OPEN ACCESS

Volume: 8

Issue: 2

Month: April

Year: 2020

P-ISSN: 2320-4168

E-ISSN: 2582-0729

Received: 01.02.2020

Accepted: 10.03.2020

Published: 01.04.2020

Citation:
Jha, Pawan Kumar, and Shreya Basnet. "Effect of Government Budget Announcement on Stock Returns: Evidence from Nepal Stock Exchange." *Shanlax International Journal of Commerce*, vol. 8, no. 2, 2020, pp. 10–21.

DOI:
https://doi.org/10.34293/commerce.v8i2.2363

Effect of Government Budget Announcement on Stock Returns: Evidence from Nepal Stock Exchange

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Abstract
This study examines the effect of government budget announcement on stock return of selected companies listed at Nepal Stock Exchange. For this purpose, secondary data of 48 companies are used over the study period from 5th November 2018 to 30th June 2019 and analyzed using the event study methodology with an estimation period of 120 days and event window of 41 days. The market model has been used to predict expected stock returns and use of regression technique helps to find the constant parameters of the regression equation. Calculations of AAR and CAAR are done to make sense of the aggregate effect of the government budget announcement on stock returns. Student's t-statistics of AAR and CAAR have provided the evidence that there is a positive effect of government budget announcement on stock returns of selected companies in Nepal.
Keywords: Budget, Announcement, Event Study, NEPSE and Stock Returns

Introduction

The study of events and stock price behavior holds an essential place in financial management. If the financial markets pick up information about an impending event, the said event can change the stock prices for days or weeks before it occurs and influences stock prices for some time after that (Robert Schweitzer, 1989). Researchers have always shown an interest in the behavior of the stock market to various events that might affect them. Various events such as dividend announcements (Mahmood et al., 2011), merger (Shah & Arora, 2014) acquisitions (Elad, 2017), and stock split (Nadig, 2015) have been previously studied to see how the stock market reacts to them.

The budget announcement is one such awaited event in the country as it decides the financial situation for the coming year. The annual national budget is a confidence-building measure where a detailed road map is laid to put into shape the policies pursued the growth of the economy. Announcement of annual budget ought to have some important effect on stock market returns, though there could be other concurrent news, which may cloud the impact, either by reducing or by augmenting the price effects (Erfanian et al., 2016). Researches like Thomas & Shah (2002), Gayathiri & Ganesamoorthy (2018), and Saraswat & Banga (2012) studied the union budget announcement on the Indian stock market. Similarly, Edirisinghe (2017) examined the stock market sector indices of the Colombo Stock Exchange in response to government budget announcements.

Results from similar studies are still inconclusive. Hence, there has been an ongoing debate, where some researchers defend the budget announcement's effect on stock returns while some oppose it. Different kinds of literature regarding budget announcements and stock returns in developed and emerging economies are to be found. However, there still lacks studies in the case of Nepal. It has created a gap in the literature, as the result of these stock markets might not be relevant for the Nepal Stock Exchange (NEPSE).

Similarly, in case of Nepal, various researches have been conducted, Mishra(2012), Pradhan and Upadhyay (2006), Dangol (2008) to check the effect on the Nepalese stock exchange based on political factors, calendar anomalies, however, we cannot find studies that take the budget announcement as a factor for study. Therefore, this research seeks to answer the following question:

- Does the budget announcement made by the government have a significant effect on the stock returns of companies listed in Nepal Stock Exchange?

The rest of the paper has been organized in the following way:

The next section reviews the literature related to the context methodology is reviewed in section three, along with the limitation of the study. Section four focuses on the empirical results, and finally, section five concludes and discusses the study with some implications for individual and institutional investors and policymakers.

Literature Review

This section has focused on reviewing prior studies on the instantaneous impact of the announcement on the stock market.

Thomas & Shah (2002) analyzed the Indian stock market index from April 1979 to June 2001, covering 26 Budget dates in this period. Results show that in some years, post-budget returns are positive; in other years, post-budget returns are negative; on average, there is no clear pattern about movement in the Index after the budget date. They report no evidence of overreaction or under–reaction before budget date, or immediately after it. Thus, concluding that the information processing by stock market participants is rational and that the Indian stock market is semi-strong efficient.

Khanna & Gogia (2014) examined the budget announcement and stock market performance of India, the UK, and the US. The study considered the stock market behavior on pre and posted the announcement of the budget of these countries throughout 2008 and 2010. The statistical paired t-test and f test signified that budget announcement affects the stock market in either short term, medium-term, or long term.

According to Kanyari's (2015) research on the effect of the national budget, reading on the Nairobi Securities Exchange indicated that no significant differences were found between the pre-budget and post-budget sector returns. The study adopted the event methodology with data collected from 2010 to 2014. The event period was taken ten days before and ten days after the national annual budget reading. Due to the varied results every year, the researcher recommended further research on the study because of inconclusive results. The researcher also recommends a longer time period.

Edirisinghe (2017) studied the reaction of five stock market indices of the Colombo Stock Exchange to investigate the impact of Sri Lankan government budget announcements from the period of 2002 to 2013, showing 12 budget speeches. The event study methodology was mainly adopted as an analysis tool, where 181 days were taken in the event period. In conclusion, the reaction to the budget announcement was negative in all five sectors; however, the magnitude of reaction differed.

Similar research conducted in Pakistan by Khan et al. (2017) showed that budget news influences the stock market for a short period of one post-event day. Event methodology was employed in the research as per the suggestion of Fama et al. (1969).

Joshi and Mehta (2018) examined the impact of union budget on various indices of Bombay Stock Exchange, SE 500, BSE Sensex, BSE Bakex, BSE IT, BSE SENSEX, and BSE Finance from the period of 2011 to 2017. The duration included seven union budget and one interim budget announcements. The analysis was done by F-test and T-test, and it concluded that the budget has a significant effect on volatility as well as daily return on indices of BSE.

Through the review of literature, it is evident that the issue of the volatility of stock market prices and returns has been an emerging topic for research. Due to the importance of budget in the economic development of a country, it has been studied to analyze the changes in stock returns in various stock exchanges like Colombo Stock Exchange, Bombay Stock Exchange, and National Stock Exchange, etc. Mainly, event study methodology has been used to analyze with some statistical t or f test. The empirical review of researches did show inconclusive results on the area with some studies indicating negative returns post-budget announcements.

Research Methodology

In this section, the methodology that has been followed to achieve the research objective is discussed in detail. The subsections include the research design, sample, data collection, and methods of analysis.

Research Design

The study follows a descriptive research design because it does not explore the factors that cause the impact or why it happens. It only aims to show whether an impact has been made or not. The study has a natural setting, as it requires unbiased data of the organizations without any manipulation from the researcher. The unit of analysis is the organizational unit, as the companies listed in the stock exchange are studied. The study is a cross-sectional study as the stock prices of a given time will only be applied.

Sample and Data collection

The population of this study was all the companies listed in the NEPSE, excluding sectors like mutual funds, preference shares, float, and sensitive float. The sample was chosen based on purposive sampling. The companies whose shares have been traded daily from 05/11/2018 to 30/06/2019 (161 days) are taken in as a sample. (See appendix 1). In total, the sample size is 48 companies. For the study purpose, secondary data was employed. The closing price of the individual's company's stock and index value of NEPSE was taken from the website of the Nepalese Stock Exchange (www.nepse.com) for the study.

Study Period

The study period is a year, 2019, which includes one budget announcement. The estimation days are 120 trading days, and the event window is 41 days. The length of the event window is consistent with previous studies, Khan et al. (2017), Gupta (2018), and Pathirawasam (2009), etc.

Conceptual Framework

As per the various literature, event methodology seemed most resourceful to study the impact of an event on stock returns. Fama et al. (1969), Schweitzer (1989) suggested an event study for such studies. The process of the study period is shown below:

Identification of the event: The event was a budget announcement on May 29, 2019. The announcement was made on a trading day. Hence the event day is assigned t= 0.

Estimation period and event window: The estimation window/ period of the study is 120 days from 05/11/2018 to 29/04/2019, which is determined to calculate the constants: alpha, beta, and the standard deviation of AAR and CAAR.

The event window is of 41 days surrounding the event day, i.e., 20 days before and 20 days after the event (i.e., +20 and -20 days before the event) and one event day. The event window is from 30/04/2019 to 30/06/2019.

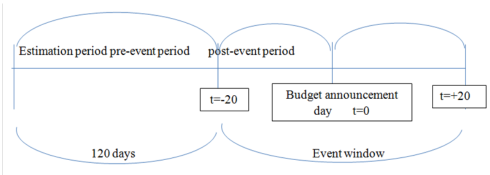

Figure 1: Estimation and Event Period

After the specification of dates, the daily index prices of NEPSE and closing prices of sample companies were extracted on excel for analysis.

Methods of Analysis

The following calculations were used in chronological order for data analysis:

Calculation of daily return of stocks and market: The daily closing prices of all the listed sample companies and the NEPSE index prices in the study period were entered in excel.

The actual returns of security "I," on a particular day, t, is calculated by:

$$R_{it} = \frac{(P_{it} - P_{it-1})}{P_{it-1}} \times 100 \quad (1)$$

Here, R_{it} = return of security "i" on day "t"

P_{it} = closing price of security "i" on "t" and

P_{it-1} = closing price of security "i" on day t-1 (previous day)

The actual returns of a market index, on a particular day, t, is calculated by:

$$R_{mt} = \frac{(P_{mt} - P_{mt-1})}{P_{mt-1}}; \quad (2)$$

Here, R_{mt} = return of market index "m" on the day "t."

P_{mt} = closing price of market index "m" on "t" and

P_{mt-1} = closing price of market index "m" on day t-1 (previous day)

Calculation of alpha and beta (constants): Alpha and beta were calculated from the individual stocks to return and market return of 120 days (clean period). The model parameters were estimated by regressing daily stock return on the market index over the estimation period (Gupta, 2018), where the dependent variable was the individual stock return of all the sample companies, and the independent variable was the market return of the index. From the regression summary, the intercept co-efficient shows the alpha (α), and X Variable 1 shows the Beta (β). The alpha and beta coefficient were constant for further calculations. (See Appendix 2)

Calculation of expected returns and abnormal returns: Researchers like Edirisinghe (2017) and Pathirawasam (2009) used a market model to calculate expected returns of security for estimation and event window.

The benchmark market model estimated the expected return for the event window and estimation window (161 days),

$$E(R_{it}) = \alpha_i + \beta_i * R_{mt} \quad (3)$$

Where, $E(R_{it})$ = the expected return of stock "i" at the time "t."

α_i and β_i is the constant coefficient terms and

R_{mt} = the market index return at time "t" from the model (2)

Abnormal return is the difference between expected returns from the benchmark model from actual returns of security "i."

$$AR_{it} = R_{it} - E(R_{it}) \quad (4)$$

Where, AR_{it} = Abnormal returns of stock "i" on time "t."

R_{it} = Normal returns of stock "i" on time "t" from the model (1)

$E(R_{it})$ = Expected return estimated from the benchmark model in (3)

Calculation of Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAAR): The abnormal returns of the firms were grouped to calculate the cross-sectional average and cumulative cross-sectional average (for 161 days). The calculation of AAR takes into account the possibility of different impacts the event might have made on the sample firms. Pathirawasam (2009) and Gayathiri & Ganesamoorthy (2018) calculated the daily Average Abnormal Returns (AAR) by the formula:

$$AAR_t = \frac{1}{N}\sum_{i=1}^{N} AR_{it} \quad (5)$$

Where AAR_t = Average Abnormal Returns of all securities on the day "t."

N = total sample size

AR_{it} = Abnormal Return of security "i" on the day "t" calculated from (4)

Cumulative Average Abnormal Returns (CAAR) helps to make sense of the aggregate effect of the abnormal returns (in addition to AAR). The CAAR of the data is calculated by the formula:

$$CAAR_t = AAR_t + CAAR_{t-1} \quad (6)$$

Where $CAAR_t$ = Cumulative Average Abnormal Return at day "t."

AAR_t = Average Abnormal Return at day "t"

$CAAR_{t-1}$ = Cumulative Average Abnormal Return at day "t-1"/ (previous day CAAR)

Calculation of standard deviation (S.D.) of estimation period: The standard deviation was calculated using excel and was assumed constant for t-statistics. Since there are other variations in the returns that are caused by other events and announcements, to neutralize the effect of these announcements, S.D, alpha and beta are constant.

Calculation of t-statistics: Student's t- statistics were calculated to statistically test the significance of budget announcement on the Nepal Stock Exchange. An independent t-test was done to find the result of the statistical significance. Researchers like Dyckman et al. (1984) and Jain (1986) have used a t-test when the sample size is more than 30. The calculation of t- statistics was done by:

$$t = \frac{AAR_t}{S.E.of\ AAR_t} \quad (7)$$

Where, AAR_t= Average Abnormal Returns of event-window at day "t."

S.E. of AAR_t= Standard Error of AAR_t of estimation window calculated at (8)

Standard error was computed by:

$$Standard\ Error\ (S.E.) = \frac{\sigma AAR_t}{\sqrt{n}} \quad (8)$$

Where σ_{AARt}= Standard Deviation of AAR_t of estimation period and n = the sample size

$$t = \frac{CAAR_t}{S.E.of\ CAAR_t} \quad (9)$$

Where, $CAAR_t$ = Cumulative Average Abnormal Returns of the event- window at day "t."

S.E. of $CAAR_t$ = Standard Error of $CAAR_t$ of estimation window calculated at (10)

Standard error was computed by:

$$Standard\ Error\ (S.E.) = \frac{\sigma CAAR_t}{\sqrt{n}} \quad (10)$$

Where σ_{CAARt}= Standard Deviation of $CAAR_t$ of estimation period and

n = the sample size

The t-test is based on the assumption that individual abnormal returns of the stock index are independent and have a normal distribution. And t-statistic will be significant if;

t- statistics value > = 1.645 at 10% significance level

t- statistics value > 1.960 at 5% significance level

t- statistics value > = 2.576 at 1% significance level

Limitations of the study

Only one budget announcement was undertaken for the study, which was a major limitation of the study as data from a year might not be enough to conclude that the government budget announcement makes an impact on the stock returns. The event window was of only 20 days before the budget announcement, and 20 days after the budget announcement, better results from the study could be anticipated if the event window would be of a longer horizon.

Another limitation of the study is the lack of data, i.e., closing prices of stock of NEPSE. About annex 1, the sample size only represents 29.09% of the entire stock exchange. The lack of data has limited the representation of NEPSE. Furthermore, the stock market is not active when it comes to the trading of shares daily; due to this, a longer event window could not be taken up for the study.

Emprical Results

The first subsection provides the t- statistics of AAR and CAAR that will test the hypothesis mentioned along with the interpretation of the findings, table, and graphs.

Test of Significance

The table illustrates the result of average abnormal returns, cumulative average abnormal returns, and their t- statistics at the event window (days = -20 before and +20 days after).

Table 1: AARs, CAARs, and t-values

Day	AAR (%)	t-value (AAR)	CAAR (%)	t-value (CAAR)
-20	0.532686965	9.090856162*	0.532686965	4.467275442*
-19	-0.486383047	-8.300631721*	0.046303918	0.388318787
-18	-0.299654243	-5.113910796*	-0.253350325	-2.124673137**
-17	0.278396818	4.75113076*	0.025046493	0.210047531
-16	-0.250325787	-4.272069472*	-0.225279294	-1.889260906***
-15	-0.25058584	-4.276507541*	-0.475865134	-3.990750224*
-14	0.330248305	5.636030224*	-0.145616829	-1.221187164
-13	-0.054519744	-0.930436048	-0.200136573	-1.678406378***
-12	0.080433302	1.372677807	-0.119703272	-1.003868166
-11	-0.203663676	-3.475732099*	-0.323366948	-2.711853902*
-10	0.28885713	4.929646848*	-0.034509818	-0.289409865

-9	0.208784546	3.563125062*	0.174274728	1.461521049
-8	-0.114288718	-1.950455642***	0.05998601	0.503060984
-7	0.27476888	4.689216232*	0.33475489	2.807356656*
-6	0.100295547	1.711647648***	0.435050437	3.648465719*
-5	0.310344488	5.296350926*	0.745394925	6.251109299*
-4	-0.565565617	-9.651964498*	0.179829307	1.508103447
-3	0.123605782	2.109461011**	0.303435089	2.544699254**
-2	-0.007577245	-0.129313553	0.295857844	2.481154165**
-1	0.039394861	0.6723142	0.335252705	2.811531487*
0	-0.079827962	-1.362347058	0.255424743	2.142069838**
1	0.159308609	2.718766818*	0.414733351	3.478080443*
2	0.247513454	4.224074096*	0.662246806	5.553803801*
3	-0.091291323	-1.55798121	0.570955483	4.788206912*
4	0.133241139	2.273898392**	0.704196623	5.905607766*
5	-0.087479769	-1.492933099	0.616716853	5.171975724*
6	0.281251156	4.799843001*	0.897968009	7.530633741*
7	-0.341872048	-5.83440147*	0.556095961	4.663590424*
8	-0.077760315	-1.327060516	0.478335646	4.011468693*
9	-0.116894009	-1.994917632**	0.361441637	3.031159865*
10	-0.114708264	-1.957615627**	0.246733373	2.069181361**
11	-0.007157381	-0.122148132	0.239575993	2.009157383**
12	0.237340901	4.050468912*	0.476916894	3.999570604*
13	-0.048760822	-0.832154061	0.428156071	3.590647469*
14	0.23580055	4.024181216*	0.663956621	5.568142834*
15	-0.080809179	-1.37909255	0.583147442	4.890452397*
16	0.038774611	0.66172899	0.621922052	5.215628114*
17	0.082175721	1.402414001	0.704097773	5.904778785*
18	-0.043293076	-0.738841301	0.660804697	5.541709835*
19	-0.01121563	-0.191406364	0.649589067	5.447652143*
20	-0.177574393	-3.030491388*	0.472014675	3.9584591*

*-significant at 0.01 level, **-significant at 0.05 level and ***-significant at 0.10 level

From the table 1, it can be observed that t-statistics is significant in most of the days after the budget announcement; this indicates that there is an effect of budget announcement on Nepal stock exchange.

There are both positive and negative AARs before the event day (t=0). The positive AARs can be seen in days,(-20), (-17), (-14), (-12), (-10), (-9), (-7), (-6), (-5), (-3) and (-1), whereas negative AARs can be observed in days, (-19), (-18), (-16), (-15), (-13), (-11), (-8), (-40) and (-2). This shows the fluctuation of the returns before the government budget was announced, which are, however, very minimal.

However, the AAR dropped from 0.532686965% to 0.039394861% until the event day and decreased to -0.177574393% until the last day of the event window. On the event day, the AAR is negative and is insignificant, as shown in the table.

However, the effect on the stock returns is mostly significant except on days (-12), (-2), (-10, (3), (8), (11), (13), (15), (16), (17) and (18). After the budget announcement, the effect is significant for ten days and non-significant for ten days, which does not show conclusive results from AAR. Nevertheless, the significance of the effect is observed to be more (total 16 days) before the budget announcement than after the announcement (10 days). From figure 2, it can be illustrated that the average abnormal returns fluctuated during the event window, and the returns have dropped slightly after the government budget.

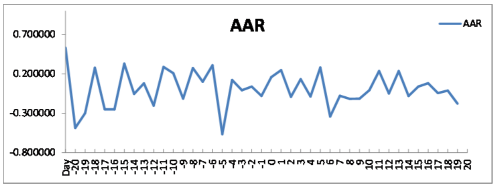

Figure 2: AAR Graph for Event Window

The CAARs before the event are positive for the day (-20) and (-19), then it turned negative on the day (-18). A slightly positive CAAR was seen on the day (-17) then returns are predominantly negative until the day (-10). However, nine days before the event day (day -9 to day -1), the returns were positive until the last day of the event window (day 20). It is observed that after the budget announcement, the behavior of the stock returns was positive.

Before the budget announcement, there seems be significant effect on the stock returns for 12 days except on days (-19), (-17), (-14), (-12), (-10), (-9), and (-4). However, after the announcement, there is an observed significant effect on the stock returns on all days. The effect can also be seen on the event day (t=0) at 95% confidence level. The significance of the t- values of CAARs after the event day support the alternate hypothesis there is an effect of government budget announcement on stock returns of NEPSE.

From figure 3, the CAAR graph illustrates that a few days after the budget announcement, the returns rose slightly, but it dropped sharply and fluctuated after that.

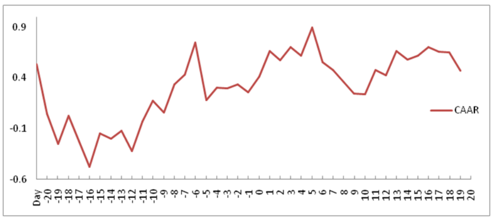

Figure 3: CAARs Graph for Event Window

Therefore, the empirical observations conclude that there is a significant effect of government budget announcements on stock returns of the Nepal Stock Exchange.

Conclusion and Discussion

The empirical research conducted by the researchers supports the evidence that the budget announcement makes an effect on the stock returns, i.e., abnormal profits are made by investors around the event days. All t-statistics of CAAR (and some of AAR) rejected the null hypothesis provided at the beginning of the study. The cumulative cross-sectional average or CAAR shows that after the budget was announced, positive abnormal returns generated for 20 days of the study. However, the returns did not increase in a huge number and returned to a stable level after a few days, normalizing the effect of the budget announcement. This can be because investors had a better understanding of the budget announcement after a few days. The fact that the budget announcement is made on the same date every year supports that investors already anticipate the event, and overreaction is not evident in the market as stock return fluctuation is minimal (-0.21659%) from event day to day 20.

The results of the study are in par with the researches done on similar topics in various stock markets such as India, Pakistan, Nigeria, and Saudi Arab, etc. as similar results were seen in these stock exchanges as well. The volatility in the average abnormal return in Nepal was found to be significant post the budget announcement for -20 and +20 days, which enables investors to earn abnormal profits during the expected budget announcement (Gakhar et al.,2015 and Joshi & Mehta, 2018). Sireesha (2016) depicted similar significant results in Sensex and Nifty on the medium term (41 days event window). However, the impact was seen more in the long term with maximum returns at 61 days event window, and this might be concluded from this study but can be a subject matter for further research. Relying on the study done by Khanna & Gogia (2014) in the US, UK, and India, in the short term (3 days) and medium-term (15 days), similar results were depicted in all three stock markets, owing to the strong literature that supported the significance of budget announcement on stock returns.

The result of the study also contributes that Nepal Stock Exchange has information asymmetry based on the positive abnormal profits earned after the budget announcement. The significance and the returns decrease slowly after a few days of the budget announcement suggesting that NEPSE might be semi- strongly efficient in terms of EMH. The data present evidence that decreasing abnormal returns after a few days of the event announcement supports the rational decision making of the investors in Nepal (Dangol, 2008).

Hence, it is suggested by the researcher that investors should consider budget announcements made by the Nepalese government as a major event for stock returns. It would be a wise choice to enter the market during the few days of the event window, preferably (0 to 3 days or three days to 7 days) as more returns are generated in the short term (Khan et al., 2017).

Implications of the Findings of the Study

Implication for Investors

The study and its empirical findings would be useful for investors as it provides strong evidence of the effect of the stock market after the budget announcement. Investors who are looking to earn a quick profit during this period can do so. Other factors being constant, a positive effect on stock returns is seen after the budget day for over 20 days.

Institutional investors can also guide their clients about the market behavior that is during special announcements and events like this. They can also help them make appropriate investment decisions during an annual budget reading. Therefore, investors looking for a speculative element for their investment decisions would profit most from the results of the study. However, the investors must look at the risk factor too before making any kind of stock investment.

Implications for Regulatory Agencies and Policymakers

The present study provides a general analysis of the stock market around the time of the budget announcement in Nepal. The policymakers can be aware of the stock market patterns during the announcement and afterward of NEPSE. If any situation comes to jolt the stock market without any direct intervention, the policymakers can use methods like announcements.

Hence, policymakers can be aware of the impact they are creating in the stock market with their policy readings. Also, they can work accordingly to ensure not to influence the behavior of the investors in other announcements.

Scope for Future Research

The literature regarding the budget announcements and stock returns is very scared and limited in the context of Nepal, and there is scope for further research. A similar methodology using a budget announcement can be infused to test the efficiency of NEPSE to add literature for studies of Joshi & K.C. (2005) and Dangol (2008). In addition to the budget announcement, policy changes, reaction to certain news, and election announcements can also be studied to find the impact on stock market returns.

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Appendix 1: List of Companies used for Sample

Sectors	Total number of companies	Total number of companies in sample	Sample representation of companies in percentage
Commercial banks	27	25	92.6%
Others	4	2	50.0%
Hydropower	32	4	12.5%
Nonlife Insurance	15	5	33.3%
Development Banks	33	5	15.2%
Microfinance	47	5	10.6%
Life Insurance	7	2	28.6%
Total	**165**	**48**	**29.09%**

Source: www.nepse.com/company

Appendix 2: Summary of Regression Analysis

Summary Output								
Regression Statistics								
Multiple R	0.5018808							
R Square	0.2518844							
Adjusted R Square	0.2517544							
Standard Error	1.6111796							
Observa-tions	5760							
ANOVA								
	df	SS	MS	F	Sig. F			
Regression	1	5032.596367	5032.6	1938.67	0			
Residual	5758	14947.19138	2.5959					
Total	5759	19979.78775						
	Coeffi-cients	Standard Error	t Stat	P value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.046023	0.021297376	-2.161	0.03074	-0.08777353	-0.004271793	-0.087773525	-0.004271793
X Variable 1	1.037134	0.023554982	44.0303	0	0.990957368	1.083310616	0.990957368	1.083310616

Appendix 3: AAR, CAAR, SD of AAR and CAAR for estimation period (120 days)

Days	AAR	CAAR	Days	AAR	CAAR
1	0.129974	0.129974	41	0.016452	-0.325005
2	0.356362	0.486336	42	-0.441774	-0.766779
3	-0.055396	0.430940	43	-0.152373	-0.919152
4	-0.018002	0.412939	44	0.314306	-0.604846
5	-0.012046	0.400892	45	-0.022783	-0.627629
6	0.363570	0.764462	46	-0.005277	-0.632906
7	-0.266573	0.497889	47	0.085549	-0.547356
8	0.100697	0.598586	48	-0.050467	-0.597824
9	-0.164725	0.433861	49	-1.910372	-2.508196
10	0.300810	0.734671	50	2.336800	-0.171396
11	-0.035087	0.699584	51	-0.890130	-1.061526
12	-0.151513	0.548070	52	0.886611	-0.174915
13	-0.199912	0.348158	53	-0.814505	-0.989420
14	-0.239378	0.108780	54	0.174032	-0.815387
15	0.274805	0.383585	55	0.238927	-0.576460
16	0.049577	0.433163	56	0.178448	-0.398012
17	-0.348378	0.084784	57	-0.205245	-0.603257
18	-0.094759	-0.009975	58	0.134519	-0.468738
19	0.190162	0.180187	59	0.258753	-0.209985

20	-0.261252	-0.081065	60	0.135082	-0.074903
21	-0.244397	-0.325462	61	-0.079074	-0.153976
22	0.155423	-0.170039	62	0.100099	-0.053877
23	0.182163	0.012123	63	0.006573	-0.047304
24	0.262280	0.274403	64	0.202308	0.155004
25	-0.437549	-0.163146	65	0.258862	0.413867
26	0.100836	-0.062309	66	0.055153	0.469020
27	0.427515	0.365205	67	0.074357	0.543376
28	-0.117815	0.247391	68	0.021791	0.565168
29	0.748169	0.995559	69	0.325207	0.890374
30	-0.709162	0.286398	70	-0.125421	0.764954
31	0.415786	0.702184	71	-0.033489	0.731464
32	0.318789	1.020973	72	0.028274	0.759738
33	0.266001	1.286974	73	0.267009	1.026747
34	-0.314574	0.972401	74	-0.155400	0.871347
35	0.124819	1.097220	75	0.040327	0.911674
36	-0.340486	0.756733	76	-0.316862	0.594812
37	-0.450416	0.306317	77	0.217639	0.812451
38	-0.561058	-0.254741	78	-0.022394	0.790057
39	0.037509	-0.217232	79	0.133628	0.923685
40	-0.124225	-0.341457	80	-0.112475	0.811211
Days	AAR	CAAR	SD of AAR for EP		0.4059644
81	0.069960	0.881171	SD of CAAR for EP		0.826133
82	-0.104218	0.776952			
83	0.003301	0.780253			
84	0.254325	1.034579			
85	0.375830	1.410408			
86	-0.372179	1.038229			
87	0.339726	1.377955			
88	0.050023	1.427978			
89	-0.234493	1.193486			
90	0.455717	1.649203			
91	-0.116654	1.532549			
92	-0.187182	1.345367			
93	0.039727	1.385094			
94	0.055528	1.440622			
95	0.015460	1.456082			
96	0.129286	1.585367			
97	0.049212	1.634579			
98	0.106656	1.741236			
99	-0.176362	1.564873			
100	0.151468	1.716341			
101	0.159321	1.875663			

102	-0.003574	1.872089			
103	0.033842	1.905931			
104	-0.177609	1.728322			
105	0.156716	1.885039			
106	-0.084495	1.800544			
107	0.144822	1.945365			
108	0.120517	2.065882			
109	0.004142	2.070024			
110	-0.396891	1.673133			
111	-0.024692	1.648441			
112	0.092104	1.740545			
113	-0.303426	1.437119			
114	-0.901041	0.536078			
115	-0.270104	0.265974			
116	-0.147196	0.118779			
117	0.485011	0.603789			
118	0.435399	1.039189			
119	-0.124380	0.914809			
120	-0.925042	-0.010234			

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