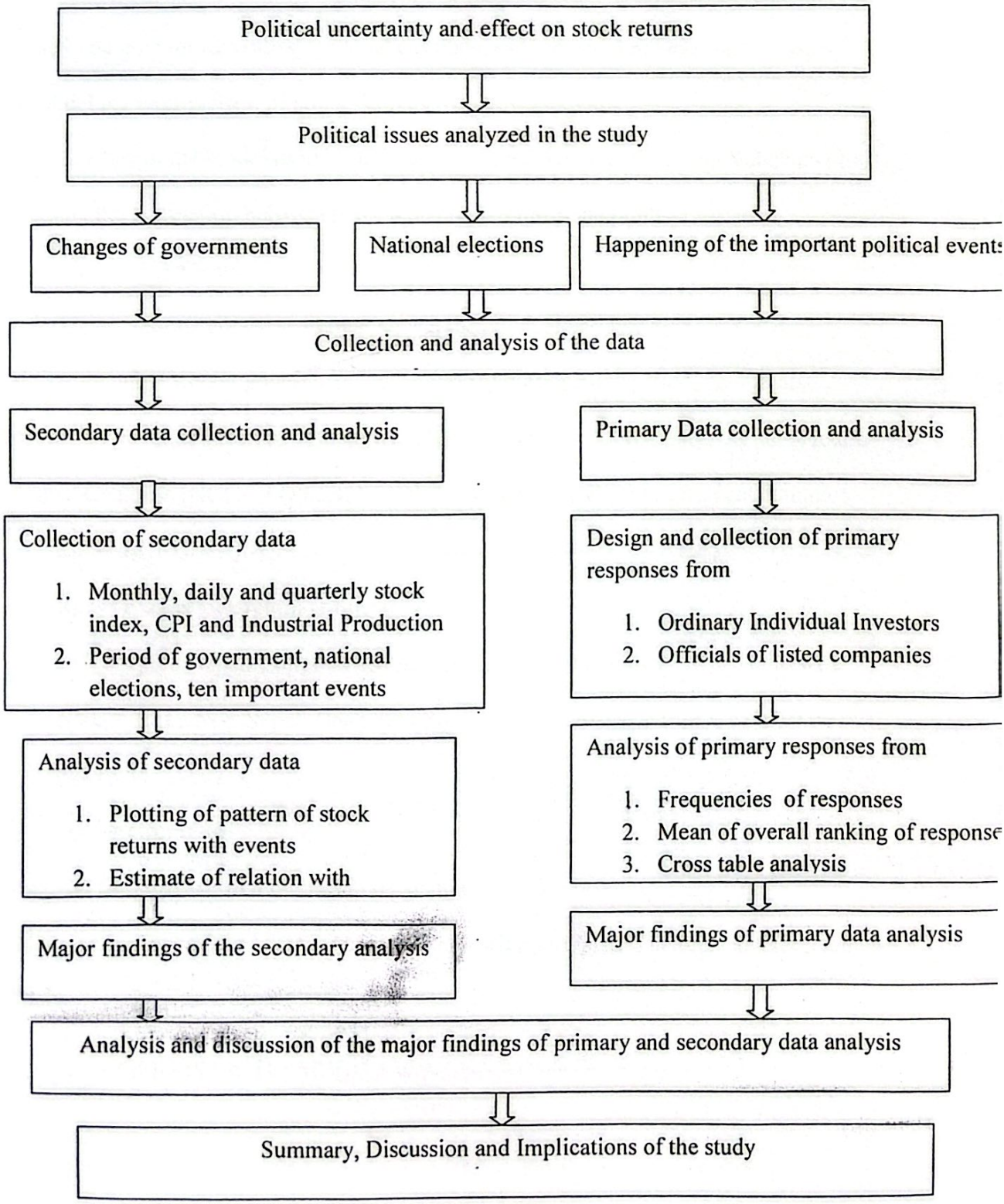
Methods of Analysis

A number of analytical tools were used to present and explain the pattern of movement of stock indices with respect to political events. Graphical presentation clearly showed a pattern of movement of stock indices with time and events. The event study method with constant return was used to see the effect of particular event on stock return of individual industry. The analysis of variance (F test) was carried out to test the statistical significance of two variances before and after the event. This test was used to check the difference of stock returns during 21 trading days before and after happening of important political events. In order to analyze the effect of change in government leadership comparison of mean and standard deviation of the stock returns was done. The monthly NEPSE index was analyzed to see the effect of particular government and that of national election on the stock index. Regression models were used to estimate the relation between stock return, stock volatility and industrial production; stock return and ruling governments; stock return and before/after national elections. The SPSS 16 software was used to analyze the data and run regression models.

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Figure 3.1

Framework of Analysis of Study



Source: Researcher's own summary

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The Models

Following regression models were used to find the relation between stock return, stock volatility and government ruling, national elections, and industrial production.

The model for comparison of stock returns with governments

The functional model used in this study was used by Santa-Clara and Valkanov (2003) to measure the correlation between (excess and real) returns and political variables.

$R_{t+1} = \alpha + \beta \pi_t + u_{t+1}$

Where, returns are denoted by R_{t+1} and the political variable by π_t.

Although different governments were formed during study period, but Nepali Congress led government were in majority. Therefore, this model compares the stock return on Nepali Congress (NC) and Others, Non Nepali Congress (NNC) government dummies:

$R_{t+1} = \alpha_1 NNC_t + \alpha_2 NC_t + u_{t+1}$ ---------- (1)

R_{t+1} = Excess tock return at time t;

NC_t = 1, if a Nepali Congress government is in office at time t, NC_t =0 otherwise.

NNC = 1, if a Non Nepali Congress government is in office at time t, NNC_t = 0 otherwise

u_{t+1} = error term

The model for stock return on national election

The following regression model was used to find stock return month before and after national elections.

$R_{t+1} = \alpha_1 MD(j)_t + \alpha_2 [1 - MD(j)_t] + u_{t+1}$ ---------- *(2)*

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R_{t+1} = Excess stock return; MD $(j)_t$ = 1 in the period from j months prior to an election, and 0 otherwise, j = 0, 1, 3, 6. This regression tests the hypothesis that a difference in returns is observed prior to elections.

The models for stock return and output

The following two basic models were used to find out how current and lagged changes in stock volatility (SD), stock prices (S) and other variables like consumer price index (CPI) can explain changes in output given by changes in industrial production index (IP).

These models were used by Pindyck (1991a) in the United States. Similar model was used by Bittlingmayer (1998) to study the effect of stock volatility and political uncertainty on output for Germany during 1880-1940.

$$In(IP_t)-In(IP_{t-1}) = a + b_1[In(SD_t)-In(SD_{t-1})] + b_2[In(SD_{t-1})-In(SD_{t-2})] + b_3[In(S_t)-In(S_{t-1})] + e_t$$

$$In(IP_t)-In(IP_{t-1}) = a + b_1[In(SD_t)-In(SD_{t-1})] + b_2[In(SD_{t-1})-In(SD_{t-2})] + b_3[In(S_t)-In(S_{t-1})] + b_4 CPI + e_t$$

In this study due to data constraint in stock volatility, two independents variable on stock volatility was considered as only one independent variable, and two dummies are added in the model , one D_1 = 0, 1 to compare the effect of the volatility before and after the signing of comprehensive peace agreement. Another D_2 = 0, 1 for the positive and negative volatility therefore, the original model was adopted as under;

$$In\ (Ipt)-In(Ipt-1) = b_0+b_1*\{In\ (St)-In(St-1)\} +b_2*\ \{In\ (SDt)-In(SDt-1)\} + b_3*D_1 + b_4*\ D_1*\{In\ (St)-In(St-1\}) + b_5*D1*\ In\ \{(SDt)-In(SDt-1)\} + b_6*D_2 + b_7*CPI + et \text{ - - - - - - - - - - - - (3)}$$

In (IPt) = log of the industrial production index for current quarter t.

In (SDt) = log of the standard deviation of the daily returns of NEPSE for quarter t.

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In St = the quarterly stock price in quarter t.

In (St) = log of the stock prices at quarter end i.e. closing price.

D_1 = Dummy for comprehensive peace agreement of signed (November 6, 2006)

$D_1 = 0$ before CPI and D1 = 1 for after CPI

D_2 = Dummy for negative volatility, $D_2 = 0$ for positive volatility, $D_2 = -1$ for negative volatility.

CPI = quarterly consumer price index. e_t = error term.

Analysis of Major Political Events

Ten most important political events that have happened in the study period were analyzed by using two standard methods of analysis namely: Event Study Method and Analysis of Variance (F test).

Event study analysis

Event study analysis is a branch of econometrics which attempts to measure the effects of economic events on the value of firms by examining stock market data. Provided that share prices reflect the underlying economic values of assets, changes in equity values properly capture expected changes in the economic profitability of the firm. This requires one to accept the hypothesis that stock markets are efficient and that prices reflect all publicly available information relevant to the prospects of the firm. Thus, the effects of an event are reflected almost immediately in asset prices. This immediate reaction makes any link easier to establish than examining, profitability, which might require months or years of observation before the effects of the event were fully felt.

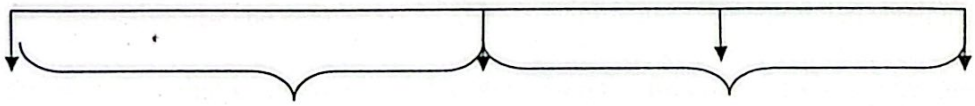
Event studies were widely used in finance to assess the effects of an event on the value of a firm. They have a long history, dating back to Dolley (1933) who examined the effects of

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stock-splits on share prices. Studies by Ball and Brown (1968) and Fama, Fisher, Jensen and Roll (1969) introduced the methodology that is essentially used today. Event studies concerning mergers tend to focus on the effect of the merger announcement on shareholder value both in the target firm and in the bidder. Therefore, it is good to use event study methodology to check effect of some of the important political events on stock returns in Nepali stock market.

The estimated period starts 200 days before the announcement date and ends 21 days before the announcement date (or day t = - 200 to days t = -21). The estimated parameters and the realized returns on the NEPSE market index have been used to predict normal returns before and after the event period. The period can be classified into two separate categories. The first category of periods covers the estimation window (-200, -21 days), second the event window -21 days to +21 days.

t = -200days t = -21days t = 0 day t = +21 days



Estimation window Event window

Estimated parameters using data in estimation window, $\check{R}_i$ and σ_e from the constant mean model.

Aggregate abnormal returns: CAR_i (T1-T2) = $\sum_{t=T1}^{T2}$ ARit

Where R_{it} and R_t are the period-t returns on instrument i and on the market portfolio respectively. A testing framework needs to be defined for any abnormal returns calculated,

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including the definition of the null hypothesis and techniques for aggregating the results over time and across individual firms.

$CARi = \Sigma ARit$

Inferences about the CAR can be drawn using a test statistic, t, where

$t = CARi/(\sigma i/\sqrt{n})$

σi is the standard error of the distribution and n is the number of days in the event window.

ANOVA test (F-test)

In order to test for the significance in difference of the two variances before and after 21 trading days happening of an event, the analysis of variance (F-test) was carried out. The analysis of variance of the daily stock was carried out for the 10 major political events, 3 national elections, and for 15 different government changes. Mean and standard deviation comparison was done for this purpose.

An F-test was used to test whether the standard deviations of two populations are equal. This test can be a two-tailed test or a one-tailed test. The two-tailed version tests against the alternative that the standard deviations are not equal. The one-tailed version only tests in one direction, that is, the standard deviation from the first population is either greater than or less than (but not both) the second population standard deviation. The choice is determined by the problem. In this study, two variances, before and after 21 days are compared to compute the F value, so it is one way ANOVA test (Ruben & Ruben, 2001, pp 616).

Test Statistic: $F = S^2_1 / S^2_2$

Where S^2_1 and S^2_2 are sample variances. The more this ratio deviates from 1, the stronger the evidence for unequal population variances.

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Analysis of Primary Data

For the primary data, the responses of the individual investors and the officials of the listed companies were collected. Individual investors of different age groups, educational qualification, years of experience in the stock market were selected. Officials of the listed companies were selected and contacted personally for their responses. Responses of individual investors and officials of the listed companies were analyzed to draw some meaningful conclusions. First analysis was done on the profile of the respondents, i.e. average age, profession, qualification and years of experience in the stock market.

The analysis included the presentation and explanation of particular political event and its effect on the stock market by frequency tables. The analysis was focused to find out the perception of the investor on political events, national election, and change in government. As the individual investor and the officials of the listed companies would have different perceptions or experiences on the issues, the responses of the two separate groups were analyzed and compared. In order to compare the responses, various statistics like mean responses, mean score and overall rank of the options were carried out. Cross tabulation analyses were carried out to compare responses of two groups of respondents on the variables like years of experience, level of education, industry group to main political events.

Limitations of the Study

This study aims to analyze the effect of political uncertainty on the stock returns, but all the aspects of political uncertainty could not be covered. Only three aspects of political uncertainty: change in governments, national elections and happening of important political events were analyzed. This study assumes that the effect on the stock returns is due to the political uncertainty events only which can be challenged because a number of other exogenous

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variables may have effect on the stock returns. It may also be noted that monthly data from 1994 to 2010 are used whereas daily NEPSE indices and sub-sector indices are used for the period 2003-2010 only, due to limited data availability for the period before 2003. Out of the nine industry indices, the indices of hydropower are only available for last four years, so direct comparisons with other indices have its own limitation. Quarterly data for the industrial production indices, NEPSE indices, consumer prices are used as annual data were not sufficiently available to run the regression model on annual data, which limited the use of full fledge model used by Pindyck (1991a).

- Only closing prices of the share indices are used as representative prices for the period, although there are studies using different prices such as bid price ask price, average of bid and ask price, transaction price etc. This is because in the context of Nepal, other than closing price are not available in the chronological order. This study aims at analyzing the perception of the individual investors and officials of listed companies but it is confined to measure perception of the investors on the effect of ten political events on stock prices.

Mostly closed-ended questions were used which might had limitations on the choices of the options to the respondents. The study surveyed the investors in the Kathmandu valley only; this is because the stock market activities and head offices of the listed companies are centered in the capital and country's only one stock exchange also situated in Kathmandu. The selection of the respondents was done on convenient basis which may not be the best approach for sample selection. There also can be a non- response bias, as the response rate was low and the results may largely reflect the responses of the investors who like to respond and may not have the proper experience of stock market.

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CHAPTER IV

RESULTS OF SECONDARY DATA ANALYSIS

This chapter is devoted to analyze the effect of political uncertainty on the stock market returns in Nepal. The analysis is divided into four sections. The first section analyzes relation between the different governments and stock returns during the study period (1994-2010). Fifteen different governments were formed in the period and the study analyses the weighted return of NEPSE during these governments. The daily indices, of different sub-sector (industries) are also analyzed from 2003 to 2010.

In the second section, the relation of stock returns with national election was the issue of investigation. The return on NEPSE index was monitored from nine months before to nine months after the election. The analysis is based mainly on monthly data of NEPSE index. The third section brings the analysis of the effect of ten most important political events on the stock returns. Event study method was used to analyze the effect of national political events on stock return. Analysis of variances ANOVA *(F test)* was also used to test the significant difference in the return 21 days before and after the date of happening of the events. Daily indices of different industries were used in analyzing these events. The last section analyzed the relation between industrial production, volatility of stock return and inflation using the quarterly indices of these variables. A number of statistical tools and regression models were used to analyze various issues raised in the study to bring meaningful findings. At the end, a concluding remark is prepared based on the analysis and findings of the secondary data analysis.

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Change of Governments and Stock Returns

Governments formed during study period

In the democratic system, different parties participate in election with intent to implement their policies their future policies for economic development and social justice, should they win. The economic development policies also include the policies related to stock market. Different governments believe to have different policies for different industry groups, which affect returns differently for different industries. This section analyses the relationship between stock returns under different party governments led by different prime ministers. Different political parties in power try to stimulate the economy before elections to enhance their election prospects to myopic electorate (Nordhaus, 1975). Partisan theories (Hibbs, 1977) stated that the parties should control the instruments according to different objective functions, implying that the instruments and the economy should behave differently.

In the study period (1994 – 2010) altogether fifteen governments were formed, out of which seven were led by Nepal Congress Party (NC), four led by Rastria Prajatantra Party (RPP), two led by United Marxist Leninist Party (UML) and one each led by King Gyanendra (King) and by Maoist Party (MP). Though most of the governments were formed as different parties' coalition but led by leader of the main party, the party of the prime minister is considered as ruling party for this study. Table 4.1 presents the details of the different governments formed in the study period.

During this study period, NC was predominantly in ruling followed by RPP. The other parties have ruled for shorter periods. Though the returns on stock may have been affected by various factors, but in this study, it is attributed grossly to three main aspects of political

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uncertainty: frequent change in governments, national elections and happening of important political events.

Table 4.1

Governments formed during study period

S. No.	Prime minister	Party	Duration of ruling	Short form used
1	Man Mohan Adhikari	UML	30 Nov 1994 - 12 Sep 1995	UML-MMA
2	Sher Bahadur Deuba	NC	2 Sep 1995 - 12 Mar 1997	NC-SBD
3	Lokendra Bahadur Chand	RPP	12 Mar 1997 - 7 Oct 1997	RPP-LBC
4	Surya Bahadur Thapa	RPP	7 Oct 1997 - 15 Apr 1998	RPP-SBT
5	Girija Prasad Koirala	NC	15 Apr 1998 - 31 May 1999	NC-GPK
6	Krishna Prasad Bhattarai	NC	31 May 1999 - 22 Mar 2000	NC-KPB
7	Girija Prasad Koirala	NC	22 Mar 2000 - 26 Jul 2001	NC-GPK
8	Sher Bahadur Deuba	NC	26 Jul 2001 - 4 Oct 2002	NC-SBD
9	Lokendra Bahadur Chand	RPP	11 Oct 2002 - 4 Jun 2003	PRR-LBC
10	Surya Bahadur Thapa	RPP	4 Jun 2003 - 3 Jun 2004	RPP-SBT
11	Sher Bahadur Deuba	NC	3 Jun 2004 - 1 Feb 2005	NC-SBD
12	King Gyanendra's rule	King	1 Feb 2005 - 30 Apr 2006	King
13	Girija Prasad Koirala	NC	30 Apr 2006 - 18 Aug 2008	NC-GPK
14	Pushpa Kamal Dahal	Maoist	18 Aug 2008 - 25 May 2009	MB-PKD
15	Madhav Kumar Nepal	UML	25 May 2009 – May 20, 2010	UML-MKN

Monthly stock return with governments

The following section analyses monthly NEPSE index to see performance of stock market during government of different political parties and prime minister. The monthly closing price of NEPSE return is taken as proxy for the stock returns. The average value of stock return and percentage change in excess return (excess return volatility) are computed, for different regime governments. Table 4.2 presents term period of different government and average value of the stock returns during their tenure.

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Table 4.2

Average stock returns and excess return volatility during different governments

S.No	Party and Prime minister	Average value of the NEPSE	Average Excess Returns in percent
1	UML-MMA (33.11.1994 - 12.09.1995)	196.66	5.33
2	NC-SBD (12.09.1995 – 12.03.1997)	190.25	-1.69
3	RPP-LBC (12.03.1997 – 7.10.1998)	175.44	-1.05
4	RPP-SBT (7.10.1998 - 15.04.1998)	171.45	-1.43
5	NC-GPK (15.04.1998 - 31.05.1999)	175.49	1.90
6	NC-KPB (31.05.1999 - 22.03.2000)	252.40	8.76
7	NC-GPK (22.03.2000 - 26.07.2001)	396.46	0.58
8	NC-SBD (26.07.2001 – 04.11.2002)	249.29	-2.19
9	RPP-LBC (11.10.2002 - 04.06.2003)	211.95	0.38
10	RPP-SBT (04.06.2003 -03.06.2004)	205.23	1.52
11	NC-SBD (3.06.2004 - 1.02.2005)	234.10	6.69
12	King (1.02.2005 – 30.04.2006)	295.92	1.51
13	NC-GPK (01.02.2005 – 18.08.2008	763.38	4.52
14	Maoist-PKD (18.08.2008 -25.05.2009)	751.5	-2.18
15	UML-MKN (25.05.2009 – 30.06.2010)	567.3	-3.03

Note : The table uses the short form of the political party and their prime ministers as - UML-MMA: United Marxist Leninist and Man Mohan Adhikari, RPP-SBT: Rastriya Prajatatra Party and Surya Bahadur Thapa, RPP-LBC: Rastriya Prajatatra Party and Lokendra Bahadur Chanda, NC-SBD: Nepali Congress Party and Sher Bahadur Thapa, King: Direct Ruling of King Gyanendra, NC-GKP: Nepali Congress and Girija Prasad Koirala, Maoist-PKD: Maoist Party and Puspa Kamal Dahal, UML-MKN: United Marxist Leninist and Madhav Kumar Nepal.

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Starting from ruling of UML-MMA, the stock returns continuously decreased till NC-KPB, and then it started to go up and reached its first peak during of NC-GPK term. Afterwards, the stock return kept on decreasing during NC-SBD, RPP-LBC, RPP-SBT governments, and started to increase with the governments of NC-SBD, King and reached to highest value of NRs 818.51 at the end of NC-GPK government. Again after MP- PKD government, it started to slide down and the change in excess return turned negative (-2.18) which continued in UML-MKN government also.

The results show that UML-MMA, NC-KPB, NC-GPK governments had positive average excess returns whereas during the governments of NC-SBD, RPP-LBC, RPP-SBT, MB-PKD and UML-MKN excess returns become negative. It is found that Nepali Congress led governments, in general, have positive returns in Nepalese stock market.

The average values of the monthly stock returns are plotted in the Figure 4.1 against different parties' government from 1994 to 2010. The graph clearly shows two peaks during the Nepali Congress Party government under the prime minister-ship of late Mr. Girija Prasad Koirala. In time of conflict between political parties and King, a great deal of political uncertainty prevailed in the country which affected the stock market. And, after King Gyanendra stepped down, the stock market went up sharply perhaps due to assurance to the market that the political uncertainty was over.

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Figure 4.1

Average value of NEPSE under different governments

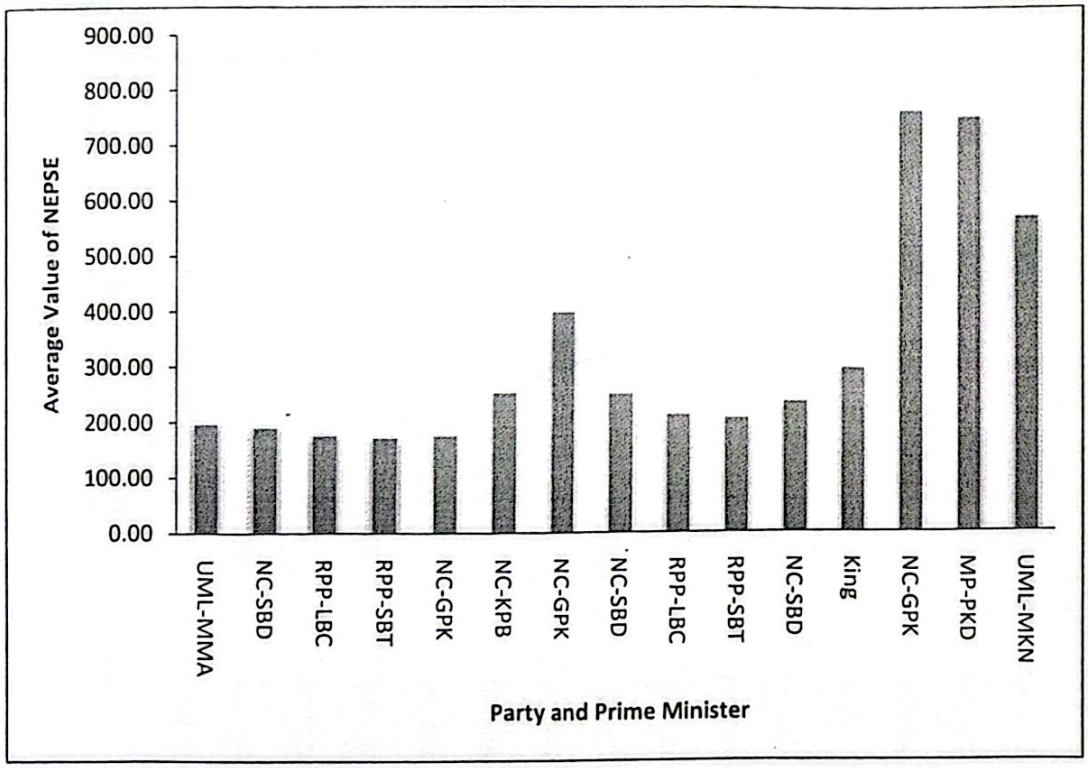


Figure 4.2 shows excess return volatility for different governments of different parties. It gives the percentage change in monthly excess return in the period (1994- 2010) of different governments. The values shown above and below the X-axis of the chart are both positive and negative as indicated by the bars.

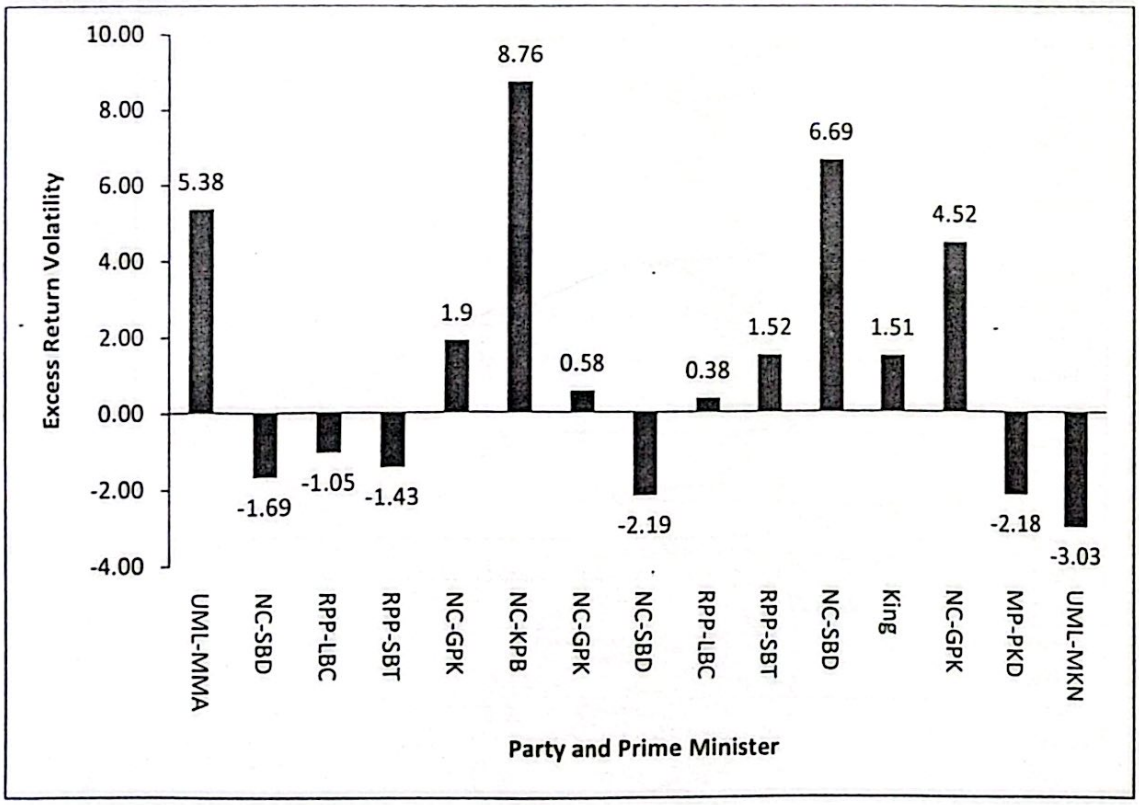
Whereas, during the ruling of MP-PKD and UML-MKN excess returns were negative. Particular the period of ruling of these governments was time high of political instability especially in the issues of settlement of peace process and drafting of new constitution. The fluctuation is more weighted on the positive side than on the negative side, which indicates that volatility is high when stock market is in bullish. The bar diagram shows that during the ruling of UML-MMA, NC-KPB, third NC-SBD and NC-GPK the excess return is

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high in the positive side. The ruling periods of these governments were fairly long and investors' may had perceived these governments relatively more stable than the others.

Figure 4.2

Excess return volatility across the ruling period of different governments

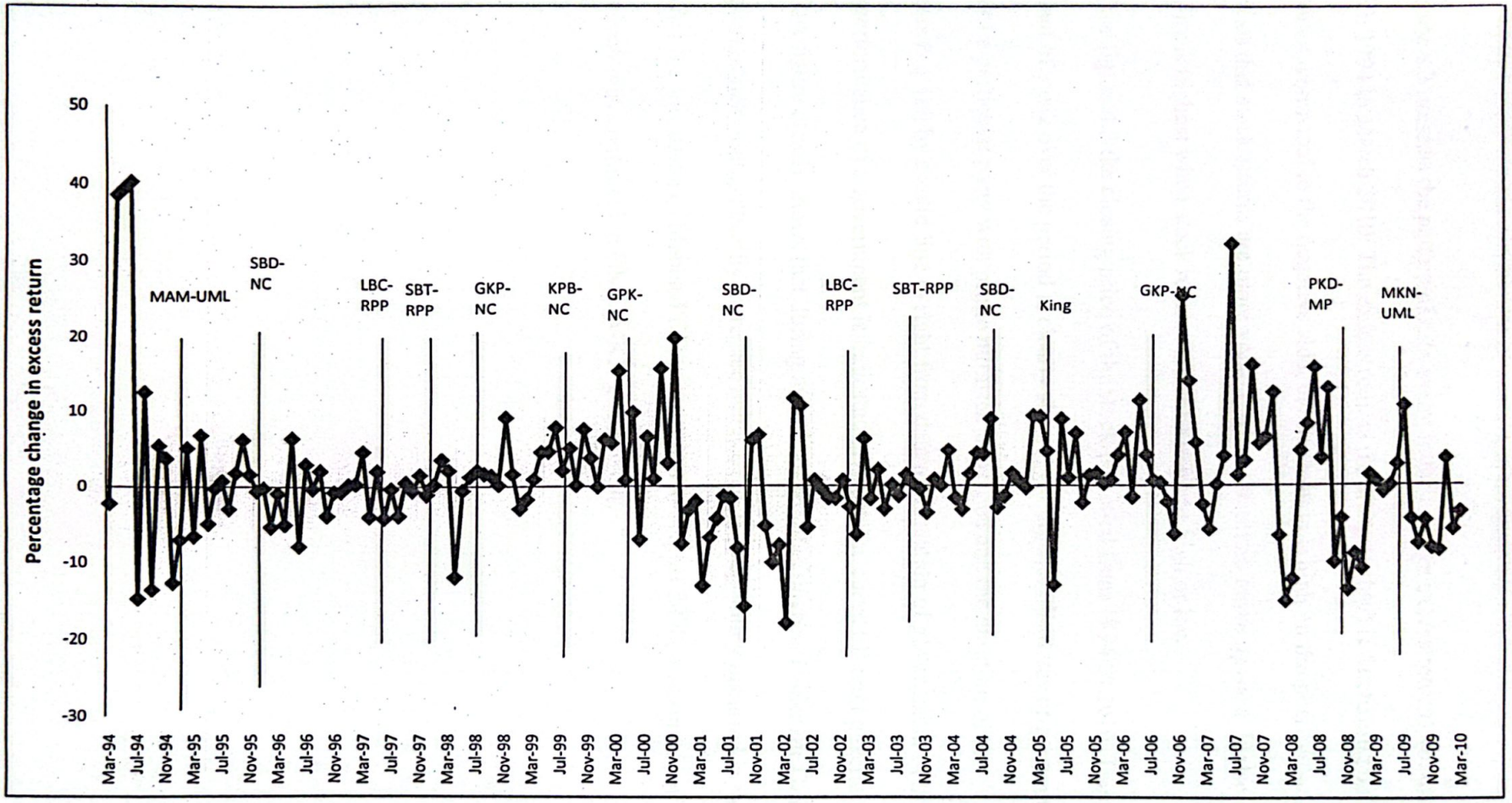


In the ruling of MP-PKD this government brought policies like voluntary declaration of taxes, increase in capital gain taxes and need of tax declaration in order to purchase stock and other assets of high value. Hence, it is found that different governments had different responses to excess return which can be attributed political stability at the time of ruling and to policies of the governments toward the stock market and political situation of the country during the ruling period of the particular governments.

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Figure 4.3

Pattern of movement of excess return volatility with governments



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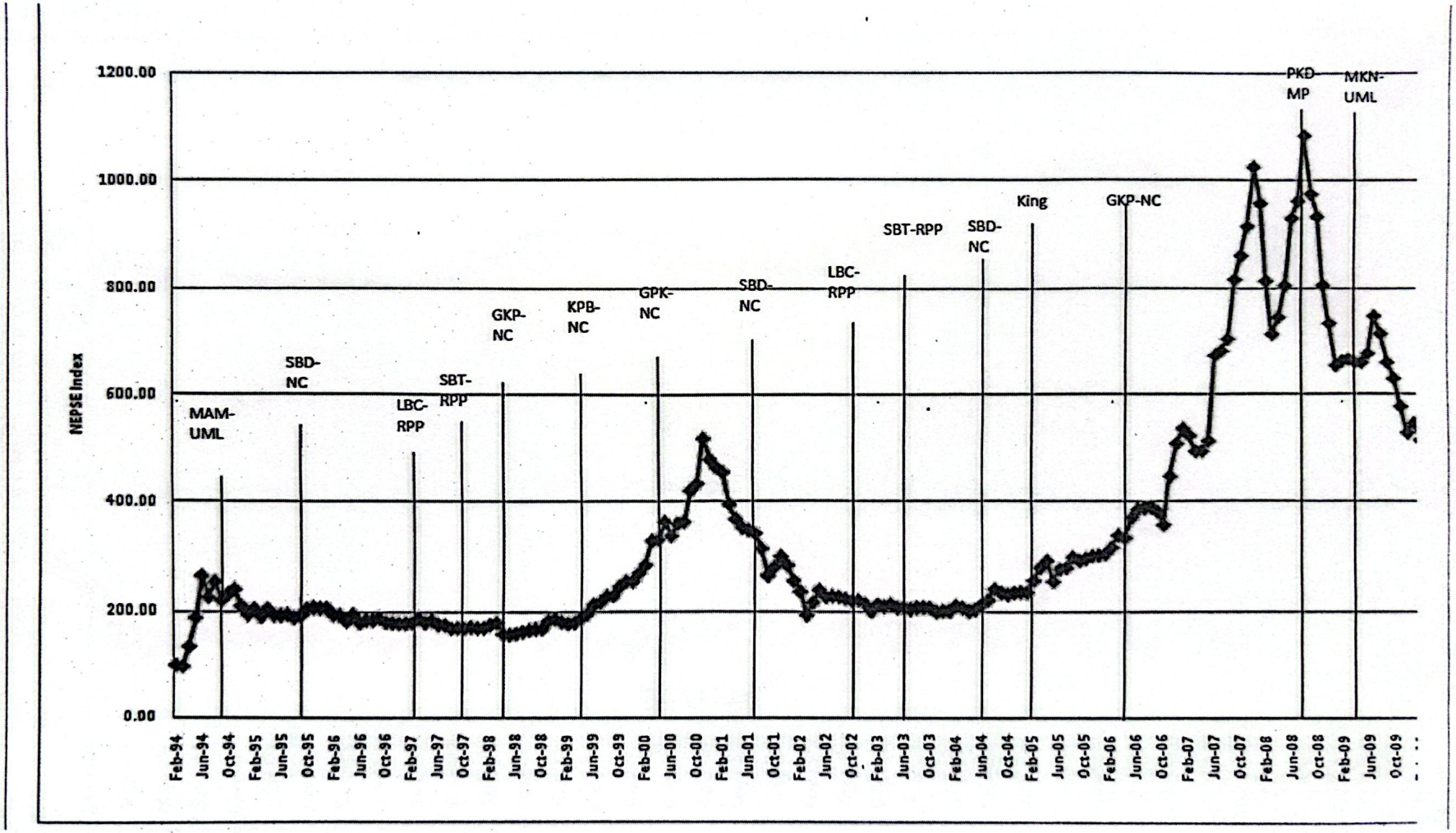
Figure 4.3 presents the pattern of movement in the average excess returns volatility from March 1994 to March 2010. The excess returns (return volatility) is fluctuating on both sides, however, compared to the negative side, the fluctuation is high on the positive side. This indicates that stock returns are more volatile when the prices move upward. It also shows that volatility is highest when stock returns are at its extreme high or low.

In the figure 4.3 the closing price of the stock is plotted from 1994 to 2010. The pattern of movement of stock over the period is clearly shown. On the plot, the dates of government formation of a particular party with prime minister is inserted and the duration of the governments is given by a solid line to right from date of formation of government of that party. Thus, the performance of a government is indicated given by the curve till next governmnet is formed. This figure clearly shows that during the rule of Nepali Congress leader Mr Girija Prasad Koirala stock returns steadily increased and peaked. A deep valley occurred in the stock returns. After the formation of Maoist-PKD government in August 2008, a sharp fall of stock occurred which also continued to UML-MKN government.

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Figure 4.4

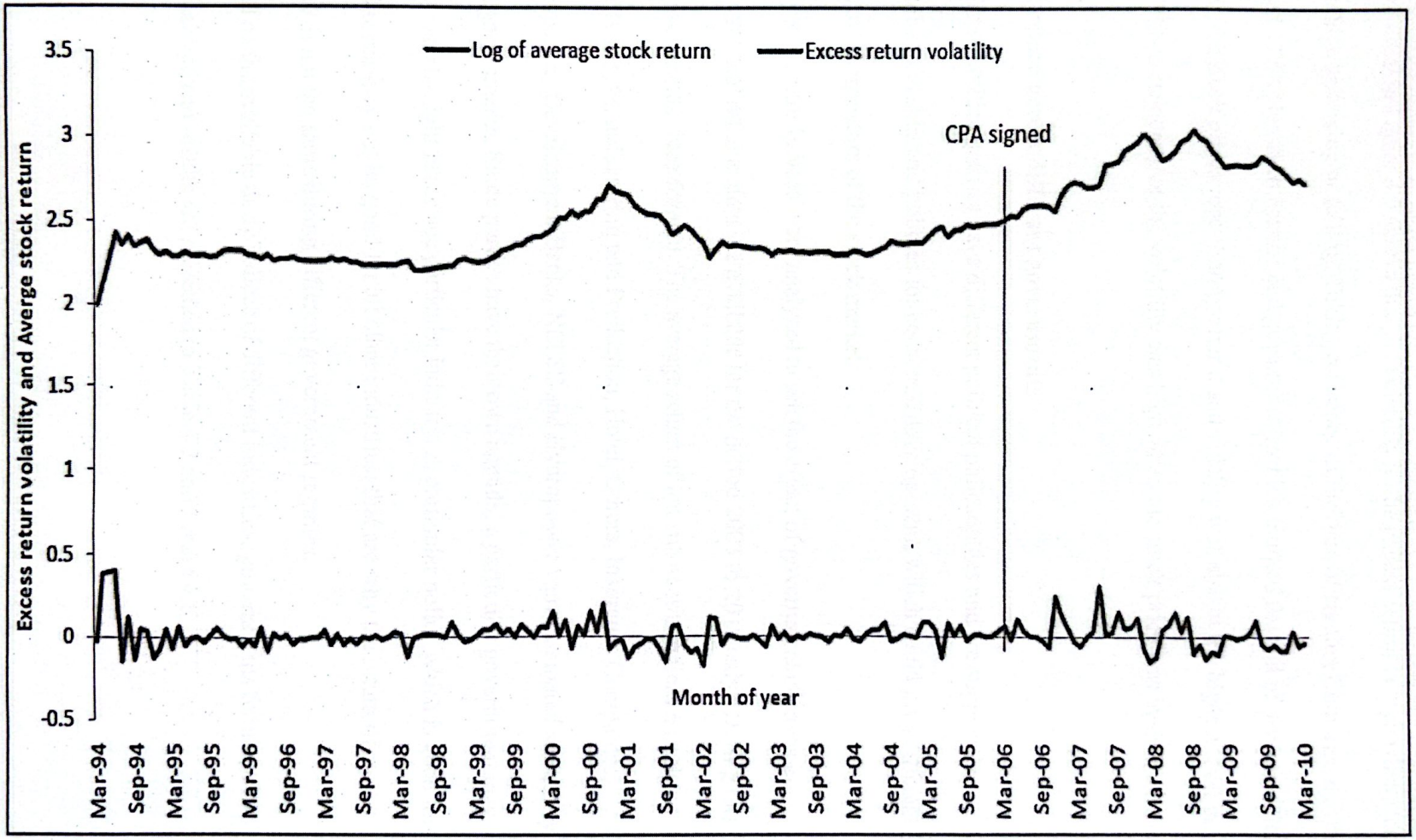
Pattern of movement of stock Price volatility for different governments



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Figure 4.5

Combined pattern of movement of average stock return and excess return volatility



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The pattern in Figure 4.5 shows that the volatility in the excess return is high when stock prices are in high and rising or falling. Taking reference of the date of signing Comprehensive Peace Accord (CPA) between Maoist and government, which marked the end of ten years' long people's war, the stock prices rose sharply after it and volality was also at the highest level in this period. This concludes that the volatility was high when the stock price was in sharp rise or fall.

Daily stock return across different governments

Different political parties have different political philosophies and are supposed to have different approaches and policies for economic development, which could give different impressions to the investors of the stock market.

Daily sub-sector indices were analyzed to see the effect of government changes in indices and valid and reliable data are available for the period 2003 to 2010 only. During this period six governments were formed. The average return of ten sub-sector indices namely Commercial Banks, Manufacturing and Production, Hotel, Others, Insurance Companies, Finance Companies, Development Banks, NEPSE and Hydropower were computed separately for different governments. Since parties have their own agenda, a particular government may have a policy which might favor one particular industry. A particular policy which is good for the financial sector may not be good for all other industries; that are why the return of an industry stock is not the same during different government regimes.

Based on the available daily indices of different industries, governments formed after 2003 were analyzed and results are presented in Table 4.3 and Figure 4.6.

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Table 4.3

Daily stock returns across the ruling of different governments

Party and Prime minister	Commercial Bank	Manufacturing and production	Hotel	Other sectors	Trading	Insurance companies	Finance Companies	Development Bank	NEPSE	Hydro power
RPP-SBT	204.53	258.25	185.31	135.96	96.11	237.93	198.04	227.02	206.30	
NC-SBD	248.00	264.82	185.87	154.33	97.84	235.68	205.77	197.97	234.97	
King	321.53	282.30	178.22	333.76	127.26	310.74	230.65	235.18	297.15	
NC-GPK	838.83	372.88	328.14	801.01	169.70	736.91	801.28	993.64	800.57	1233.14
MP-PKD	763.14	428.38	360.42	741.87	214.21	726.44	943.08	1090.04	768.46	964.19
UML-MKN	573.72	436.47	366.87	608.55	271.02	601.30	587.88	619.52	581.42	821.93

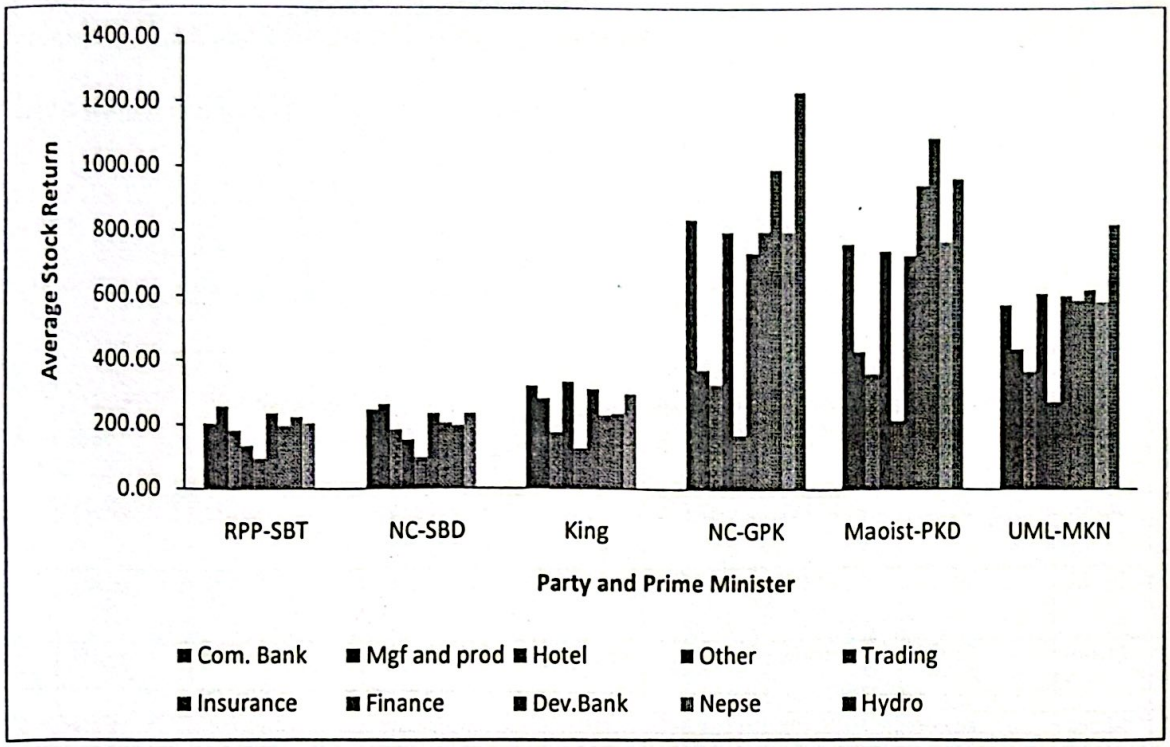
Note: RPP-SBT: Rastriya Prajatatra Party and Surya Bahadur Thapa, NC-SBD: Nepali Congress Party and Sher Bahadur Thapa, King: Direct Ruling of King Ganedara, NC-GKP: Nepali Congress and Girija Prasad Koirala, MP-PKD: Maoist Party and Puspa Kamal Dahal, UML-MKN: United Marxist Leninist and Madhav Kumar Nepal.

Out of ten indices five were highest during the rules of Nepali Congress Party led by Mr. Girija Prasad Koirala. The indices belonged to Commercial Bank, Other, Insurance Companies, NEPSE and Hydropower.

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Figure 4.6

Daily stock return across different governments



Note: RPP-SBT: Rastriya Prajatatra Party and Surya Bahadur Thapa, NC-SBD: Nepali Congress Party and Sher Bahadur Thapa, King: Direct Ruling of King Ganedara, NC-GKP: Nepali Congress and Girija Prasad Koirala, Maoist-PKD: Maoist Party and Puspa Kamal Dahal, UML-MKN: United Marxist Leninist and Madhav Kumar Nepal. The color codes start from left to right, i.e. Commercial Banks at the left to Hydropower to the right.

The indices of Finance Company and Development Bank were highest during Maoist regime led by Mr. Pushpa Kamal Dahal. The indices for Manufacturing and Production, Hotel and Trading were highest during the UML regime's government coalition led by Mr. Madhav Kumar Nepal. Volatility of stock return under different governments is estimated by calculating the standard deviations of daily NEPSE index during the period of ruling of each party for individual industries like Commercial Banks, Manufacturing & Production etc. The high value of the standard deviation indicates that the stock returns volatility for that period

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was high. As presented in the Table 4.4, eight out of ten industries had highest volatility during Nepali Congress regime led by Mr. Girija Prasad Koirala, and two indices namely Commercial Bank and Others had having highest volatility during Maoist regime led by Mr. Pushpa Kamal Dahal.

Table 4.4

Volatility of stock return under different governments

Party and Prime minister	Commercial Bank	Manufacturing & production	Hotel	Others sector	Trading	Insurance companies	Finance Companies	Development Bank	NEPSE	Hydro power
RPP-SBT	204.53	258.25	185.31	135.96	96.11	237.93	198.04	227.02	206.30	
NC-SBD	248.00	264.82	185.87	154.33	97.84	235.68	205.77	197.97	234.97	
King	321.53	282.30	178.22	333.76	127.26	310.74	230.65	235.18	297.15	
NC-GPK	838.83	372.88	328.14	801.01	169.70	736.91	801.28	993.64	800.57	1233.14
MP-PKD	763.14	428.38	360.42	741.87	214.21	726.44	943.08	1090.04	768.46	964.19
UML-MKN	573.72	436.47	366.87	608.55	271.02	601.30	587.88	619.52	581.42	821.93

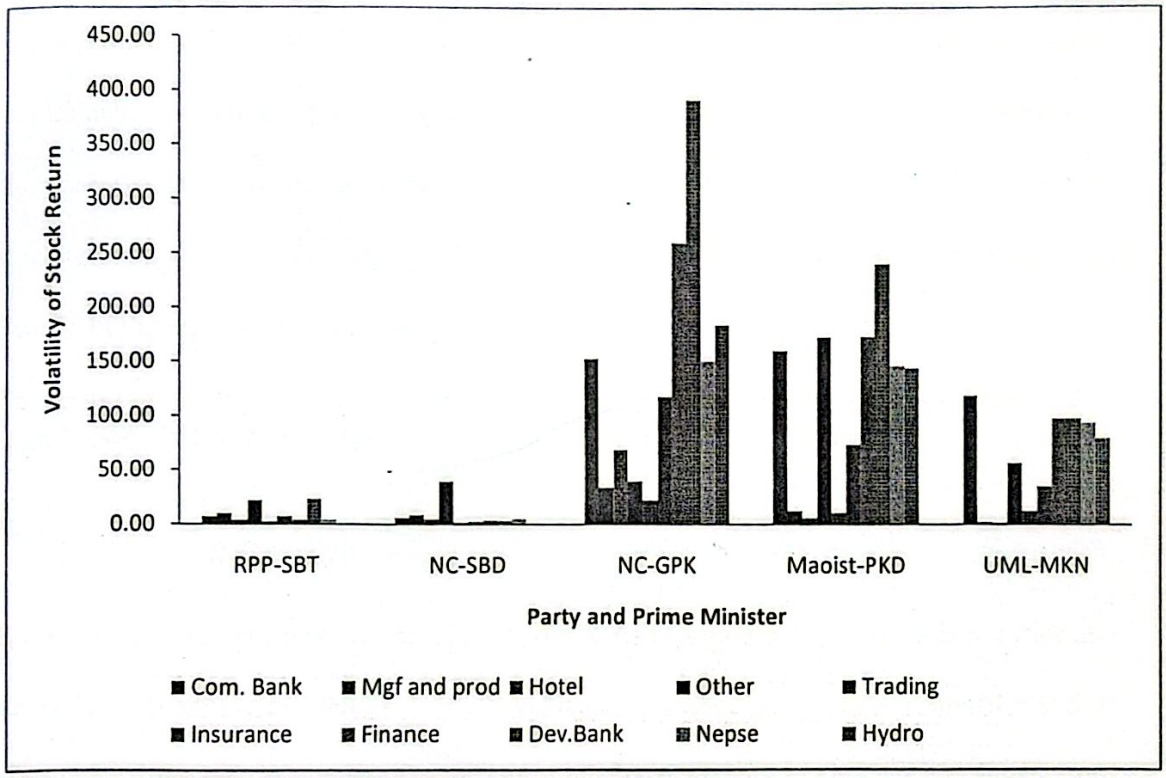
Note : RPP-SBT: Rastriya Prajatatra Party and Surya Bahadur Thapa, NC-SBD: Nepali Congress Party and Sher Bahadur Thapa, King: Direct Ruling of King Ganedara, NC-GKP: Nepali Congress and Girija Prasad Koirala, MP-PKD: Maoist Party and Puspa Kamal Dahal, UML-MKN: United Marxist Leninist and Madhav Kumar Nepal.

Thus, variations in the returns of stock prices of the most industries were high in the ruling of the Nepali Congress party under the leadership of prime minister Girija Prasad Koirala which is shown in Figure 4.7.

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Figure 4.7

Volatility of stock return during different governments



Note: The standard deviation of return of the individual industry sector is calculated for each of the government ruling period and plotted in the chart given. RPP-SBT: Rastriya Prajatatra Party and Surya Bahadur Thapa, NC-SBD: Nepali Congress Party and Sher Bahadur Thapa, King: Direct Ruling of King Ganedara, NC-GKP: Nepali Congress and Girija Prasad Koirala, Maoist-PKD: Maoist Party and Puspa Kamal Dahal, UML-MKN: United Marxist Leninist and Madhav Kumar Nepal. The color codes start from left to right, i.e. Commercial Banks at the left to Hydropower to the right.

Estimation of regression models

Regression models were used to estimate the relation between excess stock return and different government regimes. Fifteen different governments were formed in the study period, in which Nepali Congress led seven. Studies in the United States have documented the difference in stock returns under Republican and Democratic presidents, by Huang (1985), Hensel and

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Ziemba (1995), Jensen and John-son (1999). This is the first study to formally test the relation between political cycles and the stock returns in Nepal. In order to use the standard models which compared the returns in the democratic and republican ruling in the United States, the governments formed in the study period were grouped in two broad categories, one Nepali Congress (NC) and another Non Nepali Congress (NNC). Therefore, this model compared the stock return during Nepali Congress (NC) and Non Nepali Congress (NNC) governments ruling. Results of the regression model are given in Table 4.5.

The results are based on the time series data (monthly NEPSE index) of 194 observations from 1994 to 2010 by using linear regression model. The model is

$$R_{t+1} = \alpha 1 NNC_t + \alpha 2 NC_t + u_{t+1}, \quad \text{- (1)}$$

R_{t+1} = Excess tock return at time t; $NC_t = 1$, if a Nepali Congress government is in office at time t, $NC_t = 0$ otherwise. $NNC_t = 1$, if a Non Nepali Congress government is in office at time t, $NNC_t = 0$ otherwise, u_{t+1} = error term. This model tests the null hypothesis that stock return is constant during the tenure of NC and others Non NC (NNC) governments.

Table 4.5

Estimated relationship between stock return during NC and NNC ruling periods

Government Dummy	Coefficients	*t-value*	*p-value*	$\bar{R}^2$	F
NC	1.540	1.889	.060	0.012	0.025 (0.135)
NNC	-.674	-.715	.475		

The statistics given in Table 4.5 show that the coefficients, at the time of ruling of Nepali Congress (NC), are positive and significant at 6% level of significance. The coefficients show that the excess return at the time of NC ruling is higher by 1.54% compared

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to the average returns in the risk free asset. On the other hand, the coefficient of Non-Nepali Congress (NNC) is -0.674 and insignificant hence excess return was zero. This shows that, in general, the average performance of the stock market was good at the time of Nepali Congress rule relative to other that of other parties. However, the model estimated has poor fit as revealed by F statistic and coefficient of multiple determinations ($\bar{R}^2$).

These results can be compared to the finding of study by Santa-Clara and Valkanov (2003) which documented a 9% difference in monthly returns between Democrats and Republicans in for the AMEX, NYSE, and NASDAQ indexes from 1926 through 1998. Patel (2004) studied observed annual returns from 1969-2000 for the NYSE composite in addition to the industrial, transportation, utility, and financial sub-indexes and found that returns to the NYSE composite were 5% greater under Democrat administrations. Likewise they showed returns for industry (5.3%), financials (7.0%), transportation (7.2%), and utilities (10.3%) sub-indexes all higher for Democrats. Thus, finding and literature support that different parties have different returns in the stock markets.

In another set of analysis, the model is modified to run the regression for individual party governments and the results of the regression are presented in Table 4.6. The coefficient for Nepali Congress (NC) ruling is positive and significant at 6% level of significance. This means the excess return at the time of NC ruling was higher on average by 1.54% compared to risk free asset return. The coefficient for the UML dummy is -2.05 indicates that the return in period of UML ruling was less by 2.05% compared to risk free asset return, but the coefficient is not significant at 10% level of significance.

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The time series data (monthly NEPSE index) of 194 observations from 1994 to 2010 is used to estimate the relation between excess return in different party governments. The following regression model is

$$R_{t+1} = \alpha_1 NC_t + \alpha_2 UML_t + \alpha_3 RPP_t + \alpha_4 King_t + \alpha_5 MP_t + u_{t+1}, \quad \text{- - - - - - - - (2)}$$

R_{t+1} = Excess tock return at time t; for the corresponding government ruling period will have coefficient 1 and otherwise 0. For example, $NC_t = 1$, if a Nepali Congress government is in office at time t, $NC_t = 0$ otherwise. Similarly, $UML_t = 1$, in the ruling of UML, RPP =1 in the ruling of RPP, etc. u t+1 = error term. This model tests result of the null hypothesis that stock return is constant during the all governments. The

Table 4.6

Estimated relation between excess return during individual party governments

Government dummy	Coefficients	*t-value*	*p-value*	$\bar{R}^2$	F
NC	1.537	1.891	.060	0.042	1.666 (0.145)
UML	-2.051	-1.170	.243		
RPP	-.376	-.257	.797		
King	2.654	1.223	.223		
MP	-3.797	-1.355	.177		

The coefficients for other parties in government, UML, RPP, MP are all negative (MP having largest negative value) except for RPP which has positive value, however all estimates are insignificant. NC party in government was considered most favored by stock market. However, the model estimated has poor fit as revealed by F statistic and coefficient of multiple determinations ($\bar{R}^2$).

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Stock Returns with National Elections

During this study period, only three national elections took place in Nepal. First, in November 1994, in which, UML won the largest numbers of the seats in the parliament and formed a minority government led by Mr. Man Mohan Adhikari. The second parliament election was held in May 1999 and Nepali Congress won the election with absolute majority and NC government was formed under Mr. Krishna Prasad Bhattarai. The third election was the election of Constitution Assembly (CA) in which Nepal Communist Party Maoist won the largest number of seats and Mr. Pushpa Kamal Dahal became the first prime minister of Federal Republic of Nepal. The gap between the first two elections was only five years whereas it was almost ten years between the second and third elections.

Analysis of monthly NEPSE index before and after election

Elections by definition always open a period of political uncertainty, as the winner remains to be determined. In this regard, the impact of political events on the stock market stresses uncertainty over the policies that the next government will pursue. Since stock prices anticipate and capitalize policy changes, the analysis of the effects of the political events on stock market could indicate the economic importance of expected changes in economic policy. Li and Born (2006) has made an attempt to analyze the relationship between the presidential election uncertainty and common stock returns in the United States, showing the stock returns on the pre- and post election. They reported that the mean daily common stock return rises in the roughly three-month period before a US presidential election when the outcome of the election is uncertain. Similarly, the study provided weak evidence that the presidential election cycle is associated with higher return variability when outcome is uncertain. However, volatility is virtually identical to non-election periods when the outcome

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is not in doubt. This evidence is consistent with the hypothesis that investors see a causal link between political uncertainty and common stock returns. It indicates that political uncertainty is observed and priced in the equity market. This link between politics and stock market is found in an unbiased framework consistent with the market efficiency hypothesis.

Election forecasting also embraces techniques other than polling, one could make use of the fact that election outcomes tend to correlate with macroeconomic variables (Kramer, 1971). This correlation is observed because many voters assess economic conditions retrospectively and hold incumbents accountable for the efficacy of their policies. Fair (1978) formalized this intuition by deriving a model which links the share of two-party vote to such factors as GDP growth and inflation, and subsequent updates of his vote equation and provided forecasts for presidential elections (Fair 1982, 1988, 1996, 2002).

Riley and Luksetich (1980) used S&P 500 data from 1900-1976 to conduct an event study surrounding key election events. It is observed that; although the market responds favorably in the short-run to a Republican victory, investors showed no long-term political preference exist except possibly for the incumbent. Similarly, Santa-Clara and Valkanov (2003) looked at market reaction in the days following an election from 1926-1998 and concluded that the market did not price election outcomes.

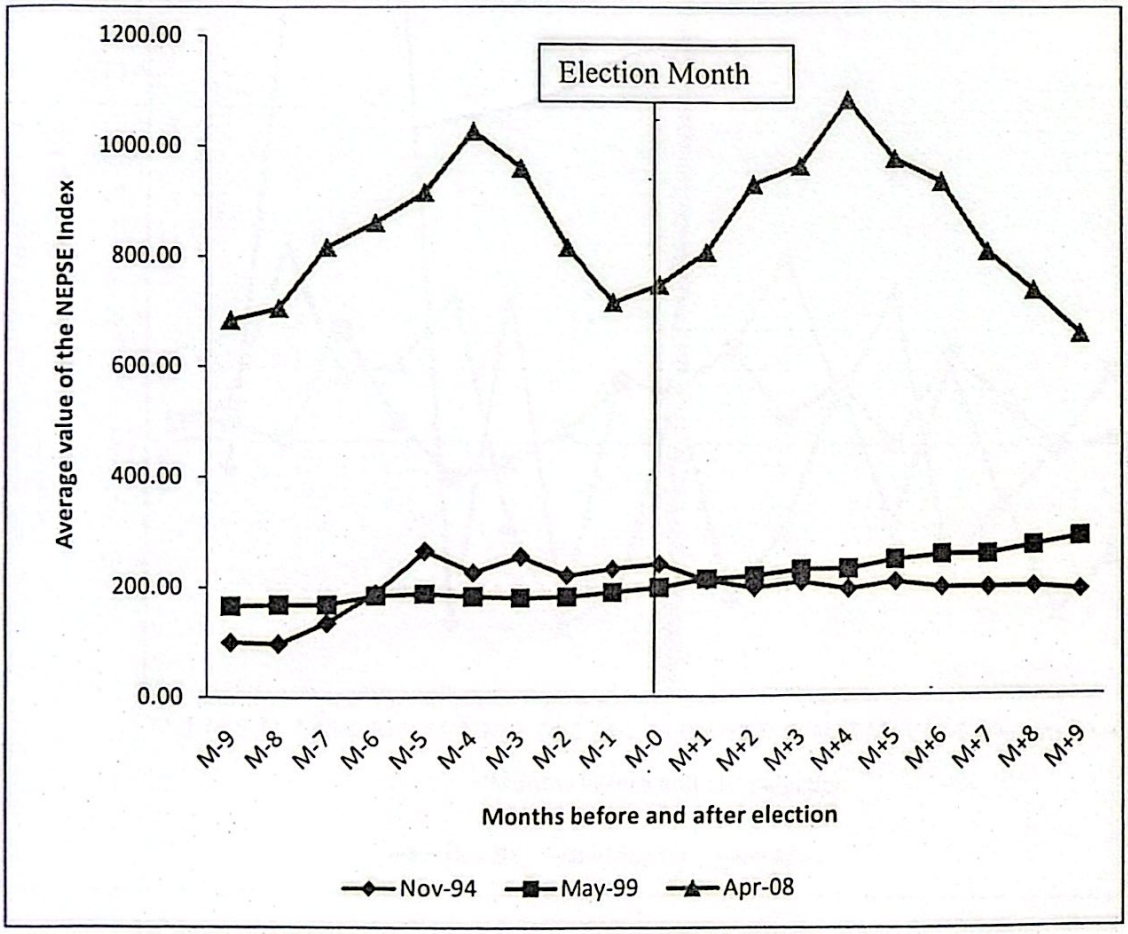
Analysis of monthly stock return is carried out to estimate the effect of election on stock return. Stock returns of nine months before and after the election month are plotted in the Figure 4.8, which shows the pattern of movement of stock prices. It is found that in CA election of 2008, the stock returns went down four months before the election and went up continuously up to four months after the election then it declined again. In the election of 1999, stock returns have not shown any significant changes before and after the election,

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however, the increase after election was little sharper than before election. In the election of 1994 the prices were on increasing trend before the election but they decreased slightly after the election. This means that three elections showed three different types of the results hence the effect of the national election has mixed effect and the effect of election was not conclusive.

Figure 4.8

Excess return with the before and after election



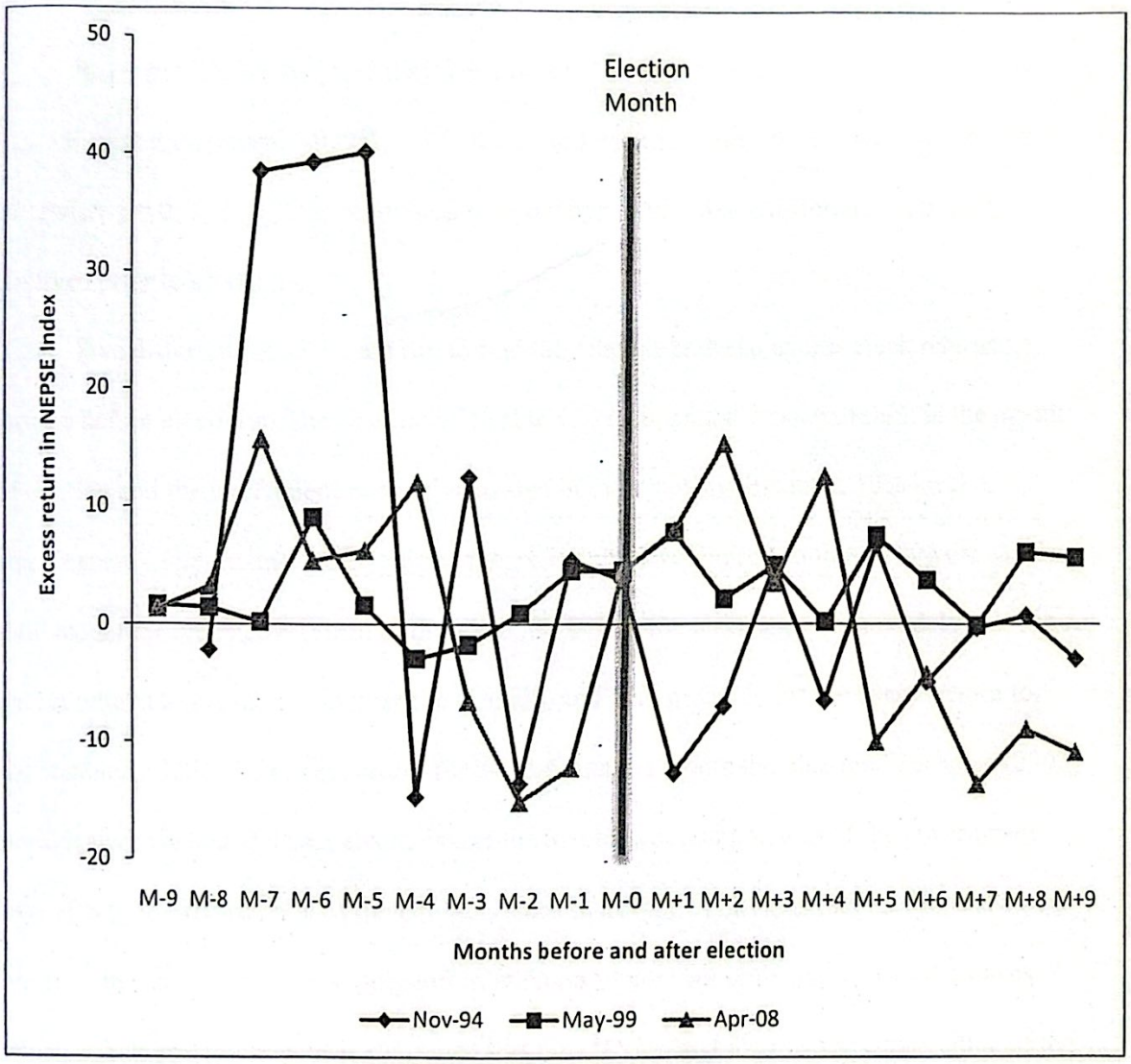
The Figure 4.9 shows that the stock return volatility was very high before election in 1994 compared to the two other elections whereas the volatility after elections are more or

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less similar. The excess return volatility is dominantly positive in the election of 1999 compared to other two elections.

Figure 4.9

Excess return volatility with election



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Estimation of relation between national election and stock returns

The following regression models were used to find the effect of approaching national elections on the stock returns. These models were used by Santa-Clara and Valanov (2003) in their study to estimate excess return of stock as the election approaches.

$$R_{t+1} = \alpha_1 MD(j)_t + \alpha_2 [1 - MD(j)_t] + u_{t+1}$$

R_{t+1} = Excess tock return; $MD(j)_t = 1$ in the period from j months prior to an election, and 0 otherwise, $j = 0, 1, 3, 6$. This regression tests the hypothesis that a difference in returns is observed prior to elections.

Five different models were run to find the relation between excess stock returns and months before elections. The first model (Table 4.7) estimated the excess return in the month of election and the coefficient is positive in sign but it is not significant at 10% level of significance. The second model relates the excess stock return one month before the election, third model for the excess return to three months before the election; fourth model related the excess returns to six months before the election, and fifth model is for the excess return for the combine relation of excess return for 0-1-3-6 months before the election. Vuchelen (2003) investigated whether Belgian elections and the ideological composition of the government may affect the performance of the Brussels stock market. It is obvious that elections and new governments are events that supply information on future economic and financial policies which affects stock return. It is suggested that the election and ideological composition of the government partners affect the common stock returns. Martinez and Santiso (2003) provided the additional evidence on the political event.

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In this study the model is modified or expressed in the different form to estimate the excess return in the election months, one month, three months, 6 months before and after election the modified model is

$$R_{t+1} = \alpha_1 Mo{+}{+} \alpha_2 Mb1 + \alpha_3 Mb3 + \alpha_4 Mb6 + u_{t+1}, \quad \text{- - - - - - - - - - - - - - - - (3)}$$

Mo is dummy for the month of election, Mb1, Mb3, Mb6 one month, three and 6months before election dummies. A separate regression for each month before election is run to estimate the effect in a particular month and a whole model is run to isolate the individual effects of all.

Table 4.7

Estimated relation between excess return before national election

Model	Months	M0	Mb1	Mb3	Mb6	F	$\bar{R}^2$
1	Coefficient	3.592				0.536	0.003
	t-value	0.732				0.465	
	p-value	0.465					
2	Coefficient		-2.494			0.508	0.003
	t-value		-0.713			0.477	
	p-value		0.477				
3	Coefficient			-4.167		2.777	0.015
	t-value			-1.666		0.097	
	p-value			0.097			
4	Coefficient				4.897	6.496	0.034
	t-value				2.549	0.12	
	p-value				0.012		
5	Coefficient	11.899	-2.975	-20.75	15.9050	11.113	0.195
	t-value	1.907	-0.551	-5.153	6.0840	0.0000	
	p-value	0.058	0.583	0	0.0000		

The signs of the coefficients for 3 and 1 month before the election are negative which indicates that as the election date comes closer, the excess returns remain negative. The coefficients for excess return three months before the election are high and significant at 10%

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significant level. On the other hand, the coefficient of the returns before 6 months of election are positive in sign and significant at 5% significant level which indicates that 6 months before the election, stock market are not really affected by the national election uncertainty. The fifth model estimates the relation of excess return for election 0-1-3-6 the coefficients of the combined model are in the same sign pattern as in the individual models. In the combined models, the coefficients are significant for six months and three months before election variables with positive and negative values respectively. This reinforces the findings as the election approaches the stock returns decreases. However, the model estimated has poor fit as revealed by F statistic and coefficient of multiple determinations ($\bar{R}^2$). Similarly, in order see the effect after election, five different models are run between excess returns and months after elections. The results are presented in the Table 4.8.

The model is slightly modified to estimate the excess return in the election months, one month, three months, and 6 months after election date.

$R_{t+1} = \alpha_1 Mo++ \alpha_2 Ma1 + \alpha_3 Ma3 + \alpha_4 Ma6 + u_{t+1,}$ - - - - - - - - - - - - - - (4)

Where, Mo month of election, Ma1, Ma3, Ma6 one month, three and six months after election dummies. A separate regression for each month after election is also run to estimate the effect in a particular month and a whole model is run to see the combined effects.

The first model estimates the excess return in the month of election, the coefficient are positive in sign which indicates that in the month of election the excess returns are positive. However, the coefficients and t statistics both are small and high p value indicates that it is not significant at 10% level of significance which means the post election effects stock returns are insignificant. The model estimated has poor fit as revealed by F statistic and coefficient of multiple determinations ($\bar{R}^2$).

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Table 4.8

Estimated relation between excess return and after national election variables

Model	Statistics	M0	Ma1	Ma3	Ma6	F	$\bar{R}^2$
1	Coefficient	3.592				0.536	0.003
	t-value	0.732				0.465	
	p-value	0.465					
2	Coefficient		4.52158			1.68	0.009
	t-value		1.29634			0.196	
	p-value		0.19646				
3	Coefficient			2.2182		0.779	0.004
	t-value			0.8824		0.379	
	p-value			0.3787			
4	Coefficient				1.51789	0.605	0.003
	t-value				0.77784	0.438	
	p-value				0.43765		
5	Coefficient	-1.6867	5.44474	-0.602	0.5471	0.437	0.009
	t-value	-0.2438	0.90876	-0.135	0.18872	0.7810	
	p-value	0.8077	0.36466	0.8929	0.85052		

Stock Returns with Important Political Events

In the selected study period a number of important national events happened in Nepal. The country went through series of political events. A Kingdom Nation became Federal Republic of Nepal, demolishing 240 years long ruling Shah Dynasty. In the process of this big transformation, country underwent through numbers of crucial events which actually rocked the country, and that in fact affected every aspect of the nation, especially economic activities. These events which affect economy generally also affect the stock market. Bittlingmayer (1998) investigated stock volatility and output in a case marked by a clear exogenous political shock in Germany. The study focused on the connection between political events and stock prices during and after the First World War. It employed multiple regressions to analyze data. The study found that the increase in German volatility in the late 1800s and early and mid-

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1920s seems closely linked to the shift from an ascendant empire to a beleaguered republic. Thus, political uncertainties simultaneously affected stock prices and output. In other words, it is concluded that there was influence of political outcomes on the business cycle and stock market. Table 4.9 lists the political events selected for the study. These political events brought major socio-economic changes in Nepal in the period 2001 to 2010.

Table 4.9

Selected national political events

S. No.	Date	Event for study
1	2nd June 2001	Royal massacre
2	Feb 1, 2005	Royal took over
3	Nov 22nd, 2005	12 Points agreement between 7 political parties and Maoist
4	April 27th, 2006	2nd peoples movement in support of Maoist
5	Nov. 2nd, 2006	CPA signed between GoN and Maoist
6	Feb 1st, 2007	Movement demanding Tarai a single state
7	28th May -2008	End of Shah dynasty and country declared as secular state
8	Aug 18th, 2008	Maoist formed government
9	May 5th, 2009	Maoist led government resigned
10	May 28th, 2010	Initial two year term of CA finished

The following section analyzes the effects of the above mentioned political events on the stock market, especially in stock returns and stock market volatility.

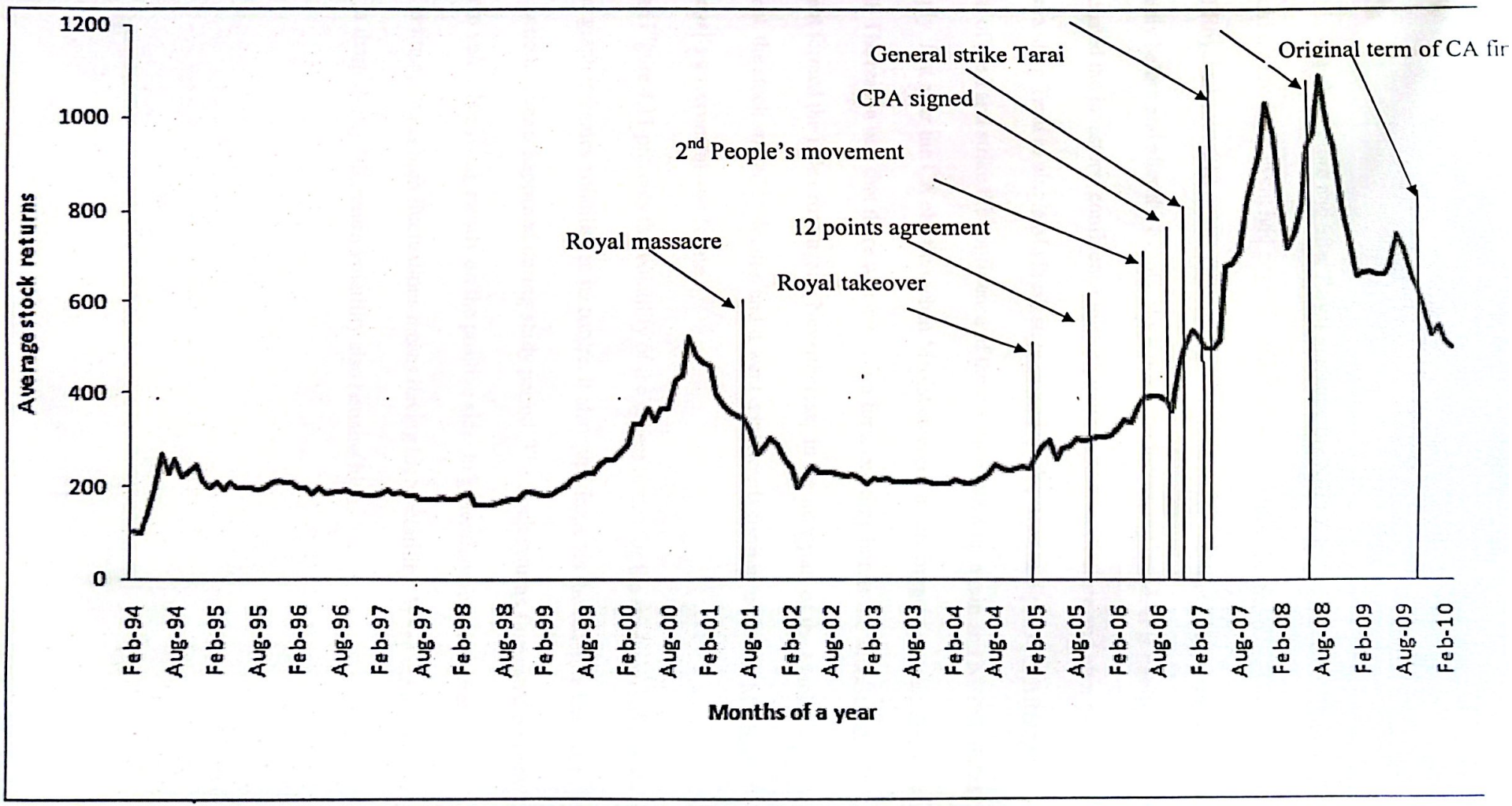
Pattern of movement of stock return with and national events

The purpose of first and simplest analysis is to plot the stock return from 1994 to 2010 together with the insertion of the date of occurrence of these ten important national events. Figure 4.10 highlights the pattern of movement of stock return from 1994 to 2010 with the date of occurrences of the ten important political events.

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Figure 4.10

Pattern of movement of stock with national events



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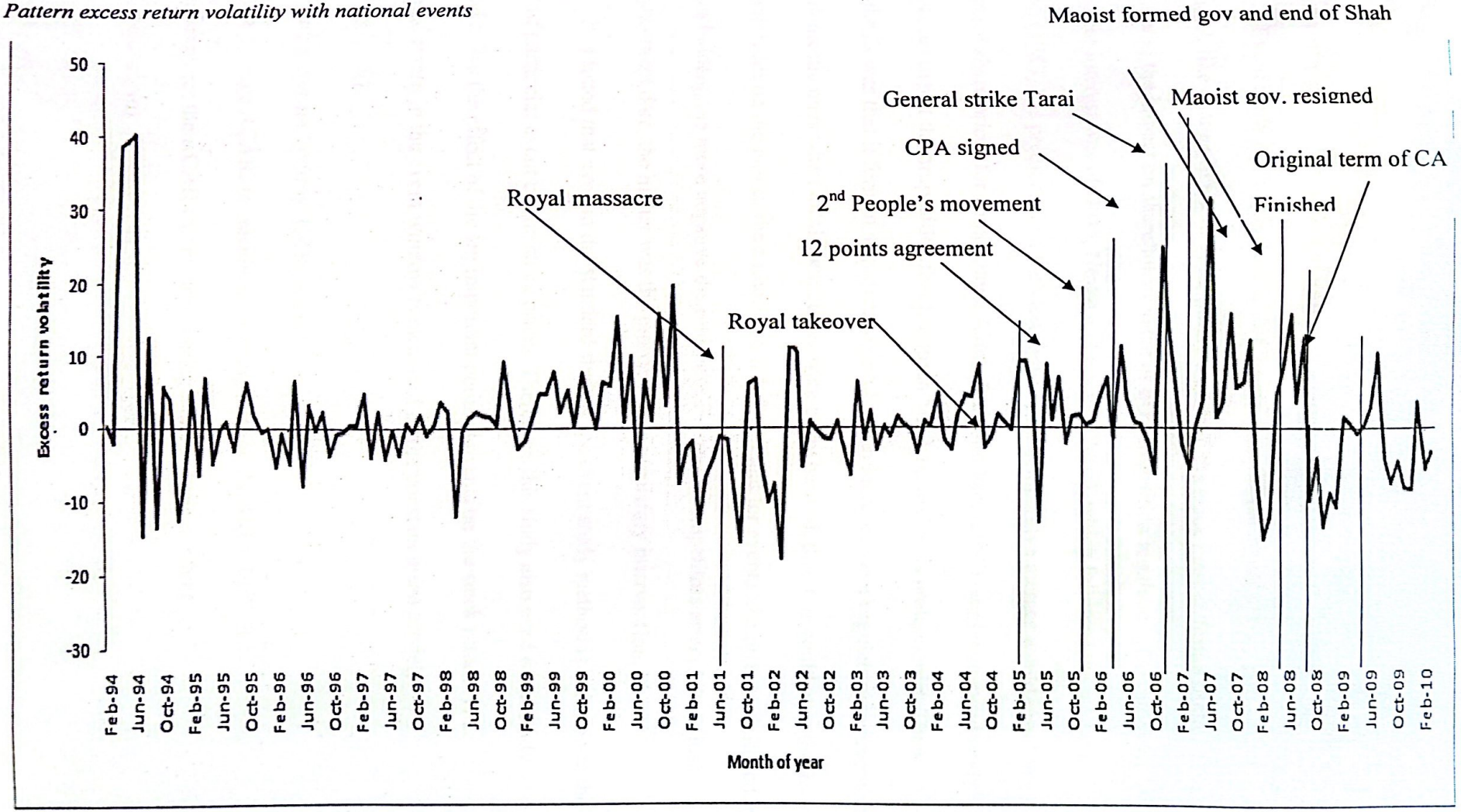
It is seen that before and after Royal massacre the NEPSE index was continuously falling, and it shows that event had negative effect on stock return. On the other hand, the events of Royal takeover, 12 points agreement, 2nd people's movement, CPA signing had immediately before and after the events, stock prices on increasing trend. It is likely that these events boosted the investors' confidence in stock market, whereas, before and after general strike demanding Tarai as single Madhesh state caused stock prices to dip down. After the settlement of the Tarai strike the confidence of the investors went up again and NEPSE index rose sharply. Just after the CA election when Maoist emerged as the biggest winner, the stock return fell. The reason was that there was confusion for some time but as the Maoist led government formed the index rose again. Nevertheless, in the later part of the Maoist government, the stock started to decline and it went downwards further until Mr. Madhav Kumar Nepal's government was forme.

The Figure 4.11 presents the volatility of the excess return for the study period (1994-2010). The graph indicates volatility in its nature. It also superimposes the dateline ten most important national events happened during study period. The stock returns fluctuated on both sides of zero value, but swing mostly on the positive side. In general, before and after important political events high fluctuations means having high volatility. When the stock prices are in sharp rise or fall, return volatility also remains high.

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Figure 4.11

Pattern excess return volatility with national events



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Event study method on effect of national events on stock returns

Event study method is used to test the effect of the particular event - political or financial, like change in tax or other policy change in the stock market. Some studies have considered the impact on shareholder value of EU competition regulation. One study of particular interest was of Duso, Neven and Roeller (2007), which followed the method of Eckbo (1983) has predicated on the view that an anti-competitive merger would result in increased share prices for competitors. Aktas, Bodt and Roll (2007) employed event study techniques to test the proposition that European M&A regulation is protectionist. Their hypothesis was that if foreign acquirers were subject to more frequent regulatory intervention than domestic ones when local competitors were being harmed, then this could only mean protectionism on the part of the authorities. It is found that for events like mergers initiated by foreign bidders, the more negative the returns of European competitors around the initial announcement date, the higher was the probability of regulatory intervention.

It is found that even in the standard studies, the event study method is used to see the effect of particular event on the stock prices. Therefore, this study also used event study method to see the effect of the ten important political events on the stock return. The abnormal return in the event window is measured by the constant mean model,

$ARit = Rit - \check{R}i$

Aggregate abnormal returns: $CAR_{i\,(T1\text{-}T2)} =$

Then the average ACARi is calculated by using relation $ACARi = 1/n*CARi$

Inferences about the ACAR can be drawn using a test statistic, t, where

$t = ACARi/(\sigma i/\sqrt{n})$

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σi is the standard deviation of the distribution and n is the number of days in the event window. The estimation window used is of 180 trading days before the event window, Ři is the average value of the stock return in the estimation window period (180days). Event window in the study is -21 days and +21 from the event day, hence total numbers of days in the event window is n = 43 days. In event studies, null hypothesis are generally stated, as "the event has no significant impact on abnormal events over the event window." In an efficient market, abnormal returns should have expected value of zero.

Tables 4.10 and Table 4.11 show that ACAR has mixed of positive and negative values. The positive and negative ACAR indicates that national events have effect in stock market. This rejects the null hypothesis that political events have no effect in the stock market i.e. ACAR is zero. The positive ACAR indicates that the effect of the event should be positive so that cumulative abnormal return was positive and on the other hand, a negative ACAR indicates the effect of the national event had negative effect in the stock market. These findings indicate that unanticipated political events have effects in the Nepalese stock market. The political events assumedly generate abnormal returns in the case of the semi-strong form of market efficiency. Such abnormal returns may be positive (negative) depending upon the good-news (bad-news) of the political events.

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Table 4.10

Results statistics national event in stock market by event study method

S. No.	Event for study	Commercial Banks		Manufacturing and Processing		Hotel		Other		Trading	
		ACAR	*t*	ACAR	*t*	ACAR	*t*	ACAR	*t*	ACAR	*t*
1	Royal massacre -2nd June 2001	-455.39	-171.08*	-34.32	-25.6*	-52.83	-41.0*	-102.56	-56.55*	-1.97	-2.1**
2	Royal took over – Feb 1st, 2005	31.58	14.84*	0.34	83.92*	1.95	-17.6*	-0.41	9.33*	0.07	13.58*
3	12 Points agreement between 7 political parties and Maoist -Nov 22nd, 2005	25.69	39.67*	1.77	1.00	1.06	33.08*	8.32	5.88*	15.03	33.76*
4	2nd peoples movement in support of Maoist - April 27th, 2006	73.73	16.59*	6.85	19.62*	2.46	8.61*	12.93	6.33*	13.64	30.52*
5	CPA signed between GoN and Maoist - Nov 2nd, 2006	95.81	15.62*	24.14	95.37*	0.29	0.95	107.57	11.95*	5.30	82.30*
6	Movement demanding Tarai a single state - February 1st, 2007	126.35	44.77*	19.36	21.42*	16.26	11.03*	238.51	109.52*	1.44	5.67*
7	End of Shah dynasty and country declared as secular state - 28th May 2008	4.82	0.33	53.43	92.86*	67.04	39.52*	-0.51*		43.10	13.48*
8	Maoist formed government - August 18th, 2008	200.55	23.74*	48.36	35.58*	-15.63	-14.0*	117.88	3.31*	33.18	51.68*
9	Maoist led government resigned -May 5th, 2009	-334.08	-2.04**	13.85	2.05**	5.78	2.08**	-269.85	-2.04**	48.28	2.04**
10	Initial two year term of CA finished	-268.5	-2.0**	-109.3	-2.0**	29.5	2.0**	-128.3	-2.0**	28.7	2.0**

Critical value of t at 1 percent and 5 percent level of significance are 2.6 and 1.96 respectively.

* and ** denotes that the results are significant at 1 percent and 5 percent level of significance respectively.

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Table 4.11

Result of national events on stock return by event study methods

S. No.	Event for study	Insurance Companies		Finance Companies		Development Bank		Nepse		Hydropower	
		ACAR	*t*	ACAR	*t*	ACAR	*t*	ACAR	*t*	ACAR	*t*
1	Royal massacre -2nd June 2001	-22.38	-3.17*					-92.25	-48.27*		
2	Royal took over - Feb 1st, 2005	1.64	7.72*	6.55	81.39*	7.81	9.37*	26.73	14.91*		
3	12 Points agreement between 7 political parties and Maoist -Nov 22nd, 2005	33.18	99.57*	16.31	31.71*	-3.15	-7.42*	21.20	45.27*		
4	2nd peoples movement in support of Maoist - April 27th, 2006	23.64	43.68*	8.99	1.54	45.84	42.09*	53.16	17.44*		
5	CPA signed between GoN and Maoist - Nov 2nd, 2006	43.73	53.44*	23.95	34.85*	87.36	10.43*	56.55	11.87*		
6	Movement demanding Tarai a single state - February 1st, 2007	175.02	22.36*	139.90	22.30*	204.96	83.88*	124.81	88.63*		
7	End of Shah dynasty and country declared as secular state - 28th May 2008	39.59	5.14*	271.44	31.49*	53.48	3.75*	36.90	2.92*	-80.78	-6.04*
8	Maoist formed government - August 18th, 2008	-168.60	-41.10*	253.06	79.14*	256.67	27.88*	195.71	24.96*	0.7458	0.136
9	Maoist led government resigned -May 5th, 2009	-235.43	-2.05**	-525.9	-2.05**	-780.15	-2.05**	-337.35	-2.05**	-379.02	-2.1**
10	Initial two year term of CA finished	-79.1	-2.1**	-307.3	-2.0**	-289.5	-2.0**	-231.1	-2.0**	-254.5	-2.0**

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Analyzing the individual event as given in Tables 4.10 and 4.11, the first event-Royal massacre of 2nd June 2001 when whole family of King Birendra was killed, reflects quite a negative impact on the stock return. This is shown by the negative values of the average cumulative excess return (ACAR) for all the industries with significant t values. The second event - Royal takeover, when King Gyanendra took over all the executive power had positive ACAR for all stocks of industries except for "Others". The events of 12 points agreement between seven parties and Maoist, the 2nd people movement, CPA was signed between then government and Maoist. Movement demanding Tarai as single state, end of Shah Dynasty and post election Maoist formed has mostly positive ACAR and is statistically significant. In the ninth event when Maoist led government resigned, the stock market responses were mixed manufacturing & production, hotel, trading have positive ACAR with statistically significant values, however, all other industries have negative ACAR. Therefore, in general, the event study analysis came up with the results that the stock market of Nepal is affected by important political events.

Mostly the events which intended to bring Maoist in the democratic process and abolishing of Shah Dynasty have positive and statistically significant effect on the stock market. But, massacre of King Birendra's family and resign of Maoist led government and end of initial two years term of CA have mostly negative effect on the stock returns. Except few values of ACAR, the values which are marked * and ** denote that the results are significant at 1 percent and 5 percent level of significance respectively. The finding are in line with the study of Langus and Motta (2007) used event study techniques to examine the impact of the main events in an antitrust investigation for a breach of Article 81 or 82 on a firm's stock market value, and found that a surprise inspection at the firm's premises had a strong and statistically significant effect on

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the firm's share price, with its cumulative average abnormal return being approximately -2%. It is also found that a negative decision by the European Commission resulted in a cumulative average abnormal return of about - 3.3%.

ANOVA test *(F-test)* of national events on stock returns

Analysis of variance, ANOVA test (F test) is used to test if the standard deviations (variance) of two samples drawn from populations are equal or not. The one-tailed version only tests in one direction that is the standard deviation (variance) from the first population is either greater than or less than (but not both) the second population standard deviation (variance).

Test Statistic: $F = S^2_1 / S^2_2$,

Where, S^2_1 and S^2_2 are the sample variances for sample 1 and 2. The more this ratio deviates from 1, the stronger the evidence for unequal population variances in the given level of significance.

In this study, F test is conducted to the variances of the stock returns 21 days before and after the happening of the events. If the value of F is more than unity, then it indicates that the variances were not the same, meaning there is an effect of a particular event on the stock return. Table 4.12 and Table 4.13 give the results of F statistic estimated for the two samples variances.

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Table 4.12

Results of national events by ANOVA (F test)

S. No.	Event for study	Commercial Banks			Manufacturing and Processing			Hotel			Other			Trading		
		Variance 1 (before)	Variance 2 (after)	F	Variance 1 (before)	Variance 2 (after)	F	Variance 1 (before)	Variance 2 (after)	F	Variance 1 (before)	Variance 2 (after)	F	Variance 1 (before)	Variance 2 (after)	F
1	Royal massacre -2nd June 2001	367.73	46.55	7.90*	70.37	38.86	1.81	11.54	81.76	7.08*	51.41	72.52	1.41	1.29	78.78	61.29*
2	Royal took over - Feb 1st, 2005	11.01	145.41	13.21*	0.56	1.31	2.33*	29.29	0.16	186.51*	6477.99	101.97	63.53*	0.00	3.21	0.00
3	12 Points agreement between 7 political parties and Maoist - Nov 22nd, 2005	22.18	11.17	1.99**	40.77	0.88	46.50*	0.07	0.01	10.30*	132.68	3.46	38.31*	3.00	0.35	8.55*
4	2nd peoples movement in support of Maoist - April 27th, 2006	18.38	997.87	54.29*	5.66	4.67	0.83	0.87	1.55	1.79	84.46	131.90	1.56	10.05	5.92	1.70
5	CPA signed between GoN and Maoist - Nov 2nd, 2006	156.10	264.42	1.69	1.04	62.09	59.44*	3.68	52.91	14.36*	254.87	12.57	20.27*	0.58	4.54	7.79*
6	Movement demanding Tarai a single state - February 1st, 2007	1595.38	1760.78	1.10	10.17	0.00	0.00	33.61	118.17	3.52*	0.00	0.00	1.00	483.10	3.94	122.59*
7	End of Shah dynasty and country declared as secular state - 28th May 2008	36.74	708.29	19.28*	5.10	0.13	0.03	0.42	5.00	11.87*	83.19	2143.60	25.77*	0.28	0.00	0.00
8	Maoist formed government - August 18th, 2008	4882.59	1225.06	3.99*	0.32	11.37	0.03	20.78	12.13	1.71	0.00	52565.36	0.00	3.60	10.59	2.95*
9	Maoist led government resigned -May 5th, 2009	76.61	1158.29	15.12*	10.04	1.22	0.12	8.79	1.90	4.62*	98.45	972.42	9.88*	3.99	724.76	181.56*
10	Initial two year term of CA finished	1029.22	101.5327	10.14*	12.30	3.78	3.25*	17.32	195.36	11.27*	315.57	147.16	2.14**	533.49	194.4	2.74*

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Table 4.13

Results of national events by ANOVA (F test)

S.No.	Events	Insurance Companies			Finance Companies			Developing banks			NEPSE			Hydropower		
		Variance 1 (before)	Variance 2 (after)	F	Variance 1 (before)	Variance 2 (after)	F	Variance 1 (before)	Variance 2 (after)	F	Variance 1 (before)	Variance 2 (after)	F	Variance 1 (before)	Variance 2 (after)	F
1	Royal massacre -2nd June 2001				4389.42	47.40	92.60*				169.28	22.78	7.43*			
2	Royal took over - Feb 1st, 2005	0.04	3.56	83.64*	0.19	0.38	1.98**	9.25	30.83	3.33*	17.81	64.14	3.60*			
3	12 Points agreement between 7 political parties and Maoist -Nov 22nd, 2005	0.59	3.10	5.25*	1.88	2.57	1.37	6.05	2.69	2.25*	11.04	4.73	2.33*			
4	2nd peoples movement in support of Maoist - April 27th, 2006	2.30	7.50	3.26*	2.97	15.22	5.12*	49.16	52.52	1.07	5.46	468.92	85.91*			
5	CPA signed between GoN and Maoist - Nov 2nd, 2006	561.18	2509.75	4.47*	694.10	182.01	3.81*	468.91	69.62	6.74*	107.87	56.33	1.91**			
6	Movement demanding Tarai a single state - February 1st, 2007	92.35	623.09	6.75*	3434.57	430.83	7.97*	4675.47	2563.01	1.82	1336.49	1191.43	1.12	3062.81	1060.68	2.89*
7	End of Shah dynasty and country declared as secular state - 28th May 2008	1.34	30.29	22.57*	2.61	8.75	3.36*	13.12	3132.30	238.72*	19.39	455.36	23.48*			
8	Maoist formed government - August 18th, 2008	167.59	924.85	5.52*	536.71	200.63	2.68*	3445.74	1707.00	2.02	2893.44	2217.27	1.30	1229.46	646.36	1.90**
9	Maoist led government resigned -May 5th, 2009	133.00	79.89	1.66	257.93	88.42	2.92*	680.29	344.17	1.98**	74.57	612.02	8.21*	182.06	619.15	3.40*
10	Initial two year term of CA finished	5.647	1.07	5.27*	46.81	52.23	1.11	48.38	83.31	1.72	270.77	72.84	3.72*	534.22	77.61	6.88*

*Note :*Critical value of F at 1 percent and 5 percent level of significance are 2.39 and 1.84 respectively. * and ** denotes that the results are significant at 1 percent and 5 percent level of significance respectively.

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Variance 1 is the variance of the stock returns calculated 21 trading days before the national events and Variance 2 is the variance of stock returns after 21days of the happening of national event. These tables give the matrix of the variances and F statistics for individual industry corresponding to the national events are also selected in this study. The ANOVA analysis (F test) carried out to compare the two variances; one 21 days before the national events and another 21 days after the event. Comparison of these two variances provides the F statistic, which to the given level of significance shows whether the variances are statistically significant or not. Table 4.12 and Table 4.13 present the variances and F values, as per the results of the F test, critical value of F at 1 percent and 5 percent level of significance are 2.39 and 1.84 respectively. * and ** denotes that the results which are significant at 1 percent and 5 percent level of significance respectively.

In the individual industry level the results show that for the first event –massacre of King Birendra's family commercial banks, hotel, trading, finance & insurance, developing banks, and NEPSE have the statistically different variances at 1% of significance level. This means that to those industries the event has the significant impact on their stock returns. The second event, Royal took over of 1st February 2005 had mixed effect on the difference of excess return before and after the event, commercial bank, others, insurance company, development bank and NEPSE have significant difference before and after the event at 1% level of significance, and rest of the industries do not have significant difference in returns. The third event, the signing of twelve point's agreement between the seven parties and Maoist also has mixed effect. Except the finance companies, all other industries had significant difference in their excess return at 1% and 5% level of significance, before and after the event. Commercial Banks, insurance companies, finance companies, NEPSE has the

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significant difference in the excess returns before and after the event, 2nd people's movement. Except for commercial banks and NEPSE, all other industries excess returns are statistically significant at 1% level of significance in before and after the signing of Comprehensive Peace Accord between the Government and Maoist. Hotel, Trading, insurance companies and finance companies have significant difference at 1% level of significance, in their excess return before and after the general strike in Tarai demanding whole Tarai as a single state. Except for manufacturing & production, hotel and others, all other industries have significant difference in their excess stock return at 1% level of significance, before and after the formation of Maoist government. Other than manufacturing & production and insurance companies, all other industries have significant difference at 1% significance level in their excess return before and after the government led by Mr. Puspa Kamal Dahal had resigned. Except for the finance companies and development banks, all other indices are significant to the last events also. The above analysis indicates the impact of political event of national interest on stock market returns. Although the impact of political events is different across different industries, however political event have effect on the stock returns in Nepal, and one particular event has effect of different magnitudes for different industries.

Relation between Stock Returns, Volatility and Output

Since successful companies are listed in the stock market, stock market represents reflection of the economic activities. Table 4.14 shows summary statistics for quarterly stock returns, stock volatility, industrial production and inflation for period 2003-2009 which are used to explore further relation among them.

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Table 4.14

Summary Statistics for Stock Return, Stock Volatility, Output

S.No.	Date	IP	St	SDt		In (Ipt)-In(Ipt-1)	In (St)-In(St-1)	In (SDt)-In(SDt-1)	D1	D1*In (St)-In(St-1)	D2*In (SDt)-In(SDt-1)	D2	CPI
1	2003-04-Q1	99.93	206.83	Excess Return volatility									156.20
2	2003-04-Q2	102.54	201.57	-2.54	2.54	0.0112	-1.1188		0	0.0000	0.0000	1	154.40
3	2003-04-Q3	101.08	196.34	-2.59	2.59	-0.0062	-1.1417	0.8704	0	0.0000	0.0000	1	153.30
4	2003-04-Q4	101.12	218.65	11.36	11.36	0.0002	4.6741	64.1415	0	0.0000	0.0000	0	155.20
5	2004-05-Q1	102.58	234.11	7.07	7.07	0.0062	2.9670	-20.6031	0	0.0000	0.0000	0	160.20
6	2004-05-Q2	103.13	238.29	1.79	1.79	0.0023	0.7686	-59.7704	0	0.0000	0.0000	0	159.80
7	2004-05-Q3	103.76	284.34	19.33	19.33	0.0027	7.6732	103.4368	0	0.0000	0.0000	0	162.10
8	2004-05-Q4	103.86	281.15	-1.12	1.12	0.0004	-0.4900	-123.6171	0	0.0000	0.0000	1	165.10
9	2005-06-Q1	102.22	296.98	5.63	5.63	-0.0069	2.3789	70.0590	0	0.0000	0.0000	0	172.60
10	2005-06-Q2	102.64	302.78	1.95	1.95	0.0018	0.8400	-45.9842	0	0.0000	0.0000	0	172.70
11	2005-06-Q3	102.14	337.52	11.47	11.47	-0.0021	4.7172	76.9002	0	0.0000	0.0000	0	173.70
12	2005-06-Q4	100.65	375.14	11.15	11.15	-0.0064	4.5894	-1.2583	0	0.0000	0.0000	0	179.70
13	2006-07-Q1	105.85	394.25	5.09	5.09	0.0219	2.1578	-34.0052	0	0.0000	0.0000	0	184.90
14	2006-07-Q2	106.70	514.42	30.48	30.48	0.0035	11.5546	77.6957	0	0.0000	0.0000	0	185.40
15	2006-07-Q3	106.98	480.99	-6.50	6.50	0.0011	-2.9182	-67.1206	1	-2.9182	-67.1206	1	185.20
16	2006-07-Q4	106.61	591.65	23.01	23.01	-0.0015	8.9929	54.9036	1	8.9929	54.9036	0	188.20
17	2007-08-Q1	107.05	885.50	49.67	49.67	0.0018	17.5124	33.4206	1	17.5124	33.4206	0	187.60
18	2007-08-Q2	106.98	984.53	11.18	11.18	-0.0003	4.6040	-64.7483	1	4.6040	-64.7483	0	187.30
19	2007-08-Q3	112.77	709.40	-27.95	27.95	0.0229	-14.2338	39.7731	1	-14.2338	39.7731	1	190.40
20	2007-08-Q4	113.99	937.46	32.15	32.15	0.0047	12.1062	6.0849	1	12.1062	6.0849	0	198.10
21	2008-09-Q1	118.15	962.55	2.68	2.68	0.0156	1.1471	-107.9610	1	1.1471	-107.9610	0	213.90
22	2008-09-Q2	114.90	695.50	-27.74	27.74	-0.0121	-14.1126	101.5621	1	-14.1126	101.5621	1	217.80
23	2008-09-Q3	109.14	664.13	-4.51	4.51	-0.0223	-2.0044	-78.8952	1	-2.0044	-78.8952	1	215.60

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Model was adopted as under;

$$\ln(Ipt)-\ln(Ipt-1) = b_0+b_1*\{\ln(St)-\ln(St-1)\} +b_2* \{\ln(SDt)-\ln(SDt-1)\} + b_3*D_1 + b_4* D_1*\{\ln(St)-\ln(St-1\}) + b_5*D_1* \ln\{(SDt)-\ln(SDt-1)\} + b_6*D_2 + b_7*CPI + et \text{ - - - - - - - - - - - - (3)}$$

In (IPt) = log of the industrial production index for current quarter t.

In (SDt) = log of the standard deviation of the daily returns of NEPSE for quarter t.

In St = the quarterly stock price in quarter t.

In (St) = log of the stock prices at quarter end i.e. closing price.

D_1 = Dummy for comprehensive peace agreement of signed (November 6, 2006)

$D_1 = 0$ before CPI and D1 = 1 for after CPI

D_2 = Dummy for negative volatility, $D_2 = 0$ for positive volatility, $D_2 = -1$ for negative volatility.

CPI = quarterly consumer price index. e_t = error term

The results of the regression model 5 are given in Table 4.15.

Table 4.15

Estimated relationship between stock return, stock volatility and output

Volatility and Stock price	b	*t*
Constant	.009	.257
$\ln(SD_t)-\ln(SD_{t-1})$	.000	.237
$\ln(S_t)-\ln(S_{t-1})$	-8.535E-5	-1.147
D1	.005	.513
D1* $\ln(SD_t)-\ln(SD_{t-1})$	-.001	-.708
D1* $\ln(S_t)-\ln(S_{t-1})$	7.626E-5	.825
D2	-.018	-2.068
CPI	-2.770E-5	-.140
$\bar{R}^2$	0.279	
Durbin-Watson Statistic	1.703	

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The regression results showed that except the coefficients of D_2, which is the dummy for the negative volatility, all the other coefficients were insignificant which means that industrial production and stock return were not related and they have no significant different before and after the signing of comprehensive peace agreement. However, the coefficient of the dummy D_2 was significant for negative volatility of the stock return; it could be interpreted as the negative volatility was negatively related to industrial production. From the value of the coefficient, one unit increase in negative volatility was matched with the 1.8% decrease in the industrial production. Hence, it can be concluded that at the time when stock market was bearish the industrial production was low and that means stock volatility and industrial production has relation in Nepali stock market. As the coefficient for the independent variable consumer price index (CPI), b_7, was insignificant that means the price level change has no effect to industrial production.

Concluding Remarks

This study has analyzed the secondary data to explore the effect of political uncertainty and its effect on stock returns. The three major aspects of political uncertainty: the change of governments, national elections and happening of the important political events were analyzed. The monthly, daily and quarterly stock indices were used in the analysis. It is found that the frequent changes of governments have effects on the stock return. The plotting of the average and excess returns clearly showed that the pattern of movement of NEPSE indices were different for the different governments. It is found that the ruling of Nepali Congress Party under the leadership of Mr. Girija Prasad Koirala was favorable to stock returns. In the ruling of other governments, the impacts were seen but not statistically significant. The findings are also supported by the results of the regression model, where it is

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found that during the ruling of Nepali Congress the coefficients are positive and significant at 10% confidence level. Findings are in line with the finding of other standard studies carried in the issue in the developed capital markets.

In the study period (1994-2010), only three national elections were conducted. The patterns of movement of stock returns, as we approach elections, were different for different elections. Regression models were run to check the effects of national election on stock return and it is found that coefficients were negative before election and immediately after the election coefficients were positive. Though the sign of the coefficient were as expected (negative before election and positive after), but magnitudes were small and not statistically significant. These findings concluded that the effects of national elections on stock returns were not very robust though they are supportive in principle and similar to findings of studies in the western countries. On the third issue, the effect of happening of the important political events three types of analysis were carried out with the use of monthly and daily stock indices. First, plotting of the monthly stock returns together with the important events, the graph clearly showed fluctuation in stock returns before and after the happening of the events. In the second analysis, event study method is used to find the effect of the event on the stock returns. The average cumulative abnormal returns (ACAR) were calculated and compared with the average returns estimated for 180 days estimated window period by the use of constant return model. It is found that most of the event had significant difference in the stock returns at 1 percent and 5 percent level. In the third analysis, the One way Anova *(F test)* was carried out to compare the variance of the daily stock indices 21 days before and 21 days after the event. The analysis showed the most of the industry returns were significantly different before and after happening of the important events. In this way, these findings have clearly

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brought forward that important political events have statistically significant impact on the stock returns. The last part of the secondary data analysis was carried out to find the relation between the industrial output, stock returns, stock returns volatility and inflation. The quarterly data of four indices were used for the analysis. The regression models results found that these variables are related to each other.

It is found the negative volatility has relation with the industrial production. From the regression results it came out that one unit increase in negative volatility decreases the industrial production by 1.8%. Hence it can be concluded that volatility and industrial production has relation in Nepali stock market.

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CHAPTER V

RESULTS OF PRIMARY DATA ANALYSIS

This chapter is devoted to analysis of the primary data. Two types of investors namely: the individual investors and officials of the listed companies were surveyed with two separate questionnaires. To collect the responses of individual investors 250 questionnaires were sent to them and 116 valid responses were received. Similarly 150 questionnaires were circulated through to listed companies to collect the responses of officers/managers and only 42 valid responses were received. Various presentation and analysis tools were used to analyze the responses to draw meaningful conclusions. The analysis of the responses was carried out on the perception of investors on the effect of political uncertainty on the stock market. Following sections bring analysis of the responses on the numbers of issues raised in the study.

Profile of the Respondents

Profile of the individual investors

This section summarizes the profile of the 116 individual investors who responded to the questionnaire circulated. The first part of questionnaire sought profile (background information) of the respondents. Table 5.1 summarizes age and qualification of the respondents. For the ease of analysis, respondents were grouped in the four broad categories of the age ranges 20-30, 31-40, 41-50, and above 50 years. Similarly, the respondents were grouped into three categories Masters, Bachelors and Intermediates on their education. It is evident that respondents were fairly young, majority (79 percent) are below 40 years of age

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whereas only 21 percent are above 40 years. This means most of the investors of Nepalese stock market are young.

Table 5.1

Age and education of the individual respondent

Age	Responses		Level of education	Responses	
	Number	Percentage		Number	Percentage
20-30 years	34	29.3	Masters	89	76.7
31-40 years	58	50	Bachelors	12	22.4
41-50 years	17	14.7	Intermediates	1	0.9
> 50 years	7	6			
Total	116	100		116	100

Table 5.1 also presents the academic qualification of the respondents and it is clearly seen that most of the respondents of the study were well educated. More than 99 percent of the respondents had bachelor degree or above. In this observation, more than 76 percent respondents had master 22 percent had bachelor degrees and only one percent had Intermediate level education. This is because the Nepalese stock market is quite new and that is why young and educated people are having information on stock market and make investment in stocks.

The questionnaire also inquired on the profession and the years of experience of the respondents on stock market. It was found that most of the respondents were doing some kind of service or employed (around 85 percent), 12 percent were in business and the rest 2.6 percent didn't mention their profession (Table 5.2)..

Table 5.2 also presents the years of experience of the investors and it was found that majorities (54 percent) of the respondents had less than 5 years experience. Fifteen and half percent of the respondents had 5-10 years of experience, and 30.2 percent were having more than 10 years experiences in stock market.

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Table 5.2

Profile of the respondents on profession and with years of experience

Profession	Responses		Years of Experience in Stock market	Responses	
	Number	Percentage		Number	Percentage
Service	99	85.3	<5 years	63	54.3
Business	14	12.1	5-10 years	18	15.5
Others	3	2.6	>10 years	35	30.2
	116	100		116	100

This revealed that the respondents had different level of experience, more than 50 percent were beginners but a substantial portion (45 percent) had more than 5 years of experience in stock trading.

Profile of the respondents of the listed company officials

The study surveyed the responses of officials of listed companies in order to find their perceptions on the effect of political uncertainty on the stock market of Nepal. A separate questionnaire which contained same and similar questions as used in the survey of the individual investors was used to compare the responses of the individual and institutional investors. Forty two responses were received and analyzed to draw conclusion on the perception of the listed companies' officers on the effect of political uncertainty on stock returns.

Respondents of the listed companies were working in different positions in the organization. Table 5.3 presents the positions and years of experience of the respondents. As per the responses received, around 43 percent of respondents were officers, 50 percent were managers and only 7 percent chief executive. About 62 percent with more than 10 years of

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experience; about 25 percent of respondents were having less than five years of experience and around 12 percent having experience of 5-10 years in stock market.

Table 5.3

Profile of the responses from listed companies

Position of the respondents	Frequency	Percent	Year of experience	Frequency	Percent
Officer	18	42.9	< 5 years	10	23.8
Manager	21	50.0	5-10 years	5	11.9
CEO	3	7.1	>10 years	26	61.9
Total	42	100	Missing	1	2.4
			Total	42	100

The responses received from the listed companies were also categorized on the industry group. Responses were from six different industries as given in the Table 5.4. However, majority of the responses (45.2 percent) were from commercial banks, 31% from insurance companies, 9.5 percent from hydropower, hotel, manufacturing & production and others 4.8 percent each.

Table 5.4

Profile of respondent form Industry group

Firms of the industry	Frequency	Percent
Commercial Banks	19	45.2
Insurance Company	13	31.0
Hydropower	4	9.5
Hotel	2	4.8
Manufacturing and Production	2	4.8
Others	2	4.8
Total	42	100

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The responses covered most of the active industry listed in the stock market and had also covered wide range of firms; however, the majority of responses were from commercial bank and insurance companies.

Expectations, Preferences and Share Purchase Decision

This section analyses issues on market from where investors buy stock, expectation of the investors from buying shares, industry preference and factors affecting in making share purchase decision. The responses on the market preferences of investors, both individual and officials of the listed companies to buy shares of a firm were analyzed and the results are shown in Table 5.5. It is found that most of the individual investors (50 percent) wish to buy share in the initial public offerings and small percent (14.7) go to secondary market only whereas more than 35.3 percent use both primary and secondary market to buy shares.

Table 5.5

Markets investors prefer to purchase stock

Stock purchase at	Individual investors		Official of listed companies	
	Responses	Responses	Percentage	Percentage
IPO	58	50.0	14	33.3
Secondary	17	14.7	9	21.4
Both	41	35.3	19	45.3
Total	116	100.0	42	100

In the case of the listed companies' officers, 33.3 percent bought shares in IPO, 21.4 percent went to secondary market but majority of the responses (45.3 percent) used both primary and secondary markets. It was found that the majority of individual investors preferred to buy shares in primary market and whereas, listed companies officials used both

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markets. However, a good percentage of investors in both groups go to other markets for share purchase.

The questionnaire explored the views of the respondents on their expectation in buying share of a firm. Respondents were asked to rank the options according to the relative importance of their expectations in buying shares of a firm on a scale of 1 (most important) to 5 (least important). The analysis was carried out to calculate the mean and overall rank and the results are presented in Table 5.6.

Table 5.6

Expectation of the investor from purchase of stock of a firm

Statements	Rankwise percentage of responses						Mean score	Over all rank
	1	2	3	4	5	6		
Cash dividend	30.4%	23.5%	20.6%	19.6%	3.9%	2.0%	2.49	II
Increase in share price	59.1%	16.4%	10.0%	10.9%	2.7%	0.9%	1.85	I
Bonus shares	8.2%	40.8%	35.7%	13.3%	2.0%	0.0%	2.60	III
Right shares	4.3%	16.0%	24.5%	41.5%	12.8%	1.1%	3.46	IV
To control management	6.1%	6.1%	7.3%	9.8%	70.7%	0.0%	4.33	V
Others	10.7%	0.0%	0.0%	7.1%	0.0%	82.1%	5.32	VI

The analysis brought forward that in the view of the individual investors 'increase in share price' was ranked first choice with mean score of 1.85. Expectation of 'cash dividend' was ranked second with the mean score of 2.49, 'bonus shares and right shares' were ranked third and fourth with mean scores of 2.6 and 3.46 respectively. Expectation 'to control of management' ranked fifth with score 4.33. Hence, most of the individual investors buy shares

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in the expectation that share prices will go up and the firm will also pay dividend in cash and shares. The analysis of the responses of officials of the listed companies on the expectation from buying share of a firm also matched with the overall ranking done by the individual investors (Appendix C Table C1), but the mean score values are higher than that of individual investors. Thus, it is concluded that expectations of both categories of investors are same in buying shares of a firm.

In order to explore the industry preference of investors in buying share of different industries, investors were asked to rank the different industries options to provide relative importance, on a scale of 1 (most important) to 5 (least important). The responses were analyzed to calculate the mean score and overall rank and results are presented in Table 5.7.

Table 5.7

Industry preference of investor in buying stock

Statement	Rankwise percentage responses							Mean score	Overall rank
	1	2	3	4	5	6	7		
Banks	87.7%	8.8%	0.9%	0.0%	0.9%	0.9%	0.9%	1.24	I
Hotel	2.1%	4.2%	3.1%	6.3%	27.1%	30.2%	27.1%	5.51	VI
Hydropower	13.6%	43.7%	15.5%	15.5%	6.8%	2.9%	1.9%	2.75	II
Trading	1.1%	3.3%	6.6%	13.2%	17.6%	29.7%	28.6%	5.46	VII
Finance company	0.0%	33.3%	38.4%	11.1%	13.1%	4.0%	0.0%	3.16	III
Manufacturing companies	0.0%	4.2%	13.5%	15.6%	24.0%	22.9%	19.8%	5.07	V
Others	0.0%	7.5%	24.7%	40.9%	9.7%	4.3%	12.9%	4.17	IV

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It was found that the first choice of the individual investors was the shares of the commercial banks, which got 1.24 mean score. The second preference is hydropower with mean score of 2.75 and finance company in the third position with mean score of 3.16, whereas, stock of the other industries likes others, manufacturing & production, hotel and insurance company were ranked low by the respondents. This distinctly showed that the individual investors have single target to buy shares of the commercial banks. The analysis of the responses of the listed companies' officials (Appendix C, Table C2) also produced same order of preference in overall rank, which meant both groups of investors had same industry preference in buying stock. To the both groups of investors, the questionnaire inquired to rank factors that affected buying decision on a scale of 1 (most important) to 5 (least important). The analysis of responses was carried out to calculate the mean score and overall rank and the results are presented in Table 5.8.

Table 5.8

Factor affecting in making purchase decision by investors

Statements	Rankwise percentage of responses						Mean score	Overall rank
	1	2	3	4	5	6		
Firm's performance (profitability)	60.9%	20.9%	10.9%	2.7%	2.7%	1.8%	1.71	I
Company Group image	15.7%	29.6%	24.1%	16.7%	7.4%	6.5%	2.90	II
Last dividend paid by firm	6.9%	19.8%	19.8%	24.8%	14.9%	13.9%	3.62	III
Go with market trends	12.1%	15.2%	16.2%	24.2%	17.2%	15.2%	3.65	IV
Evaluate company fundamental	9.7%	13.6%	19.4%	16.5%	32.0%	8.7%	3.74	V
Carry technical analysis	4.1%	8.2%	10.2%	13.3%	17.3%	46.9%	4.72	VI

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According to responses of the individual investors, 'firm's financial statement', which is the proxy for the profitability of a firm, was ranked as the most important factor in making the share purchase decision with the mean score of 1.71. 'Company group image' with mean score of 2.9 was ranked second and 'last dividend paid by firm' was third with mean score of 3.62. 'Go with market trends' and 'evaluate company fundamental' were ranked fourth and fifth with mean scores 3.65 and 3.74 respectively and 'carry technical analyses' sixth in importance.

The results of analysis of the responses of the listed company officials are same in terms of the overall rank of the responses (Appendix C, Table C3). Hence, both categories of the investors go with the profit making firms i.e. earnings per share matters.

The Factors Affecting Growth of the Stock Market

An efficient stock market is good indicator of the performance of economic activities ongoing in the country. A number of factors affect the stock market which could be related to national and international politics, economical and social events. In the context of developed economies where stock market is efficient, the effect of a political event and release of information are reflected immediately in the stock returns. However, in case of the developing stock market like Nepal, it may take time to show the effect of an event or information on the stock. This section of the analysis explores some of the factors that had bearing on the development of the stock market in Nepal.

Three questions in the questionnaire had raised this issue to the investors. The first question (Q-15) had surveyed opinions of investors and asked to rank the factors responsible for the deficiency in the development of the stock market in Nepal. The five options were given to rank in order of their importance by assigning 1 to the most important and so on. The

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options were: Government policy regarding stock market, market operation system, company information, lack of profitability of the company, buying and selling behavior of the investors. The Table 5.9 presents responses of the individual investors.

Table 5.9

Reasons for deficiency in the development of the stock market in Nepal

Statements	Rankwise percentage of responses						Mean Score	Overall rank
	1	2	3	4	5	6		
Government policy regarding stock market	64.2%	18.3%	7.3%	2.8%	5.5%	1.8%	1.72	I
Market operation system	20.4%	26.9%	24.1%	19.4%	8.3%	0.9%	2.71	II
Company information	7.6%	26.7%	27.6%	26.7%	10.5%	1.0%	3.09	III
Lack of profitability of the company	3.9%	12.6%	22.3%	27.2%	31.1%	2.9%	3.78	V
Buying and selling behavior of investors	9.0%	18.0%	20.0%	16.0%	36.0%	1.0%	3.55	IV
Other	5.4%	8.1%	2.7%	10.8%	13.5%	59.5%	4.97	VI

The 'government policy regarding stock market', 'market operation system' and 'company information' was ranked first, second and third important reasons respectively to expose deficiency in the development of the stock market in Nepal. 'Buying and selling behavior of the investors' and 'company information' were ranked fourth and fifth reasons for the slow development of stock market in Nepal. The analysis of the responses of the officials of listed companies is similar and given in Appendix C, Table C4 & Table C5. Thus, it is concluded that deficiency of development of stock market is due to government policies regarding stock market.

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Another question (Q-16) in the questionnaire looked for the factors which adversely affected the growth of the stock market in Nepal, in which; the respondents were requested to rank their choices in order of their importance by assigning 1 to the most important and so on. The options were 'instability in political situation of the country', 'declining growth rate in the economy', 'deteriorating balance of payment position' and 'decline in industrial growth of the nation'. The responses were analyzed to calculate the mean score and overall rank and results are summarized in the Table 5.10.

Table 5.10

Factors adversely affecting the growth of stock market

Statements	Rankwise percentage of responses					Mean score	Overall rank
	1	2	3	4	5		
Instability in political situation of the country	76.9%	13.5%	5.8%	2.9%	1.0%	1.38	I
Declining growth rate in the economy	24.7%	38.1%	27.8%	9.3%	0.0%	2.22	II
Deteriorating balance of payment position	2.3%	11.4%	23.9%	60.2%	2.3%	3.49	IV
Decline in Industrial growth of the nation	6.5%	34.8%	35.9%	22.8%	0.0%	2.75	III
Others	0.0%	5.6%	11.1%	0.0%	83.3%	4.61	V

The factors, 'instability in political situation of the country', 'declining growth rate in the economy' and 'decline in industrial growth of the nation' were ranked I, II and III respectively by respondents which got mean scores of 1.38, 2.22 and 2.75 respectively. The overall ranking of the opinions of the officials of the listed companies (Appendix C, Table C6) also matched with the opinion of the individual investors as the order of overall ranking for both groups of investors was same.

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The share market of Nepal does not move up and down randomly. There could be a number of reasons for this. A question (Q-9) was included in the questionnaire asking for the reasons why the share market of Nepal was not random. Six options were given and the respondents were asked to choose the option 1 as the most important reason and 6 as the least important reason. The responses were calculated over all rank and the results are given in the Table 5.11.

Table 5.11

Reasons for share market not being random

Statements	Rankwise percentage of responses						Mean Score	Over all rank
	1	2	3	4	5	6		
Stock market is in early stage of development	22.3%	19.4%	17.5%	13.6%	23.3%	3.9%	3.16	IV
Poor performance of the market intermediaries	16.2%	13.3%	25.7%	33.3%	11.4%	0.0%	3.10	III
Speculative behavior of the investors	25.9%	15.7%	24.1%	17.6%	15.7%	0.9%	2.84	II
Hidden information	14.3%	23.8%	17.1%	19.0%	24.8%	1.0%	3.19	V
Lack of professionalism	26.2%	27.1%	15.0%	15.0%	15.0%	1.9%	2.71	I
Other	19.4%	5.6%	0.0%	0.0%	16.7%	58.3%	4.64	VI

Out of the six reasons given, 'lack of professionalism' came out to be the most important reason with a mean score of 2.71 and ranked I. 'Speculative behavior of the investors' emerged as second reason with the mean score of 2.84. 'Poor performance of the market intermediaries' was third with mean score of 3.1. The responses indicated that 'stock

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market is in the early stage of development' and the 'hidden information' were in the fourth and fifth rank with mean scores 3.15 and 3.19 respectively.

The opinions of the officials of the listed companies (Appendix C, Table C7) also matched with the opinion of the individuals investors as the overall ranking of both groups was same. This concluded that as per the responses, 'the lack of professionalism' and 'speculative behavior of investors' were the main reasons for the stock market not being random in Nepal.

Political Event and Stock Returns

The opinions of the investors on the effect of the various issues related to political events like policies through budget speech, frequent change of government, happening of important events were surveyed by four questions Q-6, Q-7, Q-10, and Q-11. Q-6 surveyed the opinion of the individual investors and officials of the listed companies on the effect of new budget announcement on the stock market. The responses were analyzed and results are summarized in the Table 5.12. Majority of the investors (49.1 percent individual and 54.4 percent of officials of listed companies) believed that the effect of budget announcement depends on the government policies of the budget; if the government brings policies in favor of the stock market, then it will boost stock prices, otherwise remains just opposite. Forty one percent of the investors think that the new budget announcement always increase share prices whereas a small proportion, 9.7 and 4.8 percent, believe that budget announcement always decreases stock prices.

Question (Q-7) inquired whether the stock market volatility is high at the time of political uncertainty in the country, overwhelming majority of respondents (88 percent individual investors and 79 percent officials of listed companies) agreed on it.

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The question (Q-10) explored the effect of frequent change on government and its effect in stock prices. Majority of the responses (86 percent individual investors and 88 percent officials of listed companies) agreed that the stock market gets affected with frequent change in government. However, a small percentage of investors think that frequent change in government does not affect stock prices.

Table 5.12

Analysis of responses on various events

Statement	Options Of Response	Individual investors (II)		Officials of listed companies (OLC)		Chi-Square value
		Numbers of responses	Percentage of response	Numbers of responses	Percentage of response	
In your experience, do you think that a new budget speech will affect share prices?	Yes	48	41.4	17	40.5	30.7
	No	11	9.5	2	4.8	
	Depend on policy	57	49.1	23	54.8	
	Total	116	100	42	100	
Do you think that price fluctuation (volatility) is normally high when political situation of the country is unstable?	Yes	102	87.9	33	78.6	156.0
	No	10	8.6	4	9.5	
	I do not know	4	3.4	5	11.9	
	Total	116	100	42	100	
Do you think that frequent change of government affects the share price?	Yes	100	86.2	37	88.1	145.9
	No	7	6.0	2	4.8	
	I do not know	9	7.8	3	7.1	
	Total	116	100	42	100	
In your experience Maoist led **Janayudha** has affected the growth of the stock market of Nepal?	Yes	86	74.1	32	76.2	87.1
	No	13	11.2	1	2.4	
	I do not know	17	14.7	9	21.4	
	Total	116	100	42	100	

In the response to the question (Q-11), in your experience Maoist led *Janayudha* has affected the growth of the stock market of Nepal? It was found that 74 percent of individual investors and 76 percent of Officials of listed companies (Table 5.16) said it had affected the stock market, but only a small percentage like 14 and 21 said opposite of it. This concluded that Maoist led *Jana-yudhdha* had affected stock return in Nepalese stock market.

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In order to check the independency of the responses, Chi square values of the responded options were calculated. As the numbers of option for the respondent were three, therefore, the degree of freedom becomes two and table value (critical value) of Chi square at 5% level of significance at two degrees of freedom is 5.99. As all the calculated value of Chi square were bigger than the critical value (5.99), therefore, there was a significant difference in the responses and the difference is not by chance.

Effect of Information on the Stock Returns

In the efficient stock market, information has pronounced effect on stock return. The questions Q-13, Q-14, Q-17 and Q-18 in both questionnaires surveyed the opinions of the investors (individual investors and Officials of listed companies) on the effect of information on the stock returns. The analysis of the responses to these four questions was carried out and the results are presented in the Table 5.13.

When asked "whether you think that share prices on the stock exchange fully reflects the publicly available information" (Q-13) 67 percent of individual investors and 69 percent of officials of listed companies responded negatively. This means the share prices do not reflect all the publicly available information on stock prices. However, approximately one fifth of the investors believed that stock prices reflect the effect of publicly available information. Thus, the majority of the investors of Nepalese stock market do not think that stock market reflects general information to stock prices.

In the inquiry to question (Q-14), "do you think that insider's information can be used to beat the Nepalese stock market?", majority of the respondents (70 percent individual investors and 60 percent Officials of listed companies) opined that the investors having inside

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information could beat the market, meaning be able to take extra advantage from the information (Table 5.13).

When the respondents were asked whether the future price changes of a given firm could be predicted from historical price changes (Q-17), as shown in Table 5.13, the majority (56 percent of individual investors and 62 percent Officials of listed companies) of the investors were of the opinion that the past price change pattern could not be used to predict future price.

Table 5.13

Effect of information on stock return

Statement	Options Of Response	Individual investors		Officials of listed companies		Chi-Square value
		Numbers of responses	Percentage of response	Numbers of responses	Percentage of Response	
Do you think that share prices on the stock exchange fully reflect the publicly available information?	Yes	24	20.7	8	19.0	61.3
	No	78	67.2	29	69.0	
	I do not know	14	12.0	5	11.9	
	Total	116	100	42	100	
Do you think that insider's information can be used to beat the market in the Nepalese stock market?	Yes	82	70.7	25	59.5	73.0
	No	15	12.9	9	21.4	
	I do not know	19	16.4	8	19.0	
	Total	116	100	42	100	
Do you think that future price changes of a given firm can be predicted from historical price changes?	Yes	37	31.9	12	28.6	35.3
	No	65	56.5	26	61.9	
	I do not know	14	11.3	4	9.5	
	Total	116	100	42	100	
Do you think that the frequent release of financial information changes the share prices of the company?	Yes	90	77.6	29	69.0	106.0
	No	18	15.5	12	28.6	
	I do not know	7	6.0	1	2.4	
	Total	116	100	42	100	

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In the inquiry, like "whether you think the frequent release of financial information can change the share prices of the company" (Q-18), 78 percent of the individual investors and 69 percent of officials of listed companies expressed that release of financial information affected the stock price of the firm

Only 15 and 28 percent of respondents opined that financial information release does not have any effect on the stock prices. For the responses on these four questions the values of Chi-square were calculated to check whether there is a significant difference in the responses or not. As the calculated values of Chi square were all high compared to critical value (5.99) it indicated that there was a significant difference in the responses.

Effect of National Elections and Economy on Stock Returns

The study has also surveyed opinions of the individual investors and the officials of the listed companies on the effect of the national election and performance of national economy on the stock return. The analysis of the responses is summarized in Table 5.14. On the effect of the national election, responses of both categories of investors (Q-8) were mixed, around 30 percent responses of individual investors and 40 percent of the officials of the listed companies which marked that the stock price will increase, whereas, 33.6 percent of individual investors and 24 percent of officials of listed companies expressed that they will decrease, and 34.5 percent of individual investors and 33.3 percent of officials of listed companies opined that they will not change. All the responses were quiet close to each other so no conclusion could be drawn whether the investors think stock return will 'increase' or 'decrease' as the national election approached. The Chi-square value of the different types of the responses was calculated. The low value of Chi square (0.368) compared to critical value (5.99) indicated that there is no statistically significant difference between the three types of

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expected responses namely 'Increase', 'Decrease' and 'No change'. Hence, opinions of both groups of individual investors were not conclusive.

In order to survey the opinion of the investor on the relationship between the performance of the economy and effect on the stock market a question (Q-12) was asked, "when the economy of the nation is in booming stage along with its very good opportunities for investment in that case whether you think that the stock price will increase or decrease?" The analysis of the responses is presented in Table 5.14, which shows that an overwhelming majority (89 percent of individual investors and 90 percent of officials of listed companies) of the investors expressed that the stock returns will increase when the economy is in boom.

Table 5.14

Effect of election and economic boom in stock return

Statement	Options of Response	Individual investors		Officials of listed companies		Chi-Square value
		Numbers of responses	Percentage of response	Numbers of responses	Percentage of response	
Do you think that the announcement of a new parliamentary election the share prices will?	Increase	35	30.2	17	40.5	0.36
	Decrease	39	33.6	10	23.8	
	No change	40	36.2	15	35.7	
	Total	116	100	42	100	
When the economy of the nation is in booming stage and there are very good opportunities for investment. In that case do you think that the stock price will?	Increase	103	88.8	38	90.5	160.56
	Decrease	7	6.0	1	2.4	
	No change	6	5.2	3	7.1	
	Total	116	100	42	100	

Only the small percentage of the responses said that it will decrease, and there will be no change. The high value of calculated Chi square compared to critical value (5.99) indicates

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that there is statistically significant difference, at 5% level of significance, between the three types of expected responses.

Analysis of Responses of Likert Scale

The responses on the effect of the major political events on stock prices were also surveyed based on the five point Likert scale. Five political statements were asked to be rated in the 5 points rating scale, 1 strongly agree to 5 strongly disagree. The responses were analyzed and results are summarized in the Table 5.15.

Table 5.15

Analysis of responses of individual investors on five point Likert scale

S.No.	Statements	Strongly Agree	Agree	Do not Know	Disagree	Strongly Disagree	Mean score	Rank
1	Share prices are affected by political events	64.66	23.28	5.17	4.31	1.72	4.42	I
2	Share prices are affected by frequent changes of government	29.31	55.17	6.90	4.31	4.31	4.01	II
3	Share prices are affected by the policies announced by the government	31.90	53.45	4.31	5.17	5.71	4.01	II
4	Share prices also depend on which party is in government	10.34	34.48	18.97	20.69	15.52	3.03	IV
5	Share prices are affected by strikes, bandh, blockade etc. in the country	35.34	40.52	11.21	6.03	6.90	3.91	III

The mean score and overall rank for each of the statements were calculated. The statement 'share prices are affected by political events' was ranked first by individual investors with mean score of 4.42, whereas, the statements 'Share prices are affected by frequent changes of government' and 'share prices are affected by the policies announced by the government' were ranked second with score 4.01 and 'share prices are affected by strikes,

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bandh, blockade etc. in the country' was ranked third and the rank fourth was the statement 'share prices also depend on which party is in government'.

The responses of the officials of listed companies were analyzed separately, mean score and overall ranks were calculated the results are presented in the Table 5.16. The statement 'share prices are affected by political events' was ranked first with mean score of 4.59 by Officials of the listed companies.

Table 5.16

Analysis of responses of Officials of listed companies on five point Likert scale

S.No.	Statements	Strongly Agree	Agree	Do not Know	Disagree	Strongly Disagree	Mean Score	Rank
1	Share prices are affected by political events	73.8	19	2.4	2.4	2.4	4.59	I
2	Share prices are affected by frequent changes of government	35.7	50	9.5	2.4	2.4	4.14	II
3	Share prices are affected by the policies announced by the government	23.8	59.5	4.8	2.4	2.4	3.79	IV
4	Share prices also depend on which party is in government	2.4	40.5	14.3	23.8	19.1	2.84	V
5	Share prices are affected by strikes, bandh, blockade etc. in the country	33.3	40.5	11.9	9.5	2.4	3.86	III

The statements 'Share prices are affected by frequent changes of government' was ranked second and 'share prices are affected by strikes, bandh, blockade etc. in the country' was ranked third, rank fourth is the statement Share prices are affected by the policies announced by the government and at last 'share prices also depend on which party is in government'. In view of the both category of investors, the political events and the frequent changes of government has high impact on the stock prices.

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Thus, it is observed from the analysis that share returns are affected by political events, frequent change of government and changes of government policies. These results are fairly consistent with the responses of the individual investors listed.

Cross Table Analysis of Responses

Analysis of the individual investors

Cross table analysis was also carried out to find whether there is any relation between age, qualification and years of stock market experiences and the kind of responses made particularly to three major political events: like the frequent government changes, national election and political uncertainty. Table 5.17 presents the results of the analysis of individual investors.

It was found that the "Change of government affect stock market" received positive responses from majority of the investors of all age group, education level and years of experience in stock market. This showed that investors of all age group, qualification and experience level think that the stock returns are affected by frequent changes in the government. Hence, it can be said that the responses are fairly independent of the age, qualification and years of experience in the stock market.

To the statement, "as the national election approaches what will happens to share price" the responses of investors of different age, education and years of experience had mixed responses. There was no relation between age group, education level and level of experience in stock market.

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Table 5.17

Relation of age, education and experience to responses

Profile of respondent	Change of government affect stock market				As the national election approaches share price			
	Yes	No	Do not know	Total	Increase	Decrease	No change	Total
Age of the respondent								
20-30 years	29	2	3	34	8	11	13	32
31-40 years	51	4	3	58	15	21	22	58
41-50 years	13	1	3	17	6	10	1	17
Above 50 years	7	0	0	7	0	3	4	7
Total	100	7	9	116	35	39	40	114
Education of respondent								
Master	77	4	8	34	25	34	28	87
Graduate	22	3	1	58	4	12	10	26
Total	99	7	9	17	34	39	40	113
Years of experience in stock market								
Less than 5 years	52	5	6	63	15	20	27	62
5-10 years	16	1	1	18	4	10	4	18
More than 10 years	32	1	2	35	10	15	9	34
Total	100	7	9	116	35	39	40	114

Another cross tabulation analysis was also carried out to test the relation between age, qualification and years of experience of the individual investors on the effect of political uncertainty and its effect on the stock market and the results are given in Table 5.18. Majority of the investors of all age group, educational qualification and years of experience in stock market strongly agreed that the political uncertainty affects stock return.

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Table 5.18

Political uncertainty affects stock return

Profile of respondent	Strongly agree	Agree	Do not know	Disagree	Strongly disagree	Total
Age of the respondent						
20-30 years	22	11	0	0	1	34
31-40 years	38	10	5	3	1	57
41-50 years	10	5	0	0	0	15
Above 50 years	5	1	1	0	0	7
Total	75	27	6	3	2	113
Education of respondent						
Master	59	19	5	2	2	87
Graduate	15	8	1	1	0	25
Total	74	27	6	3	2	112
Years of experience of respondent						
Less than 5 years	42	15	4	1	0	62
5-10 years	13	1	1	1	1	17
More than 10 years	20	11	1	1	1	34
Total	75	27	6	3	2	113

Cross table analysis of the responses of the officials of listed companies

Cross table analysis was also carried out to the responses of the officials of listed companies to test whether there is any relationship between the industry groups on the responses to effect of election on stock market. The results in Table 5.19 show that except for hotel industry all other industries' respondents believed that as the election approached, the stock prices decreased. However, small percentage of responses in all industries categories expressed that the stock price would increase or not change with election. Out of the total responses from all industries, around 58.5 percent of respondents believed that stock prices decreased as the national election approached.

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Table 5.19

Responses of industry to national election

Industry	Increase	Decrease	No change	Total responses
Commercial Banks	26.3%	52.6%	21.1%	19
Insurance Company	7.7%	53.8%	38.5%	13
Hydropower	0.0%	75.0%	25.0%	4
Hotel	100.0%	0.0%	0.0%	2
Manufacturing and Production	0.0%	50.0%	50.0%	2
Others	0.0%	100.0%	0.0%	1
Total	14.6%	58.5%	26.8%	41

Cross table analysis was also carried out to check the relation between industry response on the effect of government changes and its effect on stock returns, and the results are presented in Table 5.20.

Table 5.20

Responses of industry to government changes

Industry	Yes	No	Do not know	Total
Commercial Banks	89.5%	5.3%	5.3%	19
Insurance Company	84.6%	7.7%	7.7%	13
Hydropower	75.0%	0.0%	25.0%	4
Hotel	100.0%	0.0%	0.0%	2
Manufacturing and Production	100.0%	0.0%	0.0%	2
Others	100.0%	0.0%	0.0%	2
Total	88.1%	4.8%	7.1%	42

The findings bring forward that all the industries believed that the frequent change in government affect the stock returns. However, small percentage of the respondents still mentioned that government changes do not affect stock market returns.

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Industry response to political events and its effect on stock market was also analyzed by the use of cross tabulation analysis. The relation between the industry responses on the effect of political uncertainty is given Table 5.21.

Table 5.21

Responses of industry to political events

Industry	Strongly agree	Agree	Disagree	Strongly disagree	Total Response
Commercial Banks	78.9%	15.8%	0.0%	5.3%	19
Insurance Company	66.7%	33.3%	0.0%	0.0%	12
Hydropower	75.0%	25.0%	0.0%	0.0%	4
Hotel	50.0%	0.0%	50.0%	0.0%	2
Manufacturing and Production	100.0%	0.0%	0.0%	0.0%	2
Others	100.0%	0.0%	0.0%	100.0%	2

It is evident that very high percentage of responses from all industries strongly agreed that political uncertainty affected stock returns. This conclusion applies equally to all industries across the board.

The Main Factors Affecting Stock Returns

At the end, an open ended question inquired on the perception of the individual investors on main factors that affected stock prices. The opinion of the investors were analyzed and presented in Table 5.22. According to results the three main factors those affected stock prices were 1) Manipulation by bigger investors 2) Political situation of country and 3) Performance of firm. As the Nepalese stock market is not fully developed and the market operative mechanism is also not fully computerized therefore there is a possibility that some of the main players of the market can distort market.

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Table 5.22

Main factors that affect stock market

Main factor	Responses			Mean score	Overall Ranking
	1	2	3		
Political situation of country	23	7	28	1.8	II
Company performance	13	19	13	2.1	III
Manipulation and perception of big investors	13	10	12	1.7	I

These results also reinforced the outcome of individual questions and the results of the five point Likert scale analysis. This supports on the reliability of findings because same conclusions are drawn from different analysis.

Concluding Remarks

The primary survey explored the perception of individual investors and official of listed companies of Nepalese stock market on political uncertainty and its effect on stock returns. The two separate questionnaires were used to collect the responses of these two groups of investors. Most of the questions in both the questionnaires were same; this is done in the expectation to get separate responses on the same issue. 116 and 42 usable responses were collected from individual investors and officials from listed companies respectively. A number of statistical tools were used to analyze the responses. In the individual investor category, most of the respondents were middle-aged highly educated persons. Majority of the respondents were service holder which implied that they were casual investors on the stock market. Large percentage of the respondents was new in the stock trading and had less than five years of experiences. The respondents of officials of listed companies were mostly managers and officers having more than ten years of experience in stock trading and were from six industry groups active in the stock market. Majority of the responses were from commercials banks and insurance companies. There were representative responses from hotel,

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hydropower, manufacturing and others industries as well. The analysis was based on the various issues raised by questions in the questionnaire. The questions were collectively analyzed since they were based on the common themes. The results of the analysis showed that most of the investors were interested to buy stock of commercial banks in the IPO in expectation that the prices of the stock purchased would increase and firm would give cash and stock dividend. Majority of the surveyed investors believed that political events and government policies affected stock prices. However, on the effect of the national election on the stock returns the respondents were not very sure.

It could also be observed based on the five point Likert scales that share returns were affected by political events, frequent change of government and changes in government's policies. Majority of the investors of Nepalese stock market do not think that stock price reflected publicly available information hence there existed an opportunity to earn more by using publicly available information. The investors were of the opinion that the past price change pattern could not be used to predict future price. The investors of all age group, educational qualifications and years of experience in stock market strongly agreed that political uncertainty affected stock return. The findings also brought forward that all the industries believe that frequent change in government affected stock returns. There was no significant difference in the responses of the individual investors and officials of the listed.

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CHAPTER VI

SUMMARY, DISCUSSIONS AND IMPLICATIONS

Summary

Business and economic activities are very much governed by political environment of the country. Stock market is one of the very sensitive sectors which realize immediately the effect of the political events, policies decisions and other economic activities of the nation. Political uncertainty can take different forms e.g. frequent changes of governments, national elections, happening of important political events. In a democratic system, elections are the major political events that re-distribute political power to different political parties which may have different political ideologies and development policies to be implemented. This has important implications for government formation and for future political and economic courses of the countries, as well as creating uncertainty to both domestic and foreign investors. In such context, this study focuses on the impact of the political uncertainty and its effect on the stock returns.

The main objective of this study is to examine the effect of political uncertainty on output and stock returns in Nepal. The specific objectives are: 1) To determine the effect of major political events on stock return and stock market volatility, 2) To analyze and compare the effect of government changes on stock return and stock market volatility. 3) To compare the changes in stock returns and stock market volatility before and after national elections. 4) To establish relations between stock return, stock market volatility and industrial output. 5) To survey the perception of investors on the effect of major political uncertainty on output and stock returns.

This sort of research perhaps is the first of its kind in Nepalese stock market to analyze primary and secondary data to find the effect of political uncertainty on stock returns. The

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research design adopted in the study consists of descriptive and causal comparative research designs to deal with the various issues raised. In the secondary data analysis, the daily, monthly and quarterly NEPSE, sub-sector indices, industrial production index, consumer price index and stock index were analyzed. The daily data (2003- 2010) on sub-sectors namely commercial banks, manufacturing & processing, hotel, other, trading, insurance companies, finance companies, development banks, NEPSE, hydropower were taken to find the impact of political event in each individual industry. Secondary data were collected from various published sources viz., annual, monthly, weekly reports of Nepal Stock Exchange Ltd. (NEPSE), annual reports of Securities Board of Nepal (SEBON), annual reports, economic reviews, occasional papers of Nepal Rastra Bank. The necessary data and information were also collected from various web sites www.nepalstockexchange.com.np,www.cidob.org/np, www.idea.int/asia_pacific/nepal, www.election.gov.np. www.rnb.np/ofg.

The responses of individual investors and officials of the listed companies were collected to analyze primary data on the issues raised. Individual investors of different age groups, educational qualifications, and years of experiences were selected on the basis of convenient sampling. Officials of the listed companies were selected and contacted personally for their responses. Two types of simple and straight-forward questionnaires seeking the responses of the investors on effect of political events on stock market were designed and circulated to two groups of investors. Altogether 158 responses were received, 116 from individual investors and 42 from the officials of listed companies belonging to six different industries.

A number of analytical tools were used to present and explain the pattern of movement of stock indices with political events. Graphical presentations showed the pattern of movement of stock indices with time and events. Event study method (constant return method) was used to

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find the effect of particular event on stock return of individual industry. The variance analysis (F test) was carried out to test the difference in two variances, 21 days before and after the event. In order to analyze the effect of the government changes, mean and standard deviation comparison of the stock returns was done. The monthly NEPSE index (1994- 2010) was analyzed to estimate the effect of particular government and of national election on the stock index. Regression models were used to estimate the relation between stock return & stock volatility & industrial production, stock return & ruling governments, stock return & before/after national elections. SPSS 16 software was used to analyze the data and run regression models. The analysis has brought forward some of the important findings on the effect of political uncertainty on stock return in Nepalese stock market.

Major Findings of the Study

1. The study on the effect of political uncertainty on stock returns found that stocks returns were affected by political uncertainty. The impact of individual political event had mixed effect on stock return of different industries.
2. It was found that stock returns were affected by frequent change of governments. During the ruling of Nepali Congress led by Mr. Krishna Prasad Bhattarai and Mr. Girija Prasad Koirala the excess stock returns were positive. This could be due to the fact that the government of Mr. Krishna Prasad Bhattarai was formed after Nepali Congress won majority in the parliament after 1999 parliamentary election. Similarly, the government of Mr. Koirala was formed after stepping down by King Gyanendra. In both cases these governments were formed to bring some kind of political stability. It was found that out of ten sub-sector indices, eight were highest during the Nepali Congress's government

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with Mr. Koirala as the prime minister. Some political parties are perceived by stock market as friendly as in US Democratic Party is considered (Nofsinger,2004).

3. Stable governments are good for the stock market. The stock indices moved up noticeably after the signing of the comprehensive peace accord (CPA) between the then government and the Maoist, which formally ended the ten years' long people's war. Signing of CPA had raised hope for political stability which might have increased investors' confidence on stock market; the NEPSE index had been observed comparatively stable after signing of CPA.
4. It was found that volatility and stock returns were related to each other, this study had observed that volatility was high at the time of high rise and fall in the value of the stock indices.
5. The study also concluded that excess returns had different responses to different political parties' government. Nepali Congress Party and the direct rule of King had positive effect whereas Rastriya Prajatantra Party, United Marxist Leninist and Maoist Party had negative effect. According to the regression results, during Nepali Congress and King;s governments excess returns were positive, whereas, the governments of other three parties were not favorable to the stock returns as indicated by negative value of excess returns. This could due to short life and the unstable political situation of the country.
6. Some political events had more impact than others. For example the events which are related to bringing Maoists in the democratic process and toppling of Shah Dynasty had positive effect to the stock returns. On the other hand, event like massacre of King Birendra's family and resignation of Maoist led government had negative impact on the stock returns.

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7. Government policies also affected the stock market. Policies like voluntary declaration of income increase in capital gain tax, tax clearance for stock and land purchase etc. introduced in Maoists' regime had adverse effects on stock indices. These policies might have created confusion among the investors.

8. The effects of the national election on stock returns were not very clear. As the national election approached, excess returns were negative but the results were not very consistent as patterns of movement of the stock indices in the three different elections were different. The primary data analysis of the individual investors and the officials of the listed companies were not very conclusive either.

9. It was found that negative volatility has relation with industrial production in Nepali stock market. One unit increase in negative volatility decreases in industrial production by 1.8% .

10. It was found that investors want to buy stock in Initial Public Offering (IPO) because shares were considered more profitable for sale in the secondary market. Mostly individual investors, who bought share to keep for long time, that the shares would have higher prices in secondary market later and also anticipated dividends.

11. Policies announced by government in budget speech affected stock market's performance. If the policies were favorable to stock market, the stock prices would increase. Government could liberalize or tighten its policies on the stock market through its policies.

12. It was found that information had effect on the stock market in Nepal. An individual having the public, private information and financial performance of a firm can beat the stock market. The profit posting of firm would have better response on stock market.

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13. Investors of all age group, educational qualification and years of experience in stock market strongly agreed that political uncertainty affected stock return. The findings also reinforced the belief of industries that frequent change in government affected stock returns. There was no significant difference in responses of the individual investors and officials of the listed companies on the issues. Even the different industry groups had the same responses on different issues analyzed.
14. Strong and persistent political events like *Jana-yudhdha* affected the stock market. This was because the investors had already experienced Maoist-led People's war, which had negative effect on the economic activities and to the stock market of Nepal.
15. According to investors, three main factors those affected stock returns are 1) Manipulation by bigger investors 2) Political situation of country and 3) Performance of firm.

Discussions

The major finding of the study was that political uncertainty affected the stock returns in Nepalese stock market. This finding is in line with the finding of Perotti and Oijen (2001) which reported that changes in political risk in general tend to have a strong effect on local stock market development and excess returns in emerging economies. Chan, Chui, and Kwok (2001) found that political news had a distinct impact on market activity when compared with economic news. Bilson, Brailsford, and Hooper (2002) investigated the relation between political risk and stock returns within the context of emerging markets in the Pacific-Basin. Nofsinger (2004) stated that the stock market is a barometer of public sentiment and its movements can indicate whether incumbents will be re-elected or not. Beaulieu et al. (2006) showed that the stock market

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was directly influenced by the political risk and uncertainty. It implied that event-announcement may create abnormal returns to shareholders.

It was found that frequent changes of governments had affected stock return. The stock market performances were different for different parties' governments. Nepali Congress Party under the leadership of Mr. Girija Prasad Koirala had been favorable to stock returns. During other parties' governments, impacts were seen but not statistically significant. These findings could be compared with the finding of Santa-Clara and Valkanov (2003) which found that in the United States, the market excess return was higher under Democrat than Republican presidencies throughout the period from 1927 to 1998. Riley and Luksetich (1980) found that the market responds favorably in the short-run to a Republican victory, but there is no long-term response to this political outcome. Nofsinger (2004) pointed out that the evidence of a better stock market performance during democrat presidencies, in USA, is likely to be spurious. Kiewiet (1985) tested the hypothesis that voters in the United States did in fact recognize the Democratic Party as the one that fights unemployment and the Republican Party as the one that fights inflation. Havrileski (1985) found that changes of administration from Republican to Democratic have been associated with upward jumps in money growth; conversely, downward jumps are observed when a Republican administration is elected after a Democratic one. Ferguson and White (2006), Bittingmayer (1998), Fong and Koh (2003) found the investors' preference of political regimes and effect of political instabilities and uncertainties in the stock market. Other studies by Hensel and Ziemba (1995), Johnson, Chittenden, Jensen (1999), and Siegel (1998) have documented the difference in stock returns under Republican and Democratic presidents in the USA.

It was also found that national election affected stock returns, but patterns of movement of stock returns as election approached were not very clear. The responses of both individual

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investors and officials listed companies on effect of national election on stock prices were not conclusive either. Similar findings were found in the study by McAleer and Wong (2007) who explored the existence of the Presidential Election Cycle in the USA stock market based on Presidential Elections that occurred every four years. Santa-Clara and Valkanov (2003) found that the difference in returns could not be explained by business cycle variables that were related to expected returns, and were not concentrated around election dates. Gartner and Wellershoff (1995) observed the effect of general elections on stock returns. Cooper (2005) showed that political cycles and election cycles were independent of other observed market anomalies. The question of how election cycles persisted in asset returns remained unanswered and a puzzle.

This study also concluded that industrial output, stock returns volatility and inflation had relation in Nepalese stock market. It is found that negative volatility was related to industrial production, one unit increase in negative volatility is matched with 1.8% decrease in industrial productivity. These findings were similar to that of Huang and Kracaw (1984) which found the causal link between volatility and business slumps. Bodie (1976) found from 1953-1972 that common stocks were poor hedge against inflation. Cohn and Lessard (1980) found that stock prices in many industrial countries were negatively related to nominal interest rates and inflation. Bittlingmayer (1998) found a significant impact of political uncertainty on recession and market volatility. Political party differences in economic policy had the potential to move the economy along different time paths, which should manifest in different returns to stockholders (Li and Born, 2006). Alesina et al. (1997) offered convincing evidence that political variables had an impact on the state of the macro economy and found that ruling of particular party or presidential cycles have effect on the economy which was also reflected in the country's stock market.

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Cukierman (1980) and Bernanke (1983) provided formal model in this issue and concluded that political uncertainty was negatively related to output.

As discussed above, the findings of this study are in line with the standard studies carried out in the developed economies having matured stock markets. Hence, it can be concluded that the political events which created uncertainty to the stock investors affected stock returns in the Nepalese stock market also.

Implication of the Study

This study explored many aspects of the impact of political uncertainty on the stock returns and brought forward some useful findings. Some of the findings are robust because different analysis and statistical tools used have given same or similar conclusions. Based on the analysis and findings the study puts forth some practical implications to various stakeholders related to stock market of Nepal.

1. **Implications to political parties:** As it is found that political uncertainty is not good for the stock return, therefore, political parties need to work for minimizing the situation of political uncertainty in the country. It is good for the stock market and to the investors if the political parties try to clear confusion regarding political deadlocks and instability early stage. This study suggests that stable governments are favorable to stock market. Therefore, political parties could work together and try to form stable government.
2. **Implication to investors:** The volatility of the stock prices is high at the time of political uncertainty and when the stock indices are at highest or lowest; therefore, investors who could assess the situation properly may get extra benefits. A political event has mixed effect to the stock of different industries; therefore, investors could carry out detail analysis on the effect of the event to the particular industry before making the share purchase decision.

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3. **Implication to regulators:** The government policies on stock market affect stock returns. All the investors may not be able to understand the technical things in the policies and may incur losses. If institutions like NEPSE, SEBO/N or other investment forums could run investors' education/awareness programs on the effect of new policies on stock market it will be good for stock market.

Study revealed that there is information effect on the stock market. This indicates that there are chances of information leakage in the market. Such activities are against the norms of efficient market; therefore, stock market regulators need to sense such situations at its early stage of development and take strong steps to avoid such activities. Industrial output, stock volatility and political events are related to each other. Therefore, it is always good to have control over unprecedented volatility in the stock market for which regulating authority like Security Board of Nepal needs to work on timely measures to control it.

4. **Implication to Firms:** Individual investors prefer to purchase shares in IPOs, therefore, it is good for firms to collect more capital from individual investors, for which, they need to offer large numbers of shares at the time of IPO. Majority of investors prefer to purchase shares of the firms they perceive less risky (e.g. Commercial Bank), therefore, it is good for other industries also to make more promotional activities and present their performance and to raise confidence of the investors to attract investments in their sectors.

The main expectation of the investors from share purchase is to increase the price of the share and also to get dividends. In order to gain investors' confident on these things, firms need to focus on the strategy to increase prices of its share and declare the dividend at right time. As image of the group also matters, therefore, firms can carry promotional activities and discharge some corporate social responsibility to increase public relation of the firm.

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5. **Research Implications:** The study on the effect of political events on the stock market is very interesting as well as relevant in the context of the country like Nepal, where stock market is at its early stage of development, on one side, and the country is politically unstable on the other. Therefore, this study will create foundation for the possible approaches for future.

A study should cover large period and use more data to make the findings of the study more robust and reliable. Therefore, in order to refine the finding of this study a more comprehensive study which covers longer periods and uses more data, variables and respondents will be useful. The future studies could analyze the effect of political uncertainty on stock return, market capitalization, trading volume etc. This study only covers the effect of domestic political events on the stock returns of Nepal. It would be relevant to have a study which also includes the effect of global political events in the regional stock exchanges including Nepalese stock exchange.

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Survey Questionnaire ANNEX A
On
"Output, Stock Returns and Political Uncertainty: The Nepalese Evidence"
(For Investors)

Name (Optional): Sex: Age Code:

Profession: Qualification:

1. For how many years, you are in the share business? (Please make a tick mark)
   a. Less than 5years b. 5- 10years c. More than 10 years.

2. What are your expectations from the investment in shares? (Please rank in order of their importance by assigning 1 to the most important and so on).
   a. Cash dividend ( )
   b. Increase in share price ( )
   c. Bonus shares ( )
   d. Right shares ( )
   e. To control management ( )
   f. Others (Please specify) ( )

3. From which market do you normally buy shares? (Please make a tick mark)
   a. Primary market - IPO
   b. Secondary market
   c. Both

4. In general, which industry's share you would like to buy most? (Please rank in order (in bracket) of their importance by assigning 1 to the most important and so on).
   a. Banks ( )
   b. Hotel ( )
   c. Hydropower ( )
   d. Trading ( )
   e. Finance company ( )
   f. Manufacturing companies ( )
   g. Insurance company ( )

5. Which of the following, you think is important in making purchase decision of share of a firm? (Please rank in order (in bracket) of their importance by assigning 1 to the most important and so on).
   a. Firm's performance (profitability) ( )
   b. Company Group image ( )
   c. Last dividend paid by firm ( )
   d. Go with market trends ( )
   e. Evaluate company fundamental ( )
   f. Carry technical analysis ( )

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6. In your experience, do you think that a new budget speech will affect share prices? (Please make a tick mark).
   a. Yes b. No c. It depends

7. Do you think that price fluctuation (volatility) is normally high when political situation of the country is unstable? (Please make a tick mark).
   a. Yes. b. No. c. Do not know.

8. Do you think that the announcement of a new parliamentary election would increase/decrease/not change the share prices will? (Please make a tick mark).
   a. Increase b. Decrease c. No change

9. In Nepal, share price change is not a random phenomenon. What do you think are the reason? (Please rank in order (in bracket) of their importance by assigning 1 to the most important and so on).
   a. Stock market is in early stage of development ( )
   b. Poor performance of the market intermediaries ( )
   c. Speculative behavior of the investors ( )
   d. Hidden information ( )
   e. Lack of professionalism ( )
   f. Other (please specify) ( )

10. Do you think that frequent change of government affects the share price? (Please make a tick mark).
    a. Yes b. No c. Do not know

11. In your experience Maoist led **Janayudha** has affected the growth of the stock market of Nepal? (Please make a tick mark).
    a. Yes b. No c. Do not know

12. When the economy of the nation is in booming stage and there are very good opportunities for investment. In that case do you think that the stock price will?
    a. Increase b. Decrease c. No change

13. Do you think that share prices on the stock exchange fully reflect the publicly available information? (Please make a tick mark).
    a. Yes b. No c. Do not know

14. Do you think that insider's information can be used to beat the market in the Nepalese stock market? (Please make a tick mark).
    a. Yes b. No c. Do not know

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15. In your opinion, which factor is more responsible for the deficiency in the development of the stock market in Nepal? (Please rank in order (in bracket) of their importance by assigning 1 to the most important and so on).
    a. Government policy regarding stock market ( )
    b. Market operation system ( )
    c. Company information ( )
    d. Lack of profitability of the company ( )
    e. Due to buying and selling behavior of the investors ( )
    f. Other (please specify) ( )

16. Which of the following factors do you think adversely affect the growth of the stock market in Nepal? (Please rank in order (in bracket) of their importance by assigning 1 to the most important and so on).
    a. Instability in political situation of the country
    b. Declining growth rate in the economy
    c. Deteriorating balance of payment position
    d. Decline in Industrial growth of the nation (add more)
    e. Others (please specify)

17. Do you think that future price changes of a given firm can be predicted from historical price changes? (Please make a tick mark).
    a. Yes b. No c. Do not know

18. Do you think that the frequent release of financial information changes the share prices of the company? (Please make a tick mark).
    a. Yes b. No c. Do not know

19. How far do you agree with the following statements on share price behavior in Nepal (Please make a tick mark at the appropriate number as per following scheme). 1= Strongly agree, 2- Agree, 3- Don't know, 4= Disagree, 5= Strongly disagree.

S.no.	Statements	1	2	3	4	5
1	Share prices are affected by political events					
2	Share prices are affected by frequent changes of government					
3	Share prices are affected by the policies announced by the government					
4	Share prices also depend on which party is in government					
5	Share prices are affected by strikes, bandh, blockade etc. in the country					

20. Any other reasons or factors that affect the share prices in Nepal?
    a.
    b.
    c.

Thank you.

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Survey Questionnaire ANNEX B
On
"Output, Stock Returns and Political Uncertainty: The Nepalese Evidence"
(For Official of Listed Companies)

Name of the respondent (optional): Position:

Name of the firm: Address:

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1. Since how many years your firm is listed in the share market? (Please make a tick mark)
   a. Less than 5 years b. 5- 10years d. More than 10 years.

2. What are expectations of your firm from listing in the stock market? (Please rank in order of their importance by assigning 1 to the most important and so on).
   a. Cash dividend ( )
   b. Increase in share price ( )
   c. Bonus shares ( )
   d. Right shares ( )
   e. To control management ( )
   f. Others (Please specify) ( )

3. From which market do you think firms normally buy shares? (Please make a tick mark)
   d. Primary market - IPO
   e. Secondary market
   f. Both

4. In general, which industry's share you think investors would like to buy most? (Please rank in order (in bracket) of their importance by assigning 1 to the most important and so on).
   a. Banks ( )
   b. Hotel ( )
   c. Hydropower ( )
   d. Trading ( )
   e. Finance company ( )
   f. Manufacturing companies ( )
   g. Insurance company ( )

5. Which of the following, do you think, is important for investors in making purchase decision of share of a firm? (Please rank in order (in bracket) of their importance by assigning 1 to the most important and so on).
   a. Firm's performance (profitability) ( )
   b. Company Group image ( )
   c. Last dividend paid by firm ( )
   d. Go with market trends ( )
   e. Evaluate company fundamental ( )
   f. Carry technical analysis ( )

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6. In your experience, do you think that a new budget speech would affect share prices? (Please make a tick mark).
   a. Yes b. No c. Depends on government policies

7. Price fluctuation (volatility) is normally high when political situation of the country is unstable? (Please make a tick mark).
   a. Yes. b. No. c. Do not know.

8. In general, if the Government announces a new parliamentary election, do you think that the share prices will? (Please make a tick mark).
   a. Increase b. Decrease c. No change

9. In Nepal, share price change is not a random phenomenon. What do you think are the reason? (Please rank in order (in bracket) of their importance by assigning 1 to the most important and so on).
   a. Stock market is in early stage of development ( )
   b. Poor performance of the market intermediaries ( )
   c. Speculative behavior of the investors ( )
   d. Hidden information ( )
   e. Lack of professionalism ( )
   f. Other (please specify) ( )

10. Do you think that frequent change of government affects the share price? (Please make a tick mark).
    a. Yes b. No c. Do not know

11. In your experience Maoist led **Janayudha** has affected the growth of the stock market of Nepal? (Please make a tick mark).
    a. Yes b. No c. Do not know

12. When the economy of the nation is in booming stage and there are very good opportunities for investment. In that case do you think that the stock price will?
    a. Increase b. Decrease c. No change

13. Do you think that share prices on the stock exchange fully reflect the publicly available information? (Please make a tick mark).

    a. Yes b. No c. Do not know

14. Do you think that insider's information can be used to beat the market in the Nepalese stock market? (Please make a tick mark).
    a. Yes b. No c. Do not know

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15. In your opinion, which factor is more responsible for the deficiency in the development of the stock market in Nepal? (Please rank in order (in bracket) of their importance by assigning 1 to the most important and so on).

g. Government policy regarding stock market ( )
h. Market operation system ( )
i. Company information ( )
j. Lack of profitability of the company ( )
k. Due to buying and selling behavior of the investors ( )
l. Other (please specify) ( )

16. Which of the following factors do you think adversely affect the growth of the stock market in Nepal? (Please rank in order (in bracket) of their importance by assigning 1 to the most important and so on).

a. Instability in political situation of the country
b. Declining growth rate in the economy
c. Deteriorating balance of payment position
d. Decline in Industrial growth of the nation (add more)
e. Others (please specify)

17. Do you think that future price changes of a given firm can be predicted from historical price changes? (Please make a tick mark).

a. Yes b. No c. Do not know

18. Do you think that the frequent release of financial information changes the share prices of the company? (Please make a tick mark).

a. Yes b. No c. Do not know

19. How far do you agree with the following statements on share price behavior in Nepal (Please make a tick mark at the appropriate number as per following scheme). 1= Strongly agree, 2- Agree, 3- Don't know, 4= Disagree, 5= Strongly disagree.

S.no.	Statements	1	2	3	4	5
1	Share prices are affected by political events					
2	Share prices are affected by frequent changes of government					
3	Share prices are affected by the policies announced by the government					
4	Share prices also depend on which party is in government					
5	Share prices are affected by strikes, bandh, blockade etc. in the country					

20. Any other reasons or factors that affect the share prices in Nepal?

b.
b.
c.

Thank you.

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ANNEX C

ANALYSIS OF RANK TYPES QUESTION FOR THE RESPONSES OF THE LISTED COMPANY OFFICIALS

Table C1

Expectation of the officials of listed companies in purchase of stock

Statements	Rankwise percentage of responses						Mean Score	Overall rank
	1	2	3	4	5	6		
Cash dividend	33.33%	19.05%	23.81%	11.90%	7.14%	4.76%	2.55	II
Increase in share price	40.48%	23.81%	14.29%	9.52%	4.76%	7.14%	2.36	I
Bonus shares	7.14%	35.71%	28.57%	21.43%	2.38%	4.76%	2.90	III
Right shares	4.76%	16.67%	14.29%	42.86%	11.90%	9.52%	3.69	IV
To control management	4.76%	9.52%	11.90%	7.14%	61.90%	4.76%	4.26	V
Others	8.00%	0.00%	0.00%	5.33%	10.00%	76.67%	5.60	VI

Table C2

Industry preferences of officials of listed companies in buying stock

Statement	Rankwise percentage responses							Mean Score	Overal l rank
	1	2	3	4	5	6	7		
Banks	88.1%	4.76%	0.00%	0.00%	0.00%	0.00%	7.14%	1.48	I
Hotel	2.38%	2.38%	0.00%	4.76%	23.81%	38.10%	26.19%	5.57	VI
Hydropower	9.52%	40.48%	4.76%	26.19%	7.14%	7.14%	4.76%	3.21	II
Trading	2.38%	7.14%	7.14%	7.14%	14.29%	19.05%	42.85%	5.52	VII
Finance company	0.00%	40.48%	38.10%	7.14%	9.52%	2.38%	2.38%	3.02	III
Manufacturing companies	0.00%	4.76%	11.90%	11.90%	28.57%	16.67%	26.19%	5.19	V
Others	0.00%	2.38%	30.95%	40.48%	11.90%	4.76%	9.52%	4.14	IV

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Table C3

Factor making purchase decision of the stock to officials of listed companies

Statements	Rankwise percentage of responses						Mean Score	Overal l rank
	1	2	3	4	5	6		
Firm's performance (profitability)	64.3%	16.7%	11.9%	2.4%	0.0%	4.8%	1.71	I
Company Group image	9.5%	33.3%	31.0%	11.9%	7.1%	7.2%	2.95	II
Last dividend paid by firm	9.5%	19.0%	14.3%	23.8%	11.9%	19.1%	3.60	III
Go with market trends	7.1%	7.1%	9.5%	31.0%	23.8%	21.4%	4.21	IV
Evaluate company fundamental	4.8%	16.7%	23.8%	14.3%	31.0%	9.5%	3.79	III
Carry technical analysis	4.8%	11.9%	9.5%	11.9%	16.7%	49.3%	4.60	V

Table C4

Reasons of slow movement of Nepalese stock market in the view of officials of listed companies

Statements	Rankwise percentage of responses						Mean Score	Overall rank
	1	2	3	4	5	6		
Government policy regarding stock market	57.1%	19.0%	7.1%	2.4%	2.4%	11.9%	2.10	I
Market operation system	11.9%	31.0%	28.6%	14.3%	9.5%	4.8%	2.93	II
Company information	11.9%	23.8%	21.4%	33.3%	7.1%	2.4%	3.07	III
Lack of profitability of the company	4.8%	11.9%	21.4%	31.0%	28.6%	2.4%	3.74	V
Due to buying and selling behavior of the investors	14.3%	14.3%	19.0%	7.1%	40.5%	4.8%	3.60	IV
Other (please specify)	2.4%	2.6%	8.6%	8.4%	9.9%	68.1%	5.62	VI

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Table C5

Reasons of slow movement of Nepalese stock market in the view of officials of listed companies

Statements	Rankwise percentage of responses						Mean Score	Overall rank
	1	2	3	4	5	6		
Government policy regarding stock market	57.1%	19.0%	9.1%	5.4%	4.5%	4.8%	2.10	I
Market operation system	11.9%	31.0%	28.6%	15.3%	9.5%	3.8%	2.93	II
Company information	11.9%	23.8%	21.4%	33.3%	7.1%	2.4%	3.07	III
Lack of profitability of the company	4.8%	11.9%	21.4%	31.0%	28.6%	2.4%	3.74	V
Due to buying and selling behavior of the investors	14.3%	14.3%	19.0%	7.1%	40.5%	4.8%	3.60	IV
Other (please specify)	1.1%	2.6%	4.8%	7.2%	12.2%	72.1%	5.62	VI

Table C6

Factor adversely affects the growth of stock market

Statements	Rankwise percentage of responses					Mean Score	Overal l rank
	1	2	3	4	5		
Instability in political situation of the country	75.8%	9.1%	7.1%	2.5%	5.4%	1.69	I
Declining growth rate in the economy	21.0%	31.6%	26.8%	16.3%	5.0%	2.76	II
Deteriorating balance of payment position	2.4%	11.5%	38.9%	40.7%	6.5%	3.60	IV
Decline in Industrial growth of the nation	0.0%	42.1%	18.7%	28.6%	3.6%	3.24	III
Others (please specify)	0.0%	0.0%	4.5%	4.5.0%	91.0%	4.95	V

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Table C7

Reasons for share market not being random

Statements	Rankwise percentage of responses						Mean Score	Over all rank
	1	2	3	4	5	6		
Stock market is in early stage of development	23.8%	11.9%	16.7%	11.9%	26.2%	9.5%	3.33	IV
Poor performance of the market intermediaries	11.9%	16.7%	31.0%	31.0%	7.1%	2.4%	3.12	III
Speculative behavior of the investors	35.7%	9.5%	26.2%	16.7%	9.5%	2.4%	2.62	II
Hidden information	9.5%	19.0%	11.9%	23.8%	31.0%	4.8%	3.62	V
Lack of professionalism	16.7%	33.3%	11.9%	14.3%	19.0%	4.8%	3.00	I
Other (please specify)	13.3%	13.3%	0.0%	0.0%	13.3%	59.4%	5.52	VI

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CALCULATION OF MEAN SCORE AND OVERALL RANK FOR RANKING QUESTIONS TO OFFICIALS OF LISTED COMPANIES

ANNEX D

Table D1

Calculation of mean score and overall rank for ranking questions to officials of listed companies

Question	Statements	R1	1	2	3	4	5	6	Mean Score	Over all Rank
Q2	a. Cash dividend		34.15%	19.51%	24.39%	12.20%	7.32%	2.44%	2.46	II
	b. Increase in share price		42.50%	25.00%	15.00%	10.00%	5.00%	2.50%	2.18	I
	c. Bonus shares		7.50%	37.50%	30.00%	22.50%	2.50%	0.00%	2.75	III
	d. Right shares		5.13%	17.95%	15.38%	46.15%	12.82%	2.56%	3.51	IV
	e. To control management		5.00%	10.00%	12.50%	7.50%	65.00%	0.00%	4.18	V
	f. Others (Please specify)		27.27%	0.00%	0.00%	9.09%	0.00%	63.64%	4.45	VI
			1	2	3	4	5	6	7	Mean Score
Q4	a. Banks		92.50%	5.00%	0.00%	0.00%	0.00%	0.00%	4.76%	1.36
	b. Hotel		2.50%	2.50%	0.00%	5.00%	25.00%	40.00%	4.76%	4.26
	c. Hydropower		9.76%	41.46%	4.88%	26.83%	7.32%	7.32%	2.38%	3.12
	d. Trading		2.63%	7.89%	7.89%	7.89%	15.79%	21.05%	9.52%	3.46
	e. Finance company		0.00%	41.46%	39.02%	7.32%	9.76%	2.44%	2.38%	3.09
	f. Manufacturing companies		0.00%	5.00%	12.50%	12.50%	30.00%	17.50%	4.76%	3.86
	g. Others		0.00%	2.44%	31.71%	41.46%	12.20%	4.88%	2.38%	3.73
			1	2	3	4	5	6	Mean Score	Over all Rank
Q5	a. Firm's performance (profitability)		65.85%	17.07%	12.20%	2.44%	0.00%	2.44%	1.61	I
	b. Company Group image		9.76%	34.15%	31.71%	12.20%	7.32%	4.88%	2.88	II
	c. Last dividend paid by firm		10.00%	20.00%	15.00%	25.00%	12.50%	15.00%	3.48	III
	d. Go with market trends		7.14%	7.14%	9.52%	30.95%	23.81%	21.43%	4.21	IV
	e. Evaluate company fundamental		4.88%	17.07%	24.39%	14.63%	31.71%	7.32%	3.73	III
	f. Carry technical analysis		5.00%	12.50%	10.00%	12.50%	17.50%	42.50%	4.53	V

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	Statements		1	2	3	4	5	6	Mean Score	Over all Rank
Q9	a. Stock market is in early stage of development		24.39%	12.20%	17.07%	12.20%	26.83%	7.32%	3.27	IV
	b. Poor performance of the market intermediaries		12.20%	17.07%	31.71%	31.71%	7.32%	0.00%	3.05	III
	c. Speculative behavior of the investors		35.71%	9.52%	26.19%	16.67%	9.52%	2.38%	2.62	II
	d. Hidden information		9.76%	19.51%	12.20%	24.39%	31.71%	2.44%	3.56	V
	e. Lack of professionalism		17.07%	34.15%	12.20%	14.63%	19.51%	2.44%	2.93	I
	f. Other (please specify)		13.33%	13.33%	0.00%	0.00%	13.33%	60.00%	4.67	VI
			1	2	3	4	5	6	Mean Score	Over all Rank
Q15	a. Government policy regarding stock market		61.54%	20.51%	7.69%	2.56%	2.56%	5.13%	1.79	I
	b. Market operation system		12.20%	31.71%	29.27%	14.63%	9.76%	2.44%	2.85	II
	c. Company information		12.20%	24.39%	21.95%	34.15%	7.32%	0.00%	3.00	III
	d. Lack of profitability of the company		4.88%	12.20%	21.95%	31.71%	29.27%	0.00%	3.68	V
	e. Due to buying and selling behavior of the investors		14.63%	14.63%	19.51%	7.32%	41.46%	2.44%	3.54	IV
	f. Other (please specify)		7.14%	0.00%	0.00%	21.43%	21.43%	50.00%	5.00	VI
			1	2	3	4	5	Mean Score	Over all Rank	
Q16	a. Instability in political situation of the country		81.58%	7.89%	7.89%	0.00%	2.63%	1.34	I	
	b. Declining growth rate in the economy		22.22%	33.33%	27.78%	16.67%	0.00%	2.39	II	
	c. Deteriorating balance of payment position		2.94%	11.76%	41.18%	44.12%	0.00%	3.26	IV	
	d. Decline in Industrial growth of the nation (add more)		0.00%	45.71%	20.00%	34.29%	0.00%	2.89	III	
	e. Others (please specify)		0.00%	0.00%	16.67%	0.00%	83.33%	4.67	V	

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MONTHLY NEPSE INDEX

ANNEX E

Table E1

Monthly Nepse Index

Year/ Month	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Janaury		195.25	206.53	179.44	170.60	181.67	269.96	464.76	255.92	200.80	201.95	235.61	305.50	537.09	958.91	654.81	512.34
February	100.00	205.17	195.47	180.07	176.63	178.48	285.30	455.34	236.01	213.31	211.31	257.29	317.69	523.94	814.43	663.52	485.14
March	97.78	191.67	193.64	188.36	180.36	180.17	329.20	395.85	193.83	209.66	207.80	280.65	339.79	494.08	714.76	667.20	443.12
April	135.53	204.67	183.99	180.83	158.86	188.38	331.76	369.05	216.21	214.08	201.22	293.26	334.77	494.59	746.69 ***	661.21	419.28
May	188.90	194.63	195.78	184.66	157.97	196.98**	364.22	353.18	239.09	207.45	204.35	255.42	372.01	513.45	806.26	660.96	457.81
June	264.97	194.05	180.34	176.89	159.95	212.39	338.76	348.43	226.04	207.65	213.12	277.79	386.83	675.04	930.65	678.74	455.48
July	226.03	195.48	185.61	176.31	163.31	216.92	360.70	342.62	227.65	204.86	222.04	280.67	389.32	683.95	963.36	749.10	
August	254.29	189.60	185.02	169.52	166.02	227.79	364.24	314.63	226.59	207.92	241.51	300.05	390.86	705.96	1084.76	721.95	
September	219.85	193.03	188.89	170.45	168.42	228.17	421.18	265.22	222.98	208.46	234.58	293.35	382.56	817.08	976.06	628.34	
October	231.81	205.05	181.64	169.43	168.75	245.41	433.92	281.21	219.26	207.54	231.31	297.34	358.44	861.37	933.97	609.55	
November	240.46 *	208.35	180.29	172.07	184.17	254.58	519.33	300.15	220.73	200.21	235.08	302.39	447.43	915.38	806.90	560.94	
December	209.96	207.03	179.04	170.16	187.16	254.30	480.05	284.48	214.57	201.94	236.38	303.12	508.55	1025.91	734.85	548.11	

*-First Election Month Nov 1994, **- Second Election Month May 1999, ***-Third Election Month April 2008.

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