

# IMPACTS OF BONUS ISSUE ON STOCK PRICE IN NEPALESE EQUITY MARKET

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## Abstract

*The aim of this study is to examine the effect of bonus issue on the price of equity share. The study is based on pooled cross sectional data of 10 commercial banks whose stocks are listed in NEPSE and traded over the market. An attempt has been made in this study, to analyze the behaviour of the share prices in the Nepalese equity market towards the announcements of bonus issue, taking into account the price movements of the stocks listed in NEPSE. In order to assess the stock price reactions to bonus issue in the Nepalese equity market, Wilcoxon Matched Pairs Test has been applied in this study. The research has revealed that there is a significant impact on the price movement of shares in accordance with the bonus issue in the Nepalese equity market which is consistent to other foremost global equity markets.*

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**Key words:** Bonus issue, Wilcoxon Matched Pairs Test, Price Reactions, Commercial Banks of Nepal, Nepalese Equity Market.

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## **Introduction**

Bonus issue is additional shares issued and distributed to the existing shareholders based upon the proportion of the shares they hold, instead of a cash dividend. A bonus issue is also known as scrip issue or a capitalization issue. It is basically distributed when the companies want to provide income to the shareholders but possesses low cash. It serves as an alternative to the increasing dividend payout ratio. When market opportunity arises, company may invest the earnings in potential project from internal profit. The other reason to issue bonus share is the restriction of government for the declaration of high amount of cash dividend. If high rate of cash dividend is distributed in one year, investors will expect the same rate of dividend in the future also which always may not be possible. The amount of shares issued is based upon the number of issued shares. Amount of bonus issue is normally transferred from the retained earnings to the share capital and share premium account. It is in this sense that bonus issue is regarded as a financial trickery as it has no real economic significance regarding the value addition to the firm and its shareholders.

Bonus issue increases the issued share capital of the company which gives a perception of being bigger than it really is. This makes the company an attractive one for the investment. Investors respond to the announcement of bonus issue which is evident by the transactions volume that takes place after the announcement date. It is very clear from the theoretical point of view that the issue of bonus shares will only increase the number of equity shares.

As there is no change on the proportional ownership holding of shareholders, one can basically contemplate that there shouldn't be change in the market price of equity because of the bonus issue. There are many studies carried out relating to the effect of bonus issue on the market price of the equity shares. In this concern Miller M and Modigliani F (1961) has evidenced that the declaration of bonus issue is independent to the market price of the equity shares and shareholders wealth.

## **Review of literature**

Several studies have been conducted on the impact of bonus share on the market price out of which some relevant studies have been presented here.

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Woolridge (1983) analyzes the effect of announcement of dividend on security prices. The study reflects two effects: a wealth transfer effect and signaling effect. Based on the announcement day returns of common stock, it is demonstrated that the primary factor influencing security returns in response to bonus announcement is market signaling. The wealth is negatively related with bonus announcement.

Asquith and Mullins (1985) studied three possible hypotheses on the effect of stock dividend on the stock price: no price effect, negative price effect and positive price effect. The no-price effect hypothesis assumes that the demand curve for a firm's share is essentially horizontal. Securities are said to be close substitution for one another, they face similar risk and return characteristics, are either available in the market or can be constructed through combination of existing securities. The negative price effect hypothesis more shapes supplied to the market means a permanent reduction in prices. The positive price effect hypothesis predicts that rights and bonus issues are associated with favourable information about planned investments of the issuing corporations.

McNichols and David (1990) conducted the study based on secondary data available on wall street journal from 1977 to 1983. They have examined the relationship between the size of bonus issue and the degree of abnormal returns around the announcement dates in United State markets. The result reveals that there is positive association between size of the bonus issue and abnormal returns. The analysis further reveal that announcement returns are significantly correlated with split factors after controlling the earnings forecast errors.

Another study was conducted in United States on Bonus issues, share splits and ex-day share price behavior (Sloan,1987). The study documented positive abnormal returns on, and in the period immediately surrounding, the day stocks trade "ex" stock dividends and splits. The study used daily market price for a sample of Australian bonus issues and stock splits, the result shows of positive abnormal returns on the ex-day itself are not confirmed, however, increasing the sample to include buy-sell quote of estimates of share prices confirmed positive abnormal ex day returns.

Michelle and Shiguang (2001) explored the result of the price behavior of Chinese stock in response to the bonus announcement and report that the high ratio bonus issue attracts positive return and the bonus announcement with low ratio is rewarded with virtually

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negative payout. Modigliani and Miller (1961) advocate that dividend payout policy is irrelevant to price of the stock. The terms of dividend that either cash or bonus issues do not impact the shareholders wealth. Supporting MM, Sloan (1987) in his Australian evidence report that, bonus issues do not influence the shareholders wealth.

Adaoglu and Lasfer (2011) assessed the market price of an unusual form of stock dividends. The result reveals positive excess returns on the announcement dates, particularly for the financially weak firms, such as the non-cash dividend paying firms. The study further asserts that there is a weak support for the liquidity enhancement hypotheses observed in other markets.

Khan (2013) conducted the study on the impact of bonus share on stock price in NSE listed companies in India of 12 firms from 30 days data prior and after bonus share issue with an objective to examine the impact of bonus share on stock price. The result reveals that bonus share issue has been a powerful financial event which will help improve the stock price and keep the stocks in good books. It further reveals that the market price has been decreased after the announcement of bonus share.

A study on bonus share announcement impact on share price was conducted by Pradhan and Kasilingam (2014) based on the Bombay stock exchange listed firms. The bonus announcement date was taken as the event date and was denoted as 0 while the before announcement and after announcement date as 0 to -10 and 0 to +10. The study covers the 7 years period from 1<sup>st</sup> Jan 2005 to 31<sup>st</sup> Dec 2012. The result reveals that six companies have positive cumulative abnormal returns while four companies have negative cumulative abnormal returns on the bonus announcement date. In overall, company analysis shows that abnormal return is positive before announcement and negative after the announcement.

Similarly, Muthukamu and Rajamohan (2015) conducted a study on stock price reaction to bonus issue in Indian equity market with a view to analyze the price behavior for the selected stocks for the period from 30 days before and after the bonus issue. The result confirmed that bonus issues by the corporates have a significant impact on the price movements of the shares and the market is reacting according to the size of the bonus issue.

A study was done by Nanjundaraj, Ananda, and Thiyagarajan (2015) on market reaction to bonus share announcements in the Indian stock market for the period of 2013 and 2014

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using event methodology and the result reveal that the AAR on -15 day is found to be positive and significant due to the leakage of information before the event. The study asserts that CAAR is found to be positive from -15 days to +7 days supporting the signaling hypothesis of bonus share announcement. It also supports the trading range hypothesis from +8 days to +30 days.

### **Significance of the study**

The overview of previous studies revealed that bonus announcements have significant impact in the context of developed countries and few surveys on dividend policy in Nepalese context. However, to the knowledge of researchers, no study has so far been conducted on this issue in with reference to the Nepalese share market. Since the study is first of its kind, there is a need of conducting the study covering divergent facet of bonus announcement and share price behavior in Nepal.

### **Objective of the study**

The objective of the study is to examine the effect of bonus issue on the share price of 'A' class Nepalese banks which are listed on the Nepal Stock Exchange (NEPSE).

### **Hypothesis of the study**

The hypothesis for this study has been laid down as under:

$H_0$  (Null Hypothesis) : There is no impact on the price behavior of the shares due to bonus issue.

$H_1$  (Alternate Hypothesis): There is significant impact on the price behavior of the shares due to bonus issue.

### **Research design**

#### **Data and Sample**

To study the impact of bonus issue on the market price of share, shares of 'A' class Bank which were listed on the NEPSE are undertaken for the study. As mentioned in the Nepal Rastra Bank, central bank of Nepal, website, those banks which declared the bonus issue on the year 2017 serially from the list that comprised ten banks, were considered for the study. To be specific, only the recent bonus issues made by Nepalese banks were considered for the study. Secondary data is used for the analysis of the study. Secondary

data are collected from “ShareSansar”, which is a recognized online financial portal of Nepal. Similarly, the information regarding the daily price movements of the selected stocks were collected from an official website of Nepal Stock Exchange (NEPSE). The data are collected based on the bonus issue declaration date rather than actual issue date. For the purpose of analyzing the impact of bonus issue, the daily closing price data of the selected banks’ stock price for the period from 30 days before and after the bonus issue i.e., (- 30 days to +30 days) were taken and the Wilcoxon matched pairs test method has been employed for analytical purpose.

## Research Methodology

### Analytical Tool

In order to test the hypothesis, Wilcoxon matched pairs test is used in this study. It is a non-parametric test that can be used to determine whether two dependent samples were selected from populations having the same distribution. This test is applied for the study as it serves as an alternative to *t*-test for two related samples that considers both direction and magnitude of the difference between any paired values. Procedure of the Wilcoxon matched pairs test is as follows:

- At first, list the pairs of share price before (X) and after the bonus issue (Y).
- Find the difference in the share price ( $D=X-Y$ ).
- Ignoring the signs, rank these differences in ascending order.
- If the difference is equal, then they are ranked following the average method.
- Sum the ranks with positive difference and negative difference and assign them as  $\sum S+$  and  $\sum S-$  respectively.
- Find the T- statistics of Wilcoxon Test ( T ) by taking the lowest value from  $\sum S+$  or  $\sum S-$ , i.e., if the value of  $\sum S+$  is lowest, the value of T is considered as the value of  $\sum S+$ . If the value of  $\sum S-$  is lowest, the value of T is considered as the value of  $\sum S-$ .

$$\text{Mean of T: } E(T) = n(n+1) / 4$$

$$\text{Standard deviation of T: } \sigma T = \sqrt{n(n+1)(2n+1) / 24}$$

$$\text{Z- Test Statistic; } Z = T - E(T) / \sigma T$$


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**Decision Rule**

For the decision whether to reject or fail to reject one has to calculate the table value of  $Z\alpha$  for a given  $\alpha$  level of significant. After determining the table value of  $Z\alpha$  we it is to be compared with the calculated value of  $Z\alpha$ . The decision is fail to reject the Null Hypothesis if the table value is more than the calculated value of  $Z\alpha$ . Similarly if the calculated value of  $Z\alpha$  is more than the table value of  $Z\alpha$ , the decision is reject the Null hypothesis. The study has considered 5 % level of significance and the table value is 1.645.

**Technique of Analysis**

The working of Wilcoxon matched pairs test and the result derived for CZBIL (Citizen Bank International Limited), has been considered as an example as shown below.

***Follow table 1***

$$\begin{aligned} E(T) &= n(n+1)/4 \\ &= 30(30+1)/4 \\ &= 30 \times 31 / 4 \\ &= 232.50 \end{aligned}$$

$$\begin{aligned} \sigma T &= \sqrt{n(n+1)(2n+1)/24} \\ &= \sqrt{30(30+1)(2 \times 30+1)/24} \\ &= \sqrt{2363.75} = 48.62 \end{aligned}$$

$$\begin{aligned} Z &= \frac{[T - E(T)]}{\sigma T} \\ &= 57 - 232.50 / 48.62 \\ &= -3.6096 \end{aligned}$$

$$Z = -3.6096 \text{ and } |Z| \text{ is } 3.6096.$$

Table Value of Z is 1.645 at 5 % level of significance.

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### **Analysis and Interpretation**

The technique of analysis with reference to Table No. 1 shows that the calculated value of Z shows the value of CZBIL is 3.60963 which is more than the table value of 1.645 at 5% level of significance. This suggests rejecting the Null hypothesis, stating that there is significant impact of bonus issue in the market price of share. This means the market price of CZBIL's share responds to the declaration of the stock dividend. Table No. 2 shows the similar situation prevalent in the cases of NIB, NBB, KBL, PCBIL, SRL, NMB, NICA, and CCBL. However, in the case of LBL, calculated value of Z is 0.21596 which is less than 1.645 (table value of Z), suggesting that we fail to reject the Null Hypothesis.

### **CONCLUSION**

Based upon the analysis and interpretation of the data, Out of the 10 selected commercial banks, 9 showed that their market price is responsive to the bonus share issue. In overall, the analysis of the Wilcoxon matched pairs test for all the selected banks' show that the price behavior of the banks share changes in response to the bonus issue. This means 90% of the sample banks support that their market price changes due to the bonus issue declaration in the market. Thus, the study concludes that the bonus issue declaration have relation with their market price movement. Nepalese banks have significant impact on the price behaviour of their shares in relation to the bonus issue. The findings of this study is consistent with various studies done by Lijebloom, E. (1989) on New York Stock Exchange, Eades, K., Hess, P. and Kim, E. (1984) on Stockholm Stock Exchange, Masse. I, Hanrahn. J. R, and Kushner, J. (1997) on Toronto Stock Exchange, Michelle L. B and Shiguang, M. (2001) on China's stock price, M. Muthukamu and S. Rajamohan (2015) on Indian Equity Market.

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## Appendices

Table 1

Share Price Behaviour: Before and after the Announcement of bonus issue of CZBIL.

Citizen Bank International Limited (CZBIL)					
Before (X)	After (Y)	Diff. (X - Y)	Rank	S (+)	S (-)
386	306	80	21.5	21.5	
391	306	85	26	26	
392	305	87	29	29	
387	303	84	25	25	
381	300	81	23.5	23.5	
377	296	81	23.5	23.5	
375	295	80	21.5	21.5	
380	293	87	29	29	
380	293	87	29	29	
375	289	86	27	27	
375	303	72	19	19	
380	307	73	20	20	
378	308	70	18	18	
377	315	62	16	16	
375	311	64	17	17	
314	310	4	11	11	
302	305	-3	8.5		-8.5
300	300	0	1.5	1.5	
294	300	-6	12		-12
295	298	-3	8.5		-8.5
297	296	1	3.5	3.5	
293	295	-2	5.5		-5.5
295	295	0	1.5	1.5	
292	295	-3	8.5		-8.5
291	293	-2	5.5		-5.5
299	290	9	14	14	
302	290	12	15	15	
301	294	7	13	13	
294	297	-3	8.5		-8.5
300	299	1	3.5	3.5	
				<b>ΣS (+) = 408</b>	<b>ΣS(-) = -57</b>

$X$  = Share price before the bonus issue.  $Y$  = Share price after the bonus issue.

**Table 2**

**Impact of Bonus issue on Share Price Behaviour: Results of Wilcoxon Matched Pairs test**

Sample Banks	$\Sigma S(+)$	$\Sigma S(-)$	E(T)	$\sigma T$	T	Z value	IZI value	T- value
Nepal Investment Bank Ltd. (NIB)	465	0	232.5	48.62	0	-4.78198	4.78198	1.645
Nepal Bangladesh Bank Ltd. (NBB)	465	0	232.5	48.62	0	-4.78198	4.78198	1.645
Kumari Bank Ltd. (KBL)	428.5	-36.6	232.5	48.62	36.6	-4.02921	4.02921	1.645
Laxmi Bank Ltd. (LBL)	222	-243	232.5	48.62	222	-0.21596	0.21596	1.645
Citizen Bank International Ltd. (CZBIL)	408	-57	232.5	48.62	57	-3.60963	3.60963	1.645
Prime Commercial Bank Ltd. (PCBL)	465	0	232.5	48.62	0	-4.78198	4.48198	1.645
Sunrise Bank Ltd. (SRBL)	465	0	232.5	48.62	0	-4.78198	4.48198	1.645
NMB Bank Ltd. (NMB)	465	0	232.5	48.62	0	-4.78198	4.48198	1.645
NIC Asia Bank Ltd. (NICA)	456	-9	232.5	48.62	9	-4.59687	4.59687	1.645
Century Commercial Bank Ltd. (CCBL)	465	0	232.5	48.62	0	-4.78198	4.48198	1.645

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