Unanticipated Political Events and Stock Returns: An Event Study

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The study focuses on market reaction to announcements of new unanticipated political events using the event analysis methodology. The findings of the study provide a consistent conclusion regarding the existence of information content hypothesis in the Nepalese stock market. The study reveals that good-news (bad-news) political announcements generate positive (negative) abnormal returns in the post-event period. The data present important evidence on the speed of adjustment of stock prices to new political information, i.e., in as many as 2 to 3 days from the announcement date. Thus, this paper finds that the Nepalese stock market is inefficient at a semi-strong level, but there is a strong linkage between political uncertainty and common stock returns.

I. INTRODUCTION

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. Therefore, 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.

Beaulieu et al. (2006) dealt with the political risk and its impact on share price. Political risk is a global phenomenon that affects most national stock markets in the twentieth century. The study found that the uncertainty surrounding the referendum outcome had short run impact on stock returns of Quebec firm positively. Beaulieu et al. (2006) showed that the stock market was directly influenced by the political risk and uncertainty. It implies that event-announcement may create abnormal returns to shareholders.

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If the security prices reflect not only on the information that contains the past time series of stock prices but also on all publicly available information, then the market is said to be in a semi-strong form of efficiency. Generally, in the semi-strong form of market efficiency, announcement of new information immediately influences the investors' psychology. Thus, the stock market immediately reacts to the announcement of any new event including mergers and acquisitions, announcement of dividend and earning, issuance of new equity and debt, stock split, overseas listings, corporate name change, business expansion and macro-economic changes.

There are various factors that affect stock market price behaviour; they bring out over or under-reaction in the market. The study of events and stock price behaviour occupies an important place in financial management. The proposed study is focused on the short-run effect on stock price caused by the announcement of unanticipated important political events. This study mainly deals with unexpected political events, which create political risks and uncertainties in economic activities in the country. The Royal massacre, dissolution of the parliament, activities and announcements of Maoists and changes in governments are the major political events. The Royal massacre in 2001 has created greater political uncertainties. Dissolution of the parliament and changes in the government always threatens investors towards the economic policies and future uncertainties. The Maoist activities and their announcements influence investors' confidence both positively and negatively towards their investment risk. Similarly, investors perceive the political announcement in different ways, viz., as good news and bad news.

The next section reviews the literature on the subject. The objectives and methodology of the study are discussed in the third section. The fourth section presents the empirical results and the last section provides the conclusions.

II. LITERATURE REVIEW

The primary hypothesis for Efficient Market Hypothesis is that the prices accurately and quickly reflect all available information in such a way that one can 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 immediately after new information, it is considered as a more efficient market. There may be various reasons for the market for not being able to adjust quickly and correctly. Hadi (2006) explained further the alternative hypothesis, in which the security market is inefficient and the result of stock price is not accurately reflecting the new information. This might result from the following: (1) the investor is unable to interpret the new information correctly, (2) the investors have no access to the new information; (3) the transaction cost in trading security is an obstruction for free trading; (4) the restriction on short sale; and finally, (5) the investors might be misled by the change in accounting principles.

As per Fama (1970), the market efficiency can be classified into three levels on the basis of the information: (1) weak form efficiency where stock price fully reflects historical information of past prices and returns; (2) semi-strong form efficiency where stock prices fully reflect all information known to all market participants, i.e., public information; and (3) strong form efficiency where stock prices fully reflect all information including public and private information, known to any market participant.

After twenty years of market efficiency literature published in 1970, Fama (1991) proposed to change the categories of market efficiency, namely:

(1) Using *tests for return predictability* instead of weak-form tests, which are only concerned with forecast power of past returns, *i.e.,* how well do past returns predict future returns?
(2) Using *event studies* instead of semi-strong-form tests of the adjustment of prices to public announcements, *i.e.,* how quickly do prices reflect public information announcements? and
(3) Using *test for private information* instead of strong-form tests of whether specific investors have information in market prices or not, *i.e*., do any investors have private information that is not fully reflected in market prices?

The weak form 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 price reflects 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 form of market efficiency, there is semi-strong form 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.

Out of the three categories of market efficiency test, the current study seeks to focus exclusively on the semi-strong form of market efficiency because this form deals with how quickly the prices reflect the public information announcement and it specifically evaluates the event effect on the market returns.

A government usually attempts to steer its economy. News about future economic policies can be derived from political events such as elections, the formation of new government, changes in the composition of government, etc. 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. 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 party differences in economic policy have the potential to move the economy along different time paths, which should manifest in different returns to stockholders (Li and Born, 2006). This suggests a link between common stock returns and political outcomes.

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.

Vuchelen (2003) investigated whether Belgian elections and the ideological composition of the government may affect the performance of the Brussels stock market.

By using the multiple regressions model, the author reported that elections and new governments are events that supply information on future economic and financial policies. The results indicate that the ideological composition of the government is an important variable of stock market. The study suggests that the election and ideological composition of the government partners affect the common stock returns.

Martinez and Santiso (2003) provide the additional evidence on the political event. This article focuses on the interactions between politics and financial markets in emerging economies. More precisely, it examines how Wall Street reacts to major Latin American political events. The case study focuses on the 2002 Brazilian presidential elections. The specific case study of Brazil, analysed through the perceptions of Wall Street analysts and from a historical and quantitative economic perspective, has shown that these ties are strong for emerging markets. In fact, the essential character of emerging markets lies precisely in this intricate link between political uncertainty and financial volatility – what could be called the 'economic fog' of democratic uncertainty.

Li and Born (2006) has made an attempt to analyse 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 report 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 provides 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 is not in doubt. This evidence is consistent with the hypothesis that investors see a causal link between political uncertainty and common stock returns generation. It indicates that political uncertainty is observed by 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.

Beaulieu et al. (2006) examined the short run effect of the 30 October 1995 Quebec referendum on the common stock returns of 102 firms in Quebec in Canada. The study used GARCH model to measure the stock price volatility. The study found that the referendum outcome did affect portfolio returns of firms in Quebec. The effect of the referendum results on these stock returns is positive and statistically significant. The reaction of stock market is larger for domestic firms than multi-national firms. The study revealed that political uncertainty could affect short-run stock returns of Quebec and Canadian firms when the uncertainty cannot be anticipated by financial market. In another study, Kramer and Hyclak (2002) examined the impact of strikes on capital market from 1982 to 1999 with 256 firms' strikes (pair sample struck firms and non-struck firms). The study revealed the statistically significant negative effects of the announcement of a strike on the cumulative average stock market returns of struck firms. Concurrently, in the case of non-struck firms, the announcement of a strike had significant positive effects on the cumulative abnormal returns (CAR) in the same industry. Stock market does not predict strikes very well.

The effect of taxation on stock prices was investigated by Amoako-Adu (1983) and McKenzie and Thompson (1995a, 1995b). Amoako-Adu (1983) employed the event study approach to assess the impact of capital gain taxes in Canada. The paper used monthly data to examine the impact of the introduction of capital gains taxes in 1971, as well as subsequent changes in 1977 on stock prices. The study finds that changes in the

relative taxation of dividends and capital gains had a differential impact on high and low dividend yield portfolios listed on the Toronto Stock Exchange (TSE) in Canada. There were significant increases in the value of high-dividend stocks, while the effect of tax changes on the low-dividend stocks was trivial. The results show that investors took the personal tax changes into consideration in pricing stocks.

McKenzie and Thompson (1995a) analysed the impact of the Canadian dividend tax increase in 1986. They employed an event study to investigate the differential impact of tax (i.e. dividend and capital gain tax) change on high and low dividend securities. They focused on the companies that issue both preferred (high-dividend) stocks and common (low-dividend) stocks. The study finds that abnormal returns are negatively related to dividend yields, which provides support for the hypothesis that taxes affect stock prices. Similarly, McKenzie and Thompson (1995b), using event study methodology, tested the hypothesis that the 1985 capital gains exemption decreased the marginal effective tax rate on capital gains using two samples of stock market prices which controlled the industry and firm-level effects. They derived estimates of the impact of the exemption on the effective capital gains tax-rate, and on the user cost of capital. The results show that the capital gains exemption may have had a positive impact on high capital gain-stocks relative to low capital gain-stocks. Using existing estimates of the relationship between the user cost of capital and investment, the study found that, depending upon the sample, the exemption may have increased real investment as much as six per cent, or had no impact at all. It is, therefore, difficult to draw strong conclusions about the effect of the capital gain exemption on the cost of capital and investment. However, the results of studies [Amoako-Adu (1983) and McKenzie and Thompson (1995a, 1995b)] are consistent with the proposition that asset prices are established to reflect the prevailing tax treatment of stock returns.

Bittlingmayer (1998) investigated stock volatility and output in a case marked by a clear exogenous political shock in Germany. The study was focused on the connection between political events and stock prices during and after the First World War. The study employed multiple regressions to analyse data. The study found that the increase in German volatility in the late 1800s and early and mid-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 concluded that there was influence of political outcomes on the business cycle and stock market. To sum up, when uncertainty is taken into account, stock prices discount investor's expectations concerning possible future corporate developments. In efficient markets, investors predict market in a rational way by making use of all available information, and prices react instantaneously to news.

In the context of Nepal, there is the need to study whether the announcements of political events generate immediate market reactions or not. This is so, as the Nepalese stock market also seems volatile with announcement of any important public information. Moreover, the Nepalese stock market still lacks empirical evidences on this issue. In this perspective, the current study examines the Nepalese stock market reaction to announcements of the unanticipated political events.

III. OBJECTIVES AND METHODOLOGY

The current study seeks to test market reaction to new unanticipated political event announcement, i.e., to test semi-strong form of stock market efficiency. The study aims at examining the market reaction that would follow immediately to the announcement of new unanticipated, significant political announcement in the context of Nepalese stock market.

Data and Selection of Enterprises

This study is based on secondary data. The secondary data, which include daily share price and NEPSE index, are collected from the trading reports of the Nepal Stock Exchange Limited. Similarly, political announcement dates are collected from daily newspapers.

This study primarily focuses on the unanticipated political events announcement. As per the NEPSE trading reports, more than 85 per cent of the transactions were the securities of the commercial banks and financial institutions. It means that shares of commercial banks and financial institutions have ruled the roost of the investors' faith as well as the market itself. All the commercial banks listed with the Nepal Stock Exchange Limited have been considered as the total population of the study. The sample commercial banks of the study should fulfil the following criteria:

- The bank should be the one listed at the Nepal Stock Exchange Ltd.
- The bank should not be the one that has remained de-listed for a long period of time.
- The bank should be the one that has already paid dividends (cash or stock or both) at least one time in its life.
- The securities of the bank should be the one traded at least 50 per cent of the floor-days during the estimated period. This will avoid the securities traded very infrequently.

On the basis of the above criteria, eleven commercial banks are selected to examine the impact of the political announcements on stock returns. They include (1) Nabil Bank Limited (formerly, Nepal Arab Bank Ltd.), (2) Nepal Investment Bank Limited (formerly, Nepal Indosuez Bank Ltd.), (3) Standard Chartered Bank Nepal Limited, (4) Himalayan Bank Limited, (5) Nepal SBI Bank Limited, (6) Nepal Bangladesh Bank Limited, (7) Everest Bank Limited, (8) Bank of Kathmandu Limited; (9) Nepal Industrial and Commercial Bank Limited, (10) Machhapuchhre Bank Limited and (11) Kumari Bank Limited.

Selection of Events

Table 1 lists the political events selected for the study. These political events are the major significant political announcements leading up to the stock market certainty as well as uncertainty from 2001 to 2006 for the study.

TABLE 1: Selected Political Announcements in Nepal from June 2001 to November 2006

Events	*Date*	*Description of Event*
1	June 1, 2001	The Royal massacre.
2	July 16, 2001	Capital gain tax imposed on share trading through the government's budget speech 2001/02.
3	Jan 29, 2003	Cease fire by the government and Maoists.
4	Feb 1, 2005	King Gyanendra dismissed Prime Minister Sher Bahadur Deuba and took up executive power.
5	Oct 4, 2005	Cease fire by the Maoists.
6	Jan 2, 2006	Cease fire withdrawn by the Maoists
7	July 23, 2006	Announcement of monetary policy for 2006/07: revision of the previous required paid-up capital of the bank to Rs. 800 million from Rs. 1,000 million by mid-July 2009.
8	Nov 16, 2006	Peace agreement between the government and Maoists; Maoists agreed to lay down arms.

Likewise, these political announcements are divided into two categories: (1) good news and (2) bad news.

Method of Analysis

The impact of announcements of new political information on common stock prices is computed using event study methods. The regression analysis (Ordinary Least Squares) is the basic technique employed for fitting models of normal stock return behaviour as a function of general market performance. The market model is based on the capital assets pricing model (CAPM), the most widely used method to estimate the returns on a firm's stock [Bosch and Hirchey (1989), MacKinlay (1997), Hovav and Arcy (2003)]:

$$R_{it} = \alpha_i + \beta_i R_{mt} + e_{it} \quad (1)$$

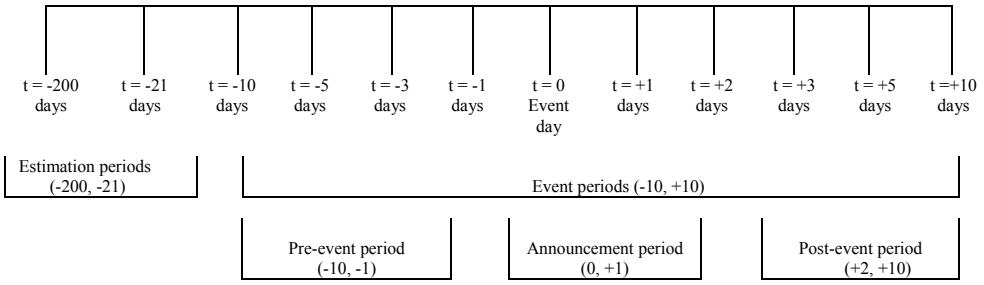
where R_{it} = the return of stock *i* on day *t* = $[Price_{it} - Price_{it-1}]/ Price_{it-1}$
R_{mt} = the market return on day *t*, the average of returns of all firms included in the market index.
e_{it} = a random error term for stock i on day *t*.
α_i and β_i = firm independent coefficients to be estimated.

The market model is estimated for each bank in the sample using 180 daily returns. The estimated period starts 200 days before the announcement date and ends 21 days before the announcement date (or day t = - 200 to day t = -21). The length of the estimation period used in this study is consistent with prior studies of capital market responses [Bosch and Hirchey (1989), Hovav and Arcy (2003)]. 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 study confined to six separate events for a-21 day period around the event announcement (i.e. –10 days to +10 days) as suggested by Cheng and Leung (2006)**.** These six event periods are: (1) ten trading days prior to the information announcement, t – 10, to one day prior to the date of announcement day (i.e. day t = -10 to t = -1); (2) announcement day, t = 0, to ten trading days after the announcement, t + 10; (i.e. day t = 0 to t = +10), (3) two trading days after the announcement, t + 2, to ten trading days after the announcement, t + 10; (i.e. day t = +2 to t = +10), (4) ten trading days prior to the information announcement, t – 10, to ten days after the date of announcement day t + 10 (i.e. day t = -10 to t = +10); (5) five trading days prior to the information announcement, t – 5, to five days after the date of announcement day t + 5 (i.e. day t = -5 to t = +5); and (6) three trading days prior to the information announcement, t – 3, to three days after the date of announcement day t + 3 (i.e. day t = -3 to t = +3). Event day t = 0, is the date when firm i or government makes the announcement of new information.

These six periods can be classified into two separate categories. The first category of periods covers the complete event window in three separate (non-overlapping) and sequential segments: the pre-event period (-10, -1), the announcement period (0, +1) and the post announcement period (+2, +10). These three independent periods are mutually exclusive and cover the complete event window in continuous trading days. The second category represents overlapping periods of different lengths. They are (-10, +10), (-5, +5) and (-3, +3). These different events windows are selected because the study can examine the effects of the cumulative abnormal returns for the pre-event, announcement period, post-event and symmetrical overlapping event periods of various durations. The parameters of equation (1) estimation periods and events periods are presented in Figure 1.

FIGURE 1: Parameter Estimation and Event Periods



The coefficient estimates from regression equation (1) are used to predict normal returns for the six event periods: (-10, -1), (-10, +10), (-5, +5), (-3, +3), (0, +1) and (+2, +10)**.** Prediction errors during the event periods, i.e. deviations of realization returns from normal returns, are estimates of abnormal returns (AR). Thus, the market model is used to calculate a prediction error (abnormal return) for the common stock of a firm i on event day t, as under:

$$PE_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt}) \quad (2)$$

The null hypothesis to be tested is that the sample average of market model cumulative prediction errors (or cumulative abnormal return) is equal to zero for any given event

period. More formally, for a sample of N securities, the sample mean prediction error on any given day t is:

$$\overline{PE}_t = \frac{1}{N}\sum_{i=1}^{N} PE_{it} \tag{3}$$

To measure market model prediction errors over a specific time interval or holding period, the sample mean prediction errors are summed to derive the sample mean cumulative prediction error as under:

$$\overline{CPE}_t = \sum_{t=T_1}^{T_2} \overline{PE}_t \tag{4}$$

where T_1 and T_2 identify beginning and ending days of sample-specific event periods within the overall 21 days t = -10 to t = +10 event period. The test t-statistic for the significance of $\overline{PE}_t$ is calculated as under:

$$t - \text{statistic (for PE)} = \frac{\overline{PE}_t}{\hat{S}(\overline{PE}_t)} \tag{5}$$

$$\text{where } \hat{S}(\overline{PE}_t) = \sqrt{\sum_{t=-200}^{t=-21} \frac{(\overline{PE}_t - \overline{\overline{PE}}_t)^2}{179}} \tag{6}$$

$$\overline{\overline{PE}} = \frac{1}{180}\sum_{t=-200}^{t=-21} \overline{PE}_t \tag{7}$$

where t = -200 to t = -21 is the 180 days estimation period. Under the null hypothesis of no abnormal returns, the $\overline{CPE}_t$ is assumed to be unit normal and both serially and cross-sectionally independent. The interval test statistic for each sample and each holding period of T days in length is assumed to be approximately unit-normal and can be written as under and follows a t-statistic distribution:

$$t - \text{statistic (for CPE)} = \frac{\overline{CPE}_t}{\hat{S}(\overline{PE}_t)\sqrt{T_2 - T_1 + 1}} \tag{8}$$

The significance of daily average abnormal returns was further tested using a non-parametric binominal statistic calculated as under:

$$Z = \frac{A - E}{\sqrt{NP(1-P)}} \tag{9}$$

where A is the actual number of positive prediction errors, E is the expected number of positive errors (i.e. equal to NxP), N is the number of observations, and P is the expected percentage of positive prediction errors. Under the null hypothesis of no effect, P = 0.5. This binomial statistic is more conservative than the t-statistic test and does not require the assumption of normality.

IV. EMPIRICAL ANALYSIS AND FINDINGS

Nature of Political Event Study

The Nepalese stock market's reaction to the unanticipated political events is what the current study deals with. 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 event.

Table 2 reports the sample event numbers, total firm observations, number of good news and bad news. During 2000/01 to 2006/07 period, total of 81 firm observations were identified with 8 different political announcements. These total 81 firm political event observations are partitioned into good news and bad news announcements on the basis of the future certainties/uncertainties to the stock market. The events are classified into good-news (bad-news) announcements if the announcements can create future certainty (uncertainty) to stock market. Thus, the Royal massacre (event-1), capital gain tax imposed on share trading (event-2), cease-fire withdrawn by the Maoists (event-6), and announcement of monetary policy for 2005/06 (event-7) are treated as bad-news announcements. These announcements are bound to introduce substantial uncertainty about the future course of the firm's business and the share market, and therefore, involve substantial risks. Thus, a negative value effect might be expected from the bad-news announcements.

Similarly, the cease-fire by the government and the Maoists (event-3), the taking up of executive power by King Gyanendra (event-4), the cease fire by the Maoists (event-5), and peace agreement between the government and the Maoists (event-8) are classified under good-news announcements. These announcements are bound to introduce substantial certainty about the future course of the firm's business and the share market, and therefore involve lesser risk. Thus, a positive value effect might be expected from the good news announcements.

TABLE 2: Political Events, Total Firm Observations, Good-News and Bad-News

Fiscal Years	*Events*	*Event details*	*Total Observations*	*Good News*	*Bad News*
2000/2001	1	The Royal massacre.	9	0	9
2001/2002	2	Capital gain tax imposed on share trading through the government's budget speech 2001/02	9	0	9
2002/2003	3	Cease fire by the government and Maoist rebels	9	9	0
2004/2005	4	King Gyanendra dismissed Prime Minister Sher Bahadur Deuba and took up executive power.	10	10	0
2005/2006	5	Cease fire by the Maoists.	11	11	
	6	Cease fire withdrawn by the Maoists	11	0	11
2006/2007	7	Announcement of monetary policy for 2006/07; revision of the required paid-up capital of the bank to Rs. 800 million from Rs. 1,000 million by mid-July 2009.	11	0	11
	8	Peace agreement between the government and Maoists; Maoist agreed to lay down arms.	11	11	0
		Total	81	41	40

TABLE 3: Summary of Frequency Distributions of Estimated Coefficients for the Political Announcements

Statistic	*Mean*	*Median*	*Mean Absolute Deviation*	*Standard Deviation*	*Extreme Values*	*Skewness*
$\hat{\alpha}$	-0.012	0.016	0.124	0.153		Left
$\hat{\beta}$	1.175	1.162	0.392	0.486	2.638	Slightly right
r	0.462	0.466	0.123	0.161	0.035, 0.044, 0.805	Slightly left

Notes: The table depicts summary descriptions of the frequency distributions of the estimated values of α_i , β_i and r_i. Where, α_i and β_i are estimated coefficients of the equation (1): $R_{it} = \alpha_i + \beta_i R_{mt} + e_{it.}$ Similarly, r_i is the correlation between the daily rates of returns security i (R_{it}), and the daily rates of returns on the market portfolio (R_{mt}). The sample average or mean absolute deviation of the random variable x is defined as

$$\frac{\sum_{t=1}^{N}\left|x_t - \bar{x}\right|}{N}$$

where $\bar{x}$ is the sample mean of the x's and N is the sample size.

Table 3 provides summary descriptions of the frequency distributions of the estimated values of α_i, β_i and r_i where, α_i and β_i are estimated coefficients of the equation (1). Similarly, r_i is the correlation coefficient between the daily rates of returns security i (R_{it}) and the daily rates of returns on the market portfolio (R_{mt}). The table indicates that there are indeed fairly moderate degrees of relationships between the market and daily returns on individual securities; the mean value of the r_i is 0.462 with an average absolute deviation of 0.123 about the mean. Moreover, the estimates of equation (1) for the different securities conform fairly well to the assumptions of the linear regression model.[1] It is important to note, however, that the data do not conform well to the normal.

Market Reaction to Overall Sample of Political Events

The distribution of prediction errors (abnormal returns) for the pre-event period (-10, -1), the announcement period (0, +1) and the post announcement period (+2, +10) are shown in Table 4 and Table 5. These tables also report the distribution of abnormal returns with overlapping event periods of different length such as (-10, +10), (-5, +5) and (-3, +3). Over the pre-event period (-10, -1), the sample cumulative average prediction error is: –1.24 per cent (t-statistic = -2.57, significance at the 5 per cent level). About 43.21 per cent of the sample firms have positive prediction errors over that period. Similarly, the prediction error for the overall sample is 0.09 per cent during the

[1] Assumptions of the linear regression model are: (1) linearity, (2) homoscedasticity, and (3) serial independence.

TABLE 4: Summary of Average Daily Prediction Errors for the Overall Sample of Political Announcements Over the Period 2001 to 2006

Panel A: Average Daily Prediction Errors				
Day	Average Prediction Error (%)	t-Statistic for Average Prediction Error	Percentage Positive Prediction Error	Z-Statistic for Percentage Positive
-10	-1.37	-9.00***	37.50	-2.12**
-9	0.90	5.94***	52.78	0.47
-8	-0.16	-1.07	38.03	-2.02**
-7	-0.73	-4.79***	36.49	-2.32**
-6	0.10	0.63	42.86	-1.20
-5	-0.24	-1.60	47.89	-0.36
-4	-0.07	-0.46	42.47	-1.29
-3	0.17	1.15	55.71	0.96
-2	0.16	1.04	45.33	-0.81
-1	0.01	0.04	43.59	-1.13
0	0.13	0.88	48.48	-0.25
1	-0.05	-0.30	39.71	-1.70*
2	0.13	0.82	43.48	-1.08
3	0.29	1.88*	52.86	0.48
4	-0.03	-0.21	56.52	1.08
5	-0.13	-0.88	52.54	0.39
6	-0.04	-0.28	55.07	0.84
7	-0.50	-3.29***	49.32	-0.12
8	-0.21	-1.37	50.00	0.00
9	0.58	3.82***	55.56	0.94
10	0.07	0.47	51.43	0.24
Panel B: Cumulative Average Prediction Errors				
Period	Cumulative Average Prediction Error (%)	t-Statistic for Cumulative Average Prediction Error	Percentage Positive Cumulative Prediction Error	Z-Statistic for Percentage Positive
(-10, -1)	-1.24	-2.57**	43.21	-1.22
(0, +1)	0.09	0.41	37.66	-2.56**
(+2, +10)	0.14	0.32	53.09	0.56
(-10, +10)	-1.00	-1.44	43.21	-1.22
(-5, +5)	0.36	0.71	45.68	-0.78
(-3, +3)	0.84	2.08**	51.85	0.33

Notes: The table reports the average daily prediction errors for day t = -10 to day t = +10. The sample consists of a total 81 firm political announcements for the eleven banking companies listed in the NEPSE for the six-year period 2001 to 2006. The market model is considered for the normal returns. Average prediction error is the sample average abnormal return for the specified day in event time, and cumulative average prediction error is the sample cumulative average abnormal return for the specified event window. Event time is measured in days relative to the political announcement date.

* Significant at the 10% level (two-tail test)

** Significant at the 5% level (two-tail test)

*** Significant at the 1% level (two-tail test)

TABLE 5: Frequency Distribution and Descriptive Statistics for Prediction Errors during the Announcement Period (day t = -10 to day t = +10) for the Overall Sample of Political Announcements over the Period 2001 to 2006

Range of Prediction Errors	Period (-10, -1)	Period (0, +1)	Period (+2, +10)	Period (-10, +10)	Period (-5, +5)	Period (-3, +3)
Panel A: Frequency Distribution						
10% ≤ PE	8	0	7	7	6	5
8% ≤ PE < 10%	1	2	1	4	2	5
6% ≤ PE < 8%	5	3	3	4	2	4
4% ≤ PE < 6%	4	1	7	5	4	2
2% ≤ PE < 4%	11	9	10	6	11	5
0% ≤ PE < 2%	6	18	15	9	12	21
-2% ≤ PE < 0%	10	40	15	12	21	14
-4% ≤ PE < -2%	11	6	9	9	6	10
-6% ≤ PE < -4%	8	1	4	7	9	10
-8% ≤ PE < -6%	8	0	2	5	5	2
-10% ≤ PE < -8%	2	0	3	1	2	1
PE < -10%	7	1	5	12	1	2
Total	81	81	81	81	81	81
Panel B: Descriptive Statistics						
Minimum (%)	-26.22	-7.05	-43.05	-43.05	-16.84	-16.84
Mean (%)	-1.24	0.09	0.14	-1.00	0.36	0.84
t-Statistic	-2.57**	0.41	0.32	-1.44	0.71	2.08**
Maximum (%)	11.86	8.07	21.01	21.01	14.90	14.90
Percentage Positive	43.21	35.80	53.09	43.21	45.68	51.85
Z-Statistics	-1.22	-2.56**	0.56	-1.22	-0.78	0.33

Notes: The table reports frequency distribution and descriptive statistics for the daily prediction errors for day t = -10 to day t = +10. The sample consists of a total 81 firm political announcements for the eleven banking companies listed in the NEPSE for the six-year period 2001 to 2006. The market model is considered for the normal returns. Prediction error is the sample abnormal return for the specified day in event time and cumulative prediction error is the sample cumulative abnormal return for the specified event window. Event time is measured in days relative to the political announcement date.

* Significant at the 10% level (two-tail test)
** Significant at the 5% level (two-tail test)
*** Significant at the 1% level (two-tail test)

announcement period (0, +1), which is statistically insignificant (t-statistic = 0.41). The 37.66 per cent of the firm observations have positive prediction errors (Z-statistic = -2.56, significant at the 5 per cent level). In the post-event period (+2, +10), the cumulative prediction error is 0.14 per cent (t-statistic = 0.32) and percentage positive cumulative prediction error is 53.09 per cent (Z-statistic = 0.56). Both parametric (t-test) and non-parametric (Z-test) increased respectively from the pre-event and announcement period, but remained statistically insignificant. During the overlapping period of (-3, +3), the cumulative average prediction error is 0.84 per cent (t-statistic = 2.08, significance at the 5 per cent level).

On the event announcement date t = 0, the sample experiences an insignificant positive average prediction error of 0.13 per cent (t-statistic = 0.88), and 48.48 per cent of the firm observations have positive abnormal returns (Z-statistic = -0.25). The average prediction error is positive for next ten business days.

Following the announcement date (t = +1), the average prediction error is negative 0.05 per cent with the 39.71 per cent of the firm observations with positive abnormal returns (Z-statistic = -1.70, significant at 10 per cent level). Thus, it indicates that the overall sample political announcements show a fairly strong negative abnormal response to the announcement period. But, positive abnormal response to the announcements of political events has been shown in the post-event periods.

The effect has occurred most significantly between the 7 to 10 business days before the important political announcement. The negative pre-announcement effect is followed by a positive post announcement drift, which cancels out 19% of the announcement effect. Over the period (-10, +10), the cumulative average prediction error is a negative but statistically insignificant –1.00 per cent (t-statistic = -1.44).

On an average, the overall sample political event announcement appears to have a little positive effect on the market value of the firm around announcement time. While the average effect is positive, the data in the sample suggests some ex-ante uncertainty about the wealth effect of political event announcements. A firm randomly selected from political announcement candidates has roughly a 51 per cent chance for a positive outcome, but the magnitude of this positive effect seems to vary substantially.

Table 5 also reports the variation of average prediction errors. The overall sample shows that the minimum average prediction error is negative 43.05 per cent, while the maximum prediction error is 21.01 per cent. Even then, the majority of the firm's average prediction errors fall within the range of 8 per cent from negative 4 per cent to positive 4 per cent.

Market Reaction to Good-News and Bad-News Political Events

The possible differences in the effects of "good-news" versus "bad-news" political announcements are considered. The average prediction errors from day t = -10 to day t = +10, t-statistic and percentage positive prediction errors with Z-statistic are shown in Tables 6 and 7. The tables also report the distribution of cumulative average prediction errors (abnormal returns), t-statistic, percentage positive prediction errors, Z-statistic with

event periods of different length such as (-10, -1), (0, +1), (+2, +10), (-10, +10), (-5, +5) and (-3, +3).

Market Reaction to Good-News Announcement

Table 6 depicts average daily prediction errors in panel "A" and cumulative average prediction errors in panel "B" for the good news announcements with respect to political events. The good news announcements cause strong positive average prediction errors, either daily or cumulatively.

The sub-sample of good news announcements, in the pre-event period, are statistically strong negative average daily prediction errors in between day t = -7 to day t = -1. Just before the event announcements, day t = -2, the negative average daily prediction error is 0.46 per cent (t – statistic = - 2.70, significant at the 1 per cent level) and 34.21 per cent of the sample firm observations have positive prediction error (Z – statistic = - 1.95, significant at the 10 per cent level). The result is also followed in day t = - 1 with strong negative average daily prediction error 0.33 per cent (t – statistic = - 1.90, significant at the 10 per cent level). On the contrary, the situation improved on the event announcement day t = 0 where the positive average prediction error is 0.01 per cent but still statistically insignificant.

The average daily prediction errors are strongly positive for the three days following the event day t = 0. On the post event periods, the average daily prediction errors on day t = +1, t = +2 and t = +3 are 0.92 per cent, 1.18 per cent and 0.73 per cent, with t-statistics significant at the 1 per cent level (t-statistic (day t = +1) = 5.38, t-statistic (day t = +2) = 6.85, t-statistic (day t = +3) = 4.27). The results explained that the unanticipated political event such as good-news effect has positive impact up to three days from the announcement.

The cumulative average prediction error over the pre-announcement period (-10, -1) is negative 2.66 per cent (t-statistic = -4.90, significant at the 1 per cent level). During the pre-announcement period (-10, -1), 29.27 per cent of sample firm observations have positive prediction error (Z-statistic = -2.65, significant at 1 per cent level). The negative cumulative average prediction error improves to become positive 0.93 per cent (t-statistic = 3.83, significant at the 1 per cent level) during the announcement period (0, +1). It is further improved to positive 1.78 per cent (t-statistic = 3.46, significant at the 1 per cent level) on the post-event period (+2, +10). Hence, there is a positive valuation effect of good political news announcement on the share market.

There are positive cumulative average prediction errors in the results of three overlapping event periods (-10, +10), (-5, +5) and (-3, +3). During the event period (-10, +10), the cumulative average prediction error is 0.05 per cent, which is statistically insignificant. The cumulative average prediction error over the period (-5, +5) is 1.43 per cent with t-statistic = 2.51 (significant at the 5 per cent level). Similarly, the cumulative average prediction error over the period (-3, +3) is 2.30 per cent (t-statistic = 5.07, significant at the 1 per cent level) and 63.41 per cent of the sample firm observations have positive prediction error (Z-statistic = 1.72, significant at 10 per cent level). The results show that the lesser the length of overlapping event period, the higher the cumulative positive prediction errors. It means that, first, the good-news sub-samples appear to compensate the negative prediction errors through positive valuation after the short span

of post-event periods, and second, there are higher positive prediction errors around the announcement date. Thus, the good-news of political sample announcement created positive valuation effects during the post-announcement period.

TABLE 6: Summary of Average Daily Prediction Errors for the Good News Sub-Samples of Political Announcements over the Period 2001 to 2006

Panel A: Average Daily Prediction Errors

Day	Average Prediction Error (%)	t-Statistic for Average Prediction Error	Percentage Positive Prediction Error	Z-Statistic for Percentage Positive
-10	-0.11	-0.61	44.44	-0.67
-9	0.10	0.59	47.22	-0.33
-8	-0.07	-0.43	27.78	-2.67***
-7	-1.22	-7.12***	37.14	-1.52
-6	-0.16	-0.95	32.35	-2.06**
-5	-0.51	-2.95***	40.00	-1.18
-4	-0.16	-0.92	36.11	-1.67*
-3	0.26	1.49	62.16	1.48
-2	-0.46	-2.70***	34.21	-1.95*
-1	-0.33	-1.90*	38.46	-1.44
0	0.01	0.04	50.00	0.00
1	0.92	5.38***	52.94	0.34
2	1.18	6.85***	52.78	0.33
3	0.73	4.27***	51.35	0.16
4	0.10	0.58	56.76	0.82
5	-0.31	-1.81*	44.12	-0.69
6	0.27	1.59	67.57	2.14**
7	-0.06	-0.38	40.00	-1.18
8	-0.01	-0.09	44.74	-0.65
9	0.17	1.00	52.78	0.33
10	-0.28	-1.61	48.57	-0.17

Panel B: Cumulative Average Prediction Errors

Period	Cumulative Average Prediction Error (%)	t-Statistic for Cumulative Average Prediction Error	Percentage Positive Cumulative Prediction Error	Z-Statistic for Percentage Positive
(-10, -1)	-2.66	-4.90***	29.27	-2.65***
(0, +1)	0.93	3.83***	48.72	-0.16
(+2, +10)	1.78	3.46***	58.54	1.09
(-10, +10)	0.05	0.07	43.90	-0.78
(-5, +5)	1.43	2.51**	53.66	0.47
(-3, +3)	2.30	5.07***	63.41	1.72*

Notes: The table reports the average daily prediction errors for day t = -10 to day t = +10. The sample consists of a total 41 firm political good-news announcements for the eleven banking companies listed in the NEPSE for the six-year period 2001 to 2006. The market model is considered for the normal returns. Average prediction error is the sample average abnormal return for the specified day in event time, and cumulative average prediction error is the sample cumulative average abnormal return for the specified event window. Event time is measured in days relative to the political announcement date.

* Significant at the 10% level (two-tail test)

** Significant at the 5% level (two-tail test)

*** Significant at the 1% level (two-tail test)

Market Reaction to Bad-News Announcement

Table 7 depicts average daily prediction errors in panel "A" and cumulative average prediction errors in panel B for the bad-news announcement with respect to political events. The bad-news announcement cause strong negative average prediction errors, either daily or cumulatively.

The sub-sample of bad-news announcements in the pre-event period, is statistically significant and positive average daily prediction errors of 0.80 per cent in day t = -2 with t-statistic 2.72 (significant at the 1 per cent level). The pre-announcement day t = -1 and event announcement day t = 0 also have positive, but statistically insignificant, average prediction errors of 0.34 per cent and 0.24 per cent, respectively.

The positive average prediction errors before the announcement date turn out to be negative immediately after the date of bad news announcement. It has continued for the following four days. On day t = +1, the negative average daily prediction error is 1.01 per cent (t – statistic = - 3.46, significant at the 1 per cent level) and 26.47 per cent of the sample firm observations have positive prediction error (Z – statistic = - 2.74, significant at the 1 per cent level). The result is also followed in day t = +2 with strong negative average daily prediction error 1.02 per cent (t – statistic = - 3.49, significant at the 10 per cent level) and 33.33 per cent of the sample firm observations have positive prediction error (Z – statistic = - 1.91, significant at the 10 per cent level). Similarly, on the event day t = +7, the average prediction error is negative 0.90 per cent with t-statistic = -3.08 (significant at the 1 per cent level). These negative average abnormal prediction errors improved to become positive on day t = +10 with t-statistic = 3.38 (significant at the 1 per cent level). The results suggested that the positive prediction errors during the pre-event day drifted to become negative due to announcement of bad news.

The cumulative average prediction error over the pre-announcement period (-10, -1) is positive 0.12 per cent, which is statistically insignificant. The negative cumulative average prediction error is 0.77 per cent (t-statistic = -1.87, significant at the 10 per cent level) during the announcement period (0, +1). In such an announcement period (0, +1), 26.32 per cent of sample firm observations have positive prediction error (Z-statistic = -2.92, significant at 1 per cent level).

The negative average prediction error further drifted to negative 1.63 per cent (t-statistic = -1.85, significant at the 10 per cent level) on the post-event period (+2, +10). Hence, the negative valuation effect of bad news political announcement on share market has surfaced.

In the case of the three overlapping event periods (-10, +10), (-5, +5) and (-3, +3), they produced negative cumulative average prediction errors. During the event period (-10, +10), the cumulative average prediction error is negative 2.28 per cent (t-statistic = -1.70, significant at the 10 per cent level). The cumulative average prediction error over the period (-5, +5) and (-3, +3) is negative 0.84 per cent and 0.79 per cent which are statistically insignificant.

TABLE 7: Summary of Average Daily Prediction Errors for the Bad News Sub-Samples of Political Announcements over the Period 2001 to 2006

Panel A: Average Daily Prediction Errors				
Day	Average Prediction Error (%)	t-Statistic for Average Prediction Error	Percentage Positive Prediction Error	Z-Statistic for Percentage Positive
-10	-2.63	-9.00***	30.56	-2.33**
-9	1.71	5.83***	58.33	1.00
-8	-0.25	-0.86	48.57	-0.17
-7	-0.29	-0.98	35.90	-1.76*
-6	0.34	1.16	52.78	0.33
-5	0.01	0.05	55.56	0.67
-4	0.01	0.05	48.65	-0.16
-3	0.08	0.28	48.48	-0.17
-2	0.80	2.72***	56.76	0.82
-1	0.34	1.16	48.72	-0.16
0	0.24	0.82	47.22	-0.33
1	-1.01	-3.46***	26.47	-2.74***
2	-1.02	-3.49***	33.33	-1.91*
3	-0.21	-0.73	54.55	0.52
4	-0.18	-0.63	56.25	0.71
5	0.11	0.36	64.00	1.40
6	-0.41	-1.39	40.63	-1.06
7	-0.90	-3.08***	57.89	0.97
8	-0.41	-1.41	55.56	0.67
9	0.99	3.38***	58.33	1.00
10	0.42	1.43	54.29	0.51
Panel B: Cumulative Average Prediction Errors				
Period	Cumulative Average Prediction Error (%)	t-Statistic for Cumulative Average Prediction Error	Percentage Positive Cumulative Prediction Error	Z-Statistic for Percentage Positive
(-10, -1)	0.12	0.13	57.50	0.95
(0, +1)	-0.77	-1.87*	26.32	-2.92***
(+2, +10)	-1.63	-1.85*	47.50	-0.32
(-10, +10)	-2.28	-1.70*	42.50	-0.95
(-5, +5)	-0.84	-0.87	37.50	-1.58
(-3, +3)	-0.79	-1.02	40.00	-1.26

Notes: The table reports the average daily prediction errors for day t = -10 to day t = +10. The sample consists of a total 40 firm political bad-news announcements for the eleven banking companies listed in the NEPSE for the six-year period 2001 to 2006. The market model is considered for the normal returns. Average prediction error is the sample average abnormal return for the specified day in event time, and cumulative average prediction error is the sample cumulative average abnormal return for the specified event window. Event time is measured in days relative to the political announcement date.

* Significant at the 10% level (two-tail test)

** Significant at the 5% level (two-tail test)

*** Significant at the 1% level (two-tail test)

The results have shown that higher the length of overlapping event period, higher the cumulative negative prediction errors. It means the bad-news sub-samples appear to cancel out the positive prediction errors by negative valuation after the long event periods Thus, the bad-news of political sample announcement placed the negative valuation effects during the post announcement period at least for two days.

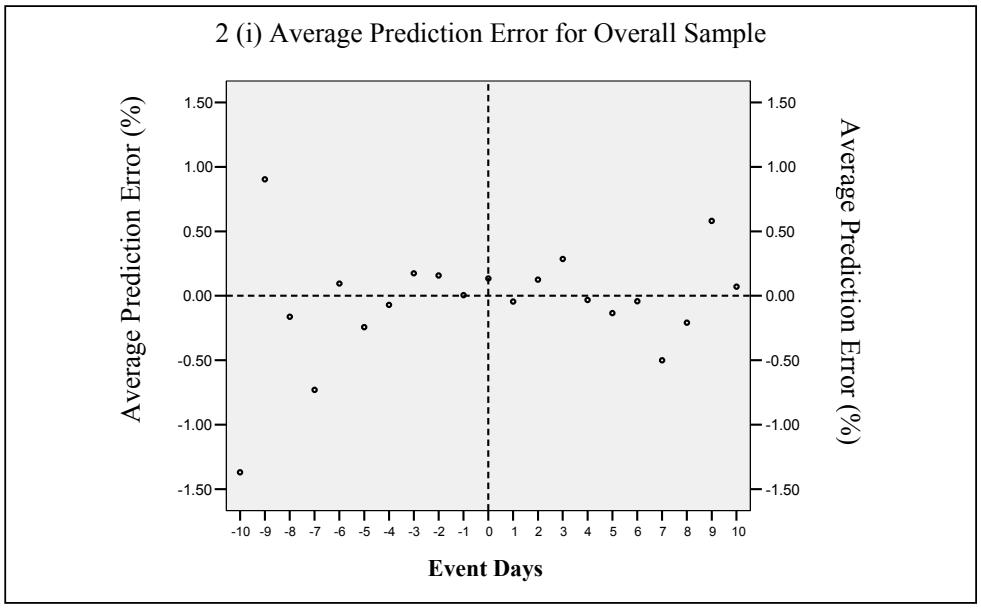
Graphical Presentation

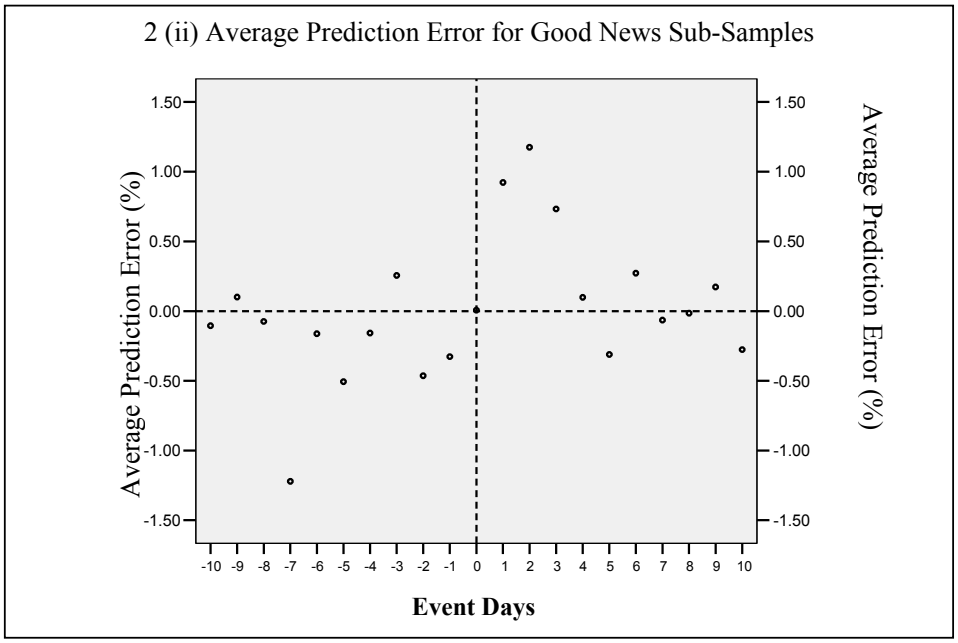
Figure 2 presents graphs of the average prediction error for overall sample, good news and bad news sub-samples. Similarly, Figure 3 presents graph of the cumulative average prediction error for all samples including good-news and bad-news sub-samples.

Several of the earlier statements can now be substantiated. First, Figures 2 (i), 2 (ii), and 2 (iii) show the average prediction errors in 21 days around the event announcement date. Out of 21 days, 10 days are pre-event periods and other 10 days are post-event period and remaining one day as the event announcement date. Figure 2 (i) clearly shows the average prediction errors are randomly distributed around the 0 per cent. Figure 2 (ii) shows that the average prediction errors are negative prior to the announcement of event, which turn to become positive on post-event period. The figure provides additional evidence of positive impact of good-news announcements as explained earlier with the help of Table 6. Similarly, Figure 2 (iii) shows the average prediction errors are positive prior to the announcement of event, which drifted into negative on post-event period. It also reinforces effect of bad-news announcements as explained earlier with the help of Table 7.

Secondly, Figure 3 shows the cumulative average prediction error in the twenty-one days around the event announcement date. The cumulative average prediction error for the overall sample is in the negative. In the post-event period, the cumulative prediction errors drifted upward to positive in the case of good news sub-sample. On the contrary, in the case of bad news sub-sample, the cumulative prediction errors drifted downward to negative. The behaviour of prediction errors for political events with ‘good-news’ and ‘bad-news’, however, provide the strongest evidence in favour of immediate market response to reliable political information.

FIGURE 2: Average Prediction Error of Political Announcement





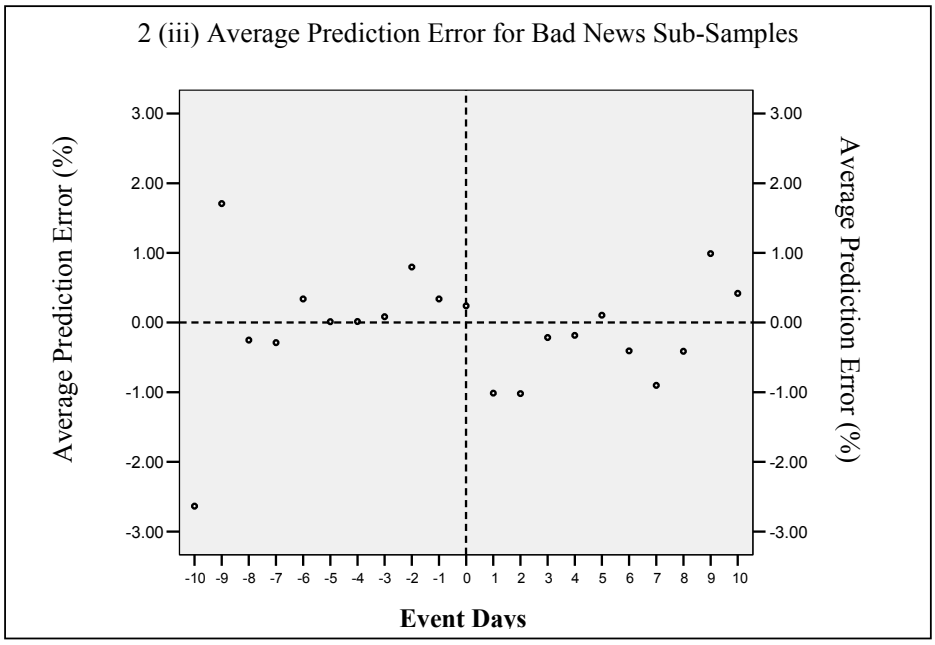
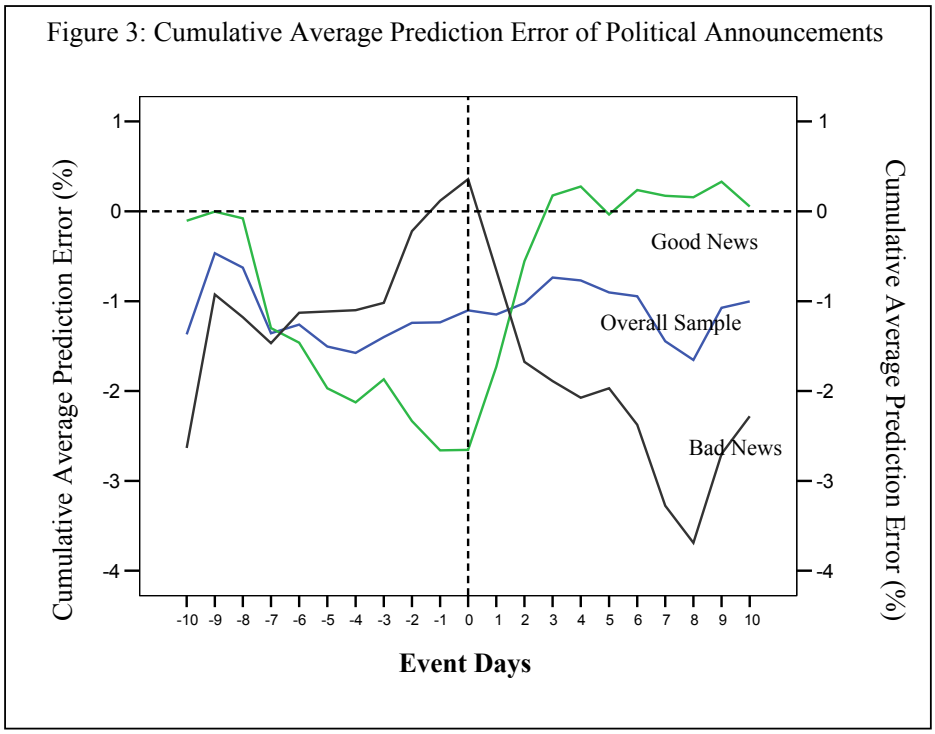


Figure 3: Cumulative Average Prediction Error of Political Announcements



In the case of good-news, only parametric tests are statistically significant for day t = +1 and t = +2. On the contrary, both parametric and non-parametric tests are statistically significant for day t = +1 and t = +2 in bad-news announcements. It means that the sample stock prices respond most strongly to bad-news. This result is consistent with the views of Conrad et al. (2002) who reported the stock prices relatively more sensitive to bad-news than good-news as the market rises.

The above empirical evidences reject the Efficient Market Hypothesis. Fama (1991) explained that stock prices seem to adjust within a day to event announcement. The fact that quick adjustment is consistent with efficiency is noted. But the results revealed that the stock price adjusted within 2 or 3 days of the political announcements in the case of Nepalese stock market. It shows that Nepalese investors revaluated their stock prices with new political information. The good-news and/or bad-news political events are carefully identified by the Nepalese capital market. For example, the positive (negative) abnormal returns are generated during and after announcement with good-news (bad-news) announcements as per the prior expectation. This suggests a link between common stock returns and political outcomes. The study provided evidence that the Nepalese stock market supports the information content hypothesis. The results are consistent with the prior studies by Li and Born, (2006), Martinez and Santiso (2003), and Bittlingmayer (1998). Results of these studies are consistent with the hypothesis that investors see a causal link between political uncertainty and common stock returns generation. The results indicate that political uncertainty is observed by and priced in the Nepalese equity market. This link between politics and stock market is found in an unbiased framework consistent with the market efficiency hypothesis. Since the stock-price adjustment is made two or three days from the announcement date, it is a clear indication that the Nepalese stock market is inefficient.

V. CONCLUSION

In aggregate, the sample data suggest that the information effects of associated political events are being properly considered by Nepalese capital market, that is, it is consistent with the information content hypothesis. As per the prior expectation, the study has provided the evidence that the good-news leads to the positive average prediction error. Similarly, the bad-news drifts the negative average prediction error on the post-announcement period. Finally, the data present important evidence on the speed of adjustment of market prices to new political information, i.e., in as many as 2 to 3 days from the announcement date. Thus, the Nepalese stock market may be inferred to be inefficient, but there is a strong linkage between political uncertainty and common stock returns generation.

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