WHO GETS THE BONUS IN BONUS STOCK ISSUANCE?

Obiyathulla Ismath Bacha*
Ahamed Kameel Meera*

ABSTRACT

This study examines bonus stock issues by Malaysian companies over the six year period 1990-1995. We find abnormal price behaviour around announcement date. Most of this was in the form of a build up in prices before announcement date. The most significant price increases were in the 15 day period just before announcement with a peak on the day following announcement. We find no change in daily price volatility, trading volume nor any wealth effect as a result of the bonus. Differences in bonus ratios did not matter. Though bonus issuing stocks collectively had above normal returns pre and post bonus, it is argued that this is regardless of the bonus decision. Neither the shareholder nor issuing company appears to benefit.

---

* *Dr. Obiyathulla Ismath Bacha and Dr. Ahamed Kameel Meera are both attached with the Department of Business Administration, Kulliyyah of Economics and Management Sciences, International Islamic University Malaysia.*

The authors gratefully acknowledge The Research Center of the International Islamic University for financial assistance, Datastream International (Singapore) for providing much of the needed data and Showkat Imran for the research assistantship. This paper was presented at the Asia-Pacific Finance Association Fourth Annual Conference held in Kuala Lumpur, July 14 to 16, 1997.
* *Corresponding author.*

Bonus Stock Issuance (BSI) appears to be a regular feature of the Malaysian stock market. In any given year, several Malaysian companies undertake bonus stock issuance, usually as part of recapitalisation. This is often done together with a rights issue or other capitalisation changes. The issuance of bonus stock is by no means unique to the Malaysian stock market. It is just as common in Singapore. A bonus stock issue is quite simply the issue of additional stock to existing shareholders according to a predetermined ratio. Also known as "Scrip Issuance" in the United Kingdom, BSI represents nothing more than an issue of additional paper. In the American sense, it is really a stock-split. Though numerous studies of the developed markets have shown stock-splits to be a "non-event", the announcement of a bonus stock issue in Malaysia apparently conjures images of getting something for nothing. The term "bonus" appears to reinforce this image. Thus, such announcements are often met with a run-up in stock prices. In many cases even prior to the official announcement.

This study attempts an indepth analysis of bonus issues and examines several issues related to the phenomenon. The paper is divided into five sections. Section I provides the justification for the study, outlines the BSI process in Malaysia and the reasons cited by issuing companies. Section II provides the literature review. Section III lays out the research questions and research methodology. Section IV reports the findings and outlines the implications while Section V concludes.

Section I: Objective And Motivation For Study

Though stock-splits, stock dividends (and reverse splits) are well researched in the context of the US and other developed markets, we are not aware of any Malaysian study that attempts an in depth analysis of BSI. The objective of this paper is to analyse BSI and issues related to it and offer recommendations for policy. The fact that companies would expend valuable resources on undertaking such an "irrelevant" process and the market reaction both before and after the announcement makes interesting study. Subjecting the BSI process to rigorous analysis to see if any justification can be made for BSI is the motivation behind the study.

The process of bonus stock issuance in Malaysia can be divided chronologically into the following five steps.

(1) The issuing company announces its intent through the Kuala Lumpur Stock Exchange (KLSE). In announcing the intent, the company must state the reasons for the BSI and basis on which the new stocks would be issued. For example if the new stocks are to be capitalised from other than retained earnings, it must state the reserves from which the capitalisation is to be done. Additionally, with this first announcement, the company must indicate when it intends to submit its application to the Securities Commission (SC).

(2) Next, the company submits its proposed BSI plan to the Securities Commission as per SC requirements. It typically takes approximately a month for SC to process the application.
(3) The company then seeks shareholder approval, usually by means of an Extraordinary General Meeting (EGM). This can be before SC approval is received but would be conditional.
(4) On receipt of SC and shareholder approval the company applies to list the resultant new shares on the KLSE, and
(5) The final step is the dispatch of circular to shareholders and books closure.

The issuance of bonus stock in Malaysia is governed by SC Chapter 13 guidelines. Among other requirements, the Chapter 13 guidelines require that companies intending to issue bonus stock must be "growth" companies whose profits had shown an uptrend over the past three financial years and are expected to increase further in future financial years. Additionally, the company is required to at least maintain the absolute quantum of dividend declared and paid in the previous financial year.

Reasons Cited For BSI

Companies often cite several reasons in justifying the bonus issuance. Of these the common ones among our sample companies were;

(1) To increase the paid up capital of the company. The justification here is the need to "better reflect" the company's current scale of operation.
(2) To provide non-cash reward to shareholders. A cash dividend would mean an outflow of cash from the firm and taxable income to shareholders.[1] A bonus stock issue presumably provides gains that are not taxable to the shareholder.
(3) To improve marketability and affordability of shares. The idea here is to reduce the stock price to an "optimal trading range" in order to increase the number of shareholders and thereby increase transaction liquidity.

> Several other reasons that are variants of the above three are often provided. Though none of the firms cite 'signalling' as a reason, previous studies have argued that stock-splits may be a means by which management could signal to shareholders.

[1] *There is no capital gains tax on stock investments.*

We now turn to an evaluation of the above mentioned reasons for BSI. We begin with an examination of what a BSI is and what impact it has on the issuing firm. A bonus stock issuance is the issue of additional (new) scrips in some predetermined proportion to existing shareholders. Thus, BSIs are essentially stock splits. As is the case with stock-splits, the immediate impact of the BSI would be to increase the company's paid-up capital by an amount equivalent to the number of new stocks issued multiplied by its par value. This increase in the paid-up capital is made by transferring the amount from either the firm's retained earnings or from other reserves. Notice that while an accounting change is made, there is no net change in the firm's total shareholders' equity[2]. This is true even in the case where the new stock is issued from reserves that were the result of a revaluation exercise[3]. Aside from the fact that a BSI like a stock-split results in no net changes to total shareholders' equity, the cash flow impact is also similar. Since in both instances the new stock is issued for free there is no net increase in cash inflows as a result. In fact in both cases, the transaction costs involved would mean a net cash outflow for the firm.

Since total shareholders' equity is left unchanged following a bonus stock issuance, capital structure and therefore both financial leverage and the firm's current cost of capital should also be unchanged. Thus, in a Modigliani and Miller sense, a bonus issue should have no impact on overall firm value[4]. In fact if one considers the net cash outflow resulting from the transaction and the evidence of previous studies that show a permanent increase in stock beta following a stock-split (see for example, Brennan & Copeland, 1988), a case could be made that overall firm value could even be lower.

This brings us back to the question, why do firms undertake BSI if there is no net benefit? We now evaluate the reasons cited by issuing firms. Though most of the sample companies cited the need to adjust capital structure to "better reflect" current operations, this is an ambiguous reason. It is hard to see how an increase in paid-up capital better reflects a firm's value or the scale of current operations. In any case, rational investors should want to see increases in market value not paid-up capital. That bonus issues can be a means to providing a non cash reward to shareholders assumes ignorant shareholders. Unless shareholders have a wealth illusion a mere increase in

---

[2] *Total Shareholders' Equity = Paid Up Capital + Retained Earnings + Other reserves.*

[3] *Once an asset revaluation exercise is completed and a new reserves account created, transferring funds from that account to paid-up capital results in no change of total equity.*

[4] *While a revaluation of assets causes an increase in reported total equity, a subsequent BSI has no effect. The SC however has tighter rules regarding this.*
Where firm value is determined as $FV = \sum \frac{CFt}{(1+k)^t}$, *where k is the firm's WACC.*

scrip should not increase overall wealth. Just as a stock's price should reduce by the amount of the dividend on its ex-dividend date, so should the stock of a company that has issued additional scrip. This is especially true since theoretically, firm value should not increase with a BSI. However, some proponents argue that there could be a tax implication, dividends are taxable[5] but bonus stocks are not. Therefore, by avoiding dividends and issuing bonus stocks instead, the firm provides non taxable rewards to the shareholder. This argument however has two flaws. First, it treats bonus issuance as stock dividends and second what if the firm that wants to avoid dividends not do a BSI either? Over some future period, shareholders would receive capital gains returns equal to the firm's Return On Investments. This is again untaxed income.

The third category of reasons cited by bonus issuing companies is the need to decrease stock price into a more desirable trading range. Several studies, including Lakonishok & Lev (1987) find that decreasing stock value to a more desirable trading range leads to an increase in the total value of shares outstanding. This has often been found to be the one major benefit of stock split. However, for such benefit to occur, the stock price prior to the BSI must have been 'expensive' or too high to have impeded liquidity and broad based shareholding.

Could signalling be a major reason for BSI? Suppose management is optimistic about the future and wishes to signal this information to shareholders, could BSI be the means to do this? It could be possible especially given the regulatory requirements. Since approval depends on being a "growth" company with established profit increases over at least the past three years and a commitment to at least maintain the absolute quantum of the prior year's dividend amounts, approval alone could be construed as official endorsement. Additionally, the fact that the firm is required to at least maintain the absolute quantum of the prior year's dividends, implies that there is a bonding effect since management is committing itself to at least maintain forthcoming dividends. Unless management is confident of at least the immediate future, they may not be willing to make this commitment.

Section II: Review of Literature

Earlier studies on stock-splits cover a broad spectrum of issues related to the event. These issues can be divided into three broad categories namely, (1) Wealth Effect (2) Market Response and (3) Management Motivation. Most studies have addressed issues in more than one category.

Studies On Wealth Effects

---

[5] *Stock dividends are subject to the same tax withholding as cash dividends.*

In their seminal study on stock splits Fama, Fisher, Jensen and Roll (FFJR,1969) examine stock price behaviour of NYSE stocks around announcement date for 940 stock splits over the period 1927-1959. They report several findings, first that stock splits tend to be cyclical, mostly taking place around bull markets; second, that the stocks earn above normal returns in the period *preceding* the split; and the third, most interestingly finds that there are no above normal returns for the same stocks on the announcement date or over a two and half year period following the split. Thus, there is no superior performance whatsoever if one buys the stock on announcement day and holds it for the subsequent two and a half years.

These findings set off several additional studies on stock splits, the more recent of which have had mixed results. While Grinblatt, Masulis and Titman (1984) and Ohlson & Penman (1985) report abnormal returns around split announcements, Bishare (1988) and Aggarwal & Chen (1989) find no excess returns around announcement dates.

Studies On Market Response

Copeland (1979) examines the liquidity effect of stock splits. Using 25 randomly selected splits between 1963 and 1973, the study finds that "the increase in share volume is less than the proportional increase in shares outstanding following a split, so that the dollar trading volume actually declines". Additionally, the bid-ask spreads increase as a percent of value traded. Both findings imply that liquidity decreases following the split.

This finding is further supported by Lamoureux & Poon (1987) and Conroy, Harris & Benet (1990). Both studies find a decrease in liquidity using the same measures. However, Murray (1985) reports no reduction in liquidity as measured by bid-ask spread or proportional trading volume. Similarly, Lakonishok & Lev (1987) find no permanent effect on trading volume as a result of the split.

Using the number of stock holders and absolute trading volume as measures, Lamoureux & Poon (1987) report an ex-day effect related to clientele shifting. Essentially, the number of shareholders increases along with the increase in absolute trading volume. Since this happens in spite of the finding of reduced liquidity using proportional trading volume and bid-ask spreads, the authors postulate that the split probably moved prices to a preferred trading range[6].

Several studies report a correlation between splits and underlying stock volatility. Among these

---

[6] *The authors still reject the hypothesis that the positive market reaction was due to the stock price's movement to an optimal range.*

are Ohlson & Penman (1985); Aggarwal & Chen (1989); and Sheikh (1989). Lamoureux & Poon (1987) in examining the market response to stock splits, attribute the increased daily volatility to noise. This increase in non systematic risk the authors argue, raises the tax-option value of the stock and it is this value that generates the announcement effect. Others, notably Brennan & Copeland (1988) find a significant and permanent increase in the systematic risk beta following a split. That beta increases following a split is confirmed by yet others but the permanency is shown to decay as the measurement interval is lengthened[7].

Studies On Management Motivation

If stock splits have no significant wealth effects (FFJR, 1969) and result in reduced liquidity, (Copeland, 1979) why then do companies continue to do stock splits? Several authors have attempted to analyse the phenomena from a management motivation viewpoint. While most of this category of studies have used surveys based on questionnaires to management of stock splitting companies, some have used secondary market data to examine if a stated or implied change has happened. Most of the studies also examine signalling as the major motivation. In perhaps the most comprehensive of such recent studies, Baker & Powell (1993), use questionnaires to survey management motivation of 251 NYSE and AMEX companies splitting stocks. They find evidence that the three most important motives are (i) moving stock price to a better trading range (ii) improving trading liquidity and (iii) signalling optimistic managerial expectations about future prospects. Arbel & Swanson (1993) investigate the role of information by examining "pure stock split" announcements[8]. They find that the degree of market anticipation (or leakage) is dependent on the stock's information environment. There is greater anticipation for stocks about which more information is available. Kimmell & Marquette (1991), find that managers plan stock splits (and stock dividends) with several objectives in mind and that the stock distribution size and the issuing company's financial condition are directly related.

BSIs in Malaysia have not been a much studied subject. Neoh Soon Kean (1991) examines bonus issues[9] by Malaysian companies over the period 1968 to 1983. Based on his findings, he argues that most of the Malaysian bonus issues were intended to provide a temporary boost to stock prices in order to benefit insiders. Annuar and Shamser (1993) examine stock price reaction to bonus issue announcements. Using a sample of 65 BSI's over the 1980 - 90 period, which includes

---

[7] *Wiggins (1993).*

[8] *A pure stock split announcement is defined as stock split not accompanied by any other firm specific news in the six day period surrounding the announcement.*

both pure BSI's and BSI's associated with other announcements, they find the following; (i)evidence of insider trading with prices rising three weeks before announcement. (ii) the price reaction is temporary and (iii) where BSI's are accompanied by dividend announcements, the information content of bonus announcement dominated the effect on share prices.

Research Methodology

We address several research questions aimed at a comprehensive analysis of BSI in Malaysia. A total of seven questions are addressed. These are (i) is there abnormal price behaviour around the bonus announcements? (ii) is daily price volatility different post bonus? (iii) is liquidity higher following the bonus issue? (iv) are there any wealth effects as measured by total share holding value? (v) are bonus issuing companies fundamentally better than average and do their stocks have superior performance pre announcement? (vi) does the ratio of the bonus matter? and (vii) would a buy and hold strategy initiated on the announcement date have had superior performance?

In addressing these questions, we examine all "pure bonus stock issues" that took place in Malaysia over the six year period 1990 to 1995. A pure bonus issue is defined as one which is not accompanied by any other capitalisation change. Many bonus issues were part of capitalisation changes that also involved a rights issue. We eliminated such bonus issues, since a rights issue or other such capitalisation change does have a cash flow impact. A rights issue results in cash inflows, a change in debt/equity ratio, leverage and as such a possible change in the firm's weighted average cost of capital (WACC). All of this would have an impact on the firm's overall value. Furthermore, the cash inflow from a rights issue would presumably be used for further expansion. As such, a change in stock price would be expected and justified. A pure BSI on the other hand has none of the above implications and thus is theoretically a non-event.

Additionally, a rights issue may be anticipated. For example, a company in a fast growth environment that is already highly leveraged can be expected to undertake a rights issue to fund further expansion. Since in a pure BSI there is no inflow of funds, no expectation about an impending bonus issue can be formed.

Over the six year period of our study, there were a total of 41 bonus issues that qualified under our criterion of pure bonus issues[10]. Table 1 shows our sample companies, the announcement dates, the bonus issue ratio and the ex-dates. We use daily high, low, open and close prices and daily volume in Ringgit for a one calendar year period before and after the announcement date.

---

[9] *The study consists of 2 chapters of the author's book on Stock Market Investment. Not being an academic study no clear delineation of hypothesis or methodology is outlined.*

[10] *Most of the sample companies had no other capitalisation change in the year of the BSI announcement.*

Table 1
Pure Bonus Stock Issues

COMPANY	ANNOUNCEMENT DATE	BONUS RATIO	BONUS EX-DATE
Highland and Lowland Bhd	20/07/90	1:1	24/01/92
Pengkalen Holding Bhd	14/08/90	1:4	01/03/91
Shell Refining Co (F.O.M) Bhd	05/12/90	3:2	24/07/91
Magnum Corporation Bhd	03/05/90	1:8	15/08/90
Calsberg Brewery Malaysia Bhd	27/11/91	1:3	12/06/92
Mycom Bhd	25/12/91	1:2	01/07/92
Magnum Corporation Bhd	12/12/91	1:10	27/07/92
Island and Peninsular Bhd	20/01/92	1:4	08/10/92
Oriental Holdings Bhd	25/01/92	1:5	09/02/93
OYL Industries Bhd	21/09/92	1:2	01/03/93
Pernas Int. Hotel and Properties Bhd	08/09/92	1:5	07/01/92
Malayan Banking Bhd	13/05/93	1:2	15/12/93
Ajinomoto Bhd	29/12/93	1:10	07/06/94
Calsberg Brewery Malaysia Bhd	25/11/93	1:4	28/04/94
Gopeng Bhd	24/02/93	7:2	27/01/94
Kretam Holdings Bhd	30/03/93	1:2	01/09/94
Magnum Corporation Bhd	01/06/93	8:2	13/09/93
Malayan Cement Bhd	30/03/93	1:2	03/11/93
Malaysian International Shipping Corporation	28/12/93	1:3	13/07/94
Mycom Bhd	06/09/93	1:2	14/12/93
Nanyang Press (Malaysia) Bhd	15/09/93	2:5	04/11/93
Pelangi Bhd	20/04/93	1:2	04/10/93
Malaysian Helicopter Services Bhd	01/06/93	1:1	22/06/94
Malayan United Industries Bhd	28/01/94	1:1	14/09/95
Chemical Company of Malaysia Bhd	16/12/94	1:1	12/07/95
Eng Technology Holding Bhd	23/12/94	2:5	03/07/95
Gamuda Bhd	03/02/94	1:3	30/12/94
IJM Corpn Bhd	31/12/94	1:1	07/09/95
Keck Seng (M) Bhd	16/12/94	1:2	23/11/95
Sime Darby Bhd	03/06/94	1:5	01/12/94
Sungei Way Holdings Bhd	20/02/94	1:2	06/06/94
Uniphone Telecommunications Bhd	02/04/94	1:1	25/08/94
Malaysian Assurance Alliance Bhd	10/05/95	1:8	06/11/95
Federal Flour Bhd	07/03/95	1:4	11/12/95
Killinghall (M'sia) Bhd	17/01/95	1:4	18/08/95
Muda Holdings Bhd	19/02/95	1:4	27/09/95
MUI Properties Bhd	07/05/95	2:1	23/11/95
Pacific Chemicals Bhd	25/05/95	2:3	08/09/95
Sarawak Oil Palms Bhd	06/01/95	1:5	29/06/95
T A Enterprise Bhd	12/01/95	1:1	06/07/95
Tiong Nam Transport Holding Bhd	18/02/95	1:1	18/10/95

In evaluating the first issue of abnormal price behaviour around bonus announcement date we use the standard cumulative abnormal returns; CAR methodology. For each sample company, we compute CARs for three window periods around the announcement date. The three window periods being ± 30, ±10 and ±5 days. Daily CAR is computed as;

$$CAR_{i,t} = \sum_{t=1}^{t} AR_{i,t} \qquad i = 1, ...N \tag{1}$$

where the daily abnormal return on day t for stock i is determined as;

$$AR_{i,t} = R_{i,t} - \hat{R}_{i,t} \tag{2}$$

The abnormal return $AR_{i,t}$ is the difference of day t's actual return $R_{i,t}$ less the expected return $\hat{R}_{i,t}$

Where,

$$\hat{R}_{i,t} = \hat{\alpha}_i + \hat{B}_i RM_t \tag{3}$$

RM being the returns of the KLCI (Kuala Lumpur Composite Index).

Next, we compute the daily mean abnormal return which is the average abnormal return across all samples on day t. (For example day -9 etc.)[11].

The daily mean abnormal return (MAR) is;

$$MAR_t = \frac{\sum_{i=1}^{N} AR_{i,t}}{N} \qquad t = 1,....., T \tag{4}$$

and Variance, $VAR\ (MAR_t) = \frac{\sum_{i=1}^{N} VAR(AR_{i,t})}{N^2}$ $\qquad t = 1,....., T$ (5)

In addition to computing daily CARs for each of our sample companies, we compute mean overall CARs for all sample companies for each window period. The Mean Cummulative

Abnormal Return (MCAR) is determined as;

$$MCAR_t = \frac{\sum_{i=1}^{N} CAR_{i,t}}{N} \qquad t = 1,....., T \tag{6}$$

---

[11] *FFJR had used monthly returns. However all later researchers including Copeland (1992), Lamoureux (1987), Shamser (1993) etc. have all used daily return measures.*

and Variance, $VAR\ (MCAR_t) = \frac{\sum_{i=1}^{N} VAR\ (CAR_{i,t})}{N^2}$ $\quad t = 1,\ldots\ldots, T$ (7)

In testing for significance, we use the standard Z - test, where the Z score is computed as;

$$Z_t = \frac{MCAR_t}{\sqrt{VAR(MCAR_t)}} \qquad t = 1,\ldots\ldots, T \tag{8}$$

We then test the following null hypothesis that;

> Since a BSI has no financial significance there should be no abnormal returns around announcement dates.

> The alternate hypothesis would postulate that there would be abnormal returns around announcement dates. Given our earlier arguments about the irrelevance of BSIs from a strictly financial viewpoint, we would expect to accept the null hypothesis.

In testing for the possibility of a change in daily stock price volatility as a result of the bonus issue, we use the Parkinson Extreme Value Estimator. The Parkinson measure of daily volatility is determined as the natural logarithm of the day's highest over lowest price as follows;

$$In\left(\frac{H_t}{L_t}\right) \qquad t=1,\ldots\ldots, T \tag{9}$$

We test whether mean daily volatility pre and post ex dates [12] is different. A means test for significant difference is then carried out.

We begin by determining the mean difference in the Parkinson measure for each individual company.

$$MPM_{A,i} - MPM_{B,i} = dPM_i \qquad i = 1, \ldots\ldots N \tag{10}$$

where;

$MPM_{A,i}$ = the mean Parkinson Measure after bonus issue.

$MPM_{B,i}$ = the mean Parkinson Measure before bonus issue.

We define mean of the difference in Parkinson Measure across all companies as MdPM. The means test for significance is carried out as;

---

[12] *In testing for significant difference, we compare the mean volatility of daily ex-bonus observations with the mean daily volatility of observations before the ex-date.*

$$MdPM = \frac{\sum_{i=1}^{N} dPM_i}{N} \quad (11)$$

$$t_{N-1} = \frac{MdPM}{S_{dPM}/\sqrt{N}} \quad (12)$$

Following Copeland (1979), Lamoureux & Poon (1987) and Conroy, Harris & Benet (1990) we examine for liquidity changes by using volume as proxy[13]. We use the daily total volume as proxy for liquidity[14]. We test the null hypothesis that pre bonus daily Ringgit volume is no different from ex-date Ringgit daily volume.

As in the earlier test for volatility we begin with a determination of the difference in the mean daily Ringgit volume before and after for each company.

$$MDV_{A,i} - MDV_{B,i} = dVi \qquad i = 1,..... N \quad (13)$$

where;

$MDV_{A,i}$ = Mean daily dollar volume after bonus ex-date.

$MDV_{B,i}$ = Mean daily dollar volume before.

The means test for significance is carried out as;

$$MdV = \frac{\sum_{i=1}^{N} dV_i}{N} \quad (14)$$

and $$t_{N-1} = \frac{MdV}{S_{dV}/\sqrt{N}} \quad (15)$$

In determining whether there is a wealth effect emanating from a bonus issue, we test the hypothesis that shareholder wealth as measured by stock value is no different pre and post bonus ex-date. We define a wealth effect as any change in the total value of shares held after adjusting for bonus ratio. Again we compare adjusted post ex date daily share values with the mean of pre bonus daily share values. The adjustment for post ex date share value is made as follows;

Adjusted ex date = Daily Closing Price x [1 + bonus ratio]

daily stock value

---

[13] *Average trading volume before and after are tested with post bonus volume adjusted as; Daily Volume/(1 + bonus ratio).*

[14] *This is a more direct measure since we are indeed interested in the total value of daily volume. Bid-ask spreads are another common proxy, but Malaysian b-a spreads tend to be 'sticky' at 5 sen.*

We begin by determining the mean difference of the daily closing price for each individual sample company stock.

$$MCP_{A,i} - MCP_{B,i} = dP_i \qquad i = 1..... N \tag{16}$$

where $MCP_{A,i}$ = Mean closing price for company *i* after bonus issue.

$MCP_{B,i}$ = Mean closing price for company *i* before bonus issue.

Defining the mean dP_i across all companies as MdP_i, we test for significant difference as;

$$MdP = \frac{\sum_{i=1}^{N} dP_i}{N} \tag{17}$$

and

$$t_{N-1} = \frac{MdP}{S_{dp}/\sqrt{N}} \tag{18}$$

Based on our earlier arguments about firm value we would expect no wealth effect. Given the design of our test, we are really examining whether a shareholder who owns the stock one year before the announcement would experience a change in net worth following bonus ex-date.

Were bonus issuing companies fundamentally better than average? To answer this, we examined whether a trading strategy involving the purchase of each stock one year before announcement date and sale on announcement date would collectively have earned returns higher than market returns. The mean excess return of each stock as determined earlier was then cross summed to compute the grand mean excess return. The null hypothesis that this grand mean excess return equals zero is then tested.

In order to examine whether the ratio of the bonus issue matters where returns (and price reaction) are concerned, we had to categorise our data by ratio. Arranging the sample in ascending order showed 3 possible cut off points with an approximately equal number of companies in each category. The 3 categories were as follows; (i) Bonus ratio $\leq$ 1.25:1, (ii) Bonus ratios between 1.33 to 1.667:1 and (iii) Bonus ratios > 1.667:1. There were a total 14 companies each in Categories (i) and (ii) and 13 companies in Category (iii). Using the excess returns of each company following announcement date and computing mean excess return for each category, an F-test is used to test the hypothesis that there is no difference in mean excess returns between categories.

H_0: $\mu 1 = \mu 2 = \mu 3$

H_1: at least 2 of the μs are different

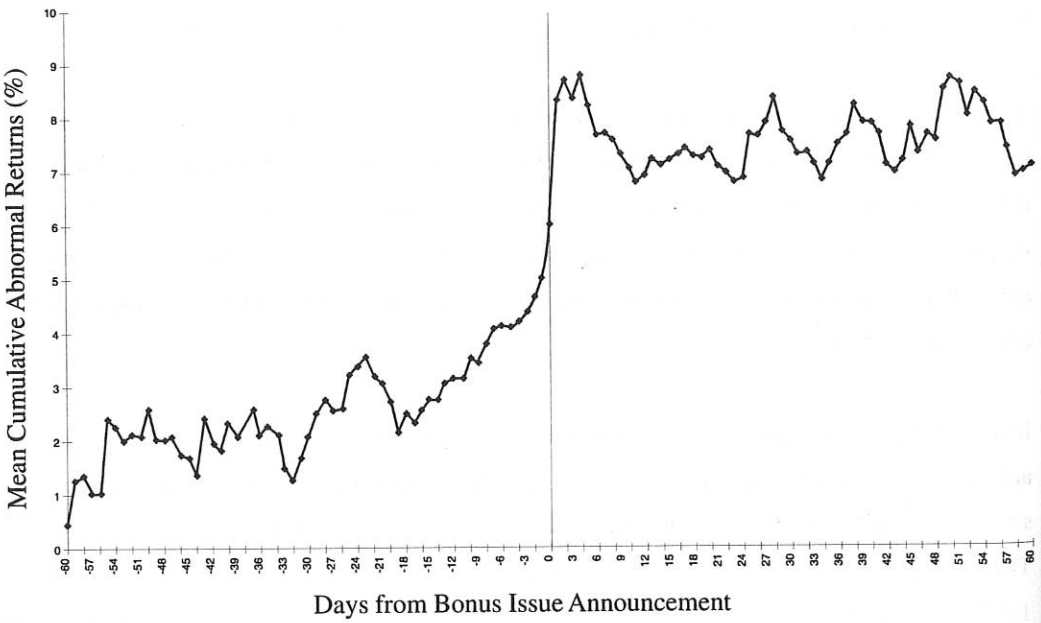
Our final test replicates Fama, Fisher, Jensen and Roll's test on whether a buy and hold strategy initiated on bonus announcement date would have had superior returns over the one year period following the announcement[15]. Once again the mean excess return for each stock for the year following announcement was used to compute the grand mean excess return across all companies. The null hypothesis that this value equals zero is tested.

Section IV: Results and Implications

We begin our analysis of the results with an examination of Figure 1 and Table 2 below. Table 2 shows the results of statistical significance tests of Mean Cumulative Abnormal Returns for all sample companies by window period.

Figure 1

Mean Cumulative Abnormal Returns for all Sample Companies



[15] *The FFJR study was for a buy & hold strategy over two and a half years from announcement date.*

Table 2

Mean Cumulative Abnormal Returns by Window Period

Window Period	MCAR	VAR (MCAR)	Z-Stat.	P-value
day - 5 to -1	0.9177	0.5845	1.2003	0.23
day 1 to 5	2.2259	0.5874	2.9043	0.004**
day - 10 to -1	1.849	1.1975	1.6904	0.091*
day 1 to 10	1.1072	1.1988	1.0112	0.312
day - 15 to -1	2.4742	1.8322	1.8279	0.067*
day 1 to 15	1.2300	1.8446	0.9056	0.363
day - 60 to -1	5.0489	8.6821	1.7134	0.087*
day 1 to 60	1.0886	8.6666	0.3697	0.711

Mean Abnormal Returns For Announcement and ± 1 day

Day	MAR	VAR (MAR)	Z-value	
-1	0.377	0.11	1.11	Not Sig.
0	0.917	0.115	2.7	Sig. at 1%
1	2.379	0.116	6.96	Sig. at 1%

Day zero is the announcement day. ** Sig. at 5%, * Sig. at 10%

Results of statistical significance tests of Mean Cumulative Abnormal Returns for all 41 sample companies by window period. For the period before announcement, with the exception of the 5 day window, all the other window periods are significant at the 10% level. There is a steady build up in abnormal returns beginning day -60. The period from -15 days to announcement, shows a very steady and consistent increase. Post announcement, only the 5 day window is significant.

Figure 1 shows the plot of Mean Cumulative Abnormal Returns for all sample companies for the period 60 trading days before and after the announcement day. Taken together, Figure 1 and Table 2 provide a number of interesting features. First, for the period before announcement, with the exception of the 5 day window, all the other window periods, 10, 15 and 60 days are significant at the 10% level. This signifies a steady build up in abnormal returns beginning day -60. This build up is borne out in Figure 1. The period from -15 days to announcement shows a very steady and consistent increase. In calendar terms, 15 trading days translate to 3 weeks. Our results appear to point towards evidence of information leakage and insider trading, beginning from about 15 days before announcement. This is consistent with Annuar and Shamser (1993) who find that BSI announcements are anticipated by about three weeks.

For the period following the announcement, only the 5 day window is significant. The 10, 15 and

60 day periods are not significant. Though the 5 day window is significant even at the 5% level, it is clear from Figure 1, that most of the increase is due to the jump on day 1. Day 1, which is the day the announcement information is published, sees the biggest one day jump and is significant at even the 1% level. Though part of this huge increase could be contributed to short covering activity[16], it is clear that the market reacts positively to the bonus announcement. Given these results, the null hypothesis that there should be no abnormal returns around announcement date is rejected.

Increasing stock liquidity and bringing stock price into an "optimal trading range" has been an almost inevitable reason cited by Malaysian companies for bonus stock issuance. Yet as Table 3 below shows, there is no evidence whatsoever of an increase in volume post bonus as measured by Ringgit volume.

Table 3

Test for Changes in Pre and Post Bonus Volume

Mean	-2.79787
Variance	166176.6
Hypothesized Value	0
t Stat	-0.04231
P (T<=t) one-tail	0.48324
t Critical one-tail	1.687094
P (T<=t) two-tail	0.96648
t Critical two-tail	2.02619

Test for difference in the mean daily Ringgit volume before and after bonus ex-date for each of the 41 companies that had pure bonus issue. The results show there is no evidence whatsoever of an increase in volume post bonus as measured by Ringgit volume.

These results are consistent with Lakonishok & Lev (1987) and Murray (1985) on US stock-splits. In addition to this, several other US studies notably Copeland (1979) had found a decrease in dollar trading volume post split. Thus, the argument that stock splits can be a means for a company to increase the volume/liquidity of its stock has largely been found to be untrue in the US context. It appears from our results that one of the main reasons cited for bonus issues by Malaysian companies does not hold either.

---

[16] *Though short-selling was legally prohibited then, the activity was quite common especially given the T + 7 settlement.*

Table 4 shows the result of our test on whether daily volatility pre and post bonus is any different. In contrast to the US studies on volatility, we cannot reject the null hypothesis that there is no difference in volatility before and after bonus.

Table 4

Test for Changes in Pre and Post Bonus Volatility

Mean	-0.00261
Variance	0.00013
Hypothesized Value	0
t Stat	-1.41127
P (T<=t) one-tail	0.083259
t Critical one-tail	1.687094
P (T<=t) two-tail	0.166519
t Critical two-tail	2.02619

Table shows the result of test for whether there is any daily volatility change post bonus. There were no statistically significant differences in daily volatility.

Given our earlier finding that there is no change in volume following bonus issue, this is a logical result. Increases in volume and liquidity, ceteris paribus, tends to reduce volatility. Since we find no increase in volume, unchanged volatility should be expected.

Does a bonus issue make shareholders any better off? Table 5 shows the result. The one tail test implies they are no better off, while the two tail test shows that they are no worse off either. There is no impact whatsoever of a bonus issuance on shareholder wealth.

Table 5

Test for Wealth Effect of Bonus Issues

Mean	-137.947
Variance	766746
Hypothesized Value	0
t Stat	-0.97113
P (T<=t) one-tail	0.168895
t Critical one-tail	1.687094
P (T<=t) two-tail	0.337789
t Critical two-tail	2.02619

Do bonus issues make shareholders better off? The one tail test implies they are no better off, while the two tail test that they are no worse off either. Given the above results, there is no impact whatsoever of a bonus issuance on shareholder wealth.

Clearly, the build up in prices (abnormal returns) prior to announcement and the positive reaction on announcement is temporary and does not translate into net long term benefits to the shareholder.

The results of our F-test of the three categories of sample stocks grouped by bonus ratio is shown below.

Table 6

Single Factor Anova: Does Bonus Ratio Matter?

Source of Variance	SS	df	MS	F-stat	P-value
Bet. Group	7.16E-06	2	3.58E-06	1.089721	0.346589
Within Group	0.000125	38	3.28E-06		
Total	0.000132	40			

Analysis of Variance is employed to determine if bonus ratio matters where returns are concerned. The insignificance of the F-ratio shows that there is no evidence that bonus ratio has any bearing on excess returns.

It appears from Table 6 that the bonus ratio has no bearing on the excess returns. Recall from Table 1, that the bonus ratios of our sample companies ranged from a low of 1.1 to a high of 4.0. The dilution factor would therefore range from 10% to 300%. The average bonus ratio for Category 1 (lowest dilution) is approximately 1.2 while that of Category 3 is approximately 2.5, and a dilution factor ranging from 20% to 150% among categories. Yet, the results suggest no difference in excess returns. This has an interesting implication. If there is statistically no difference between a 20% and a 150% dilution, then, suppose one of the sample companies had not issued bonus stocks its mean excess returns should still be the same.

That stock splitting companies are fundamentally better than average companies has been well established by US studies. It has been shown that the split is often a consequence of a consistent previous increase in stock prices arising from favourable growth and strong fundamentals. Results of our test seem to be consistent with these findings. The null hypothesis that bonus issuing companies are no better than average companies is rejected at both the 5% and 10% levels. Table 7 shows the results.

Table 7

Hypothesis Test For Mean Excess Returns Before Announcement.

Mean	0.000614
Variance	1.42E-06
Hypothesized Value	0
t Stat	3.338652
P (T<=t) one-tail	0.0009 ***
t Critical one-tail	1.687094

*** Sig. at 1%

Are companies that declare bonus issues fundamentally better than average companies?
The null hypothesis that bonus issuing companies are no better than average companies is rejected at both 5% and 10% levels of significance.

That our sample of bonus issuing companies had significantly positive excess returns compared to KLCI returns over the one year period until announcement date should not be surprising given the governing regulatory structure. Recall that SC Chapter 13 guidelines require that companies intending to issue bonus stock must be companies with at least three previous years of profit growth. The SC would presumably only approve bonus issuance if it deems the company is a "growth company". Thus, by definition any company that receives approval for bonus issue must have done well previously and be expected to do well.

While the above test is consistent with FFJR's (1969) finding that stock splitting companies had above normal returns preceding the split, our next test which replicates their test of post split performance produced contrasting results. Table 8 below shows the results.

Table 8

Hypothesis Test For Mean Excess Returns After Announcement.

Mean	0.001004
Variance	3.22E-06
Hypothesized Value	0
t Stat	3.626542
P (T<=t) one-tail	0.000393 ***
t Critical one-tail	1.687094

*** Sig. at 1%

Do companies that declare bonus issues fare better than average companies post bonus?
The null hypothesis that the returns to a one year buy and hold strategy initiated on announcement day would have no superior returns is rejected at both the 5% and 10% levels.

The null hypothesis that the returns to a one year buy and hold strategy initiated on announcement day would have no superior returns is rejected at both the 5% and 10% levels. Thus, a strategy of buying bonus issuing stocks on announcement date would have produced significantly superior returns. Though inconsistent with the FFJR study, our results are no doubt logical and expected given the regulatory regime. Recalling the requirements of SC Chapter 13, if the company has had strong growth for at least three prior years, and, a bonus issue as per our earlier argument, has no material financial impact on the firm, then there is no reason to expect it to perform otherwise post bonus.

Section V: Conclusion

We begin our conclusion with a quick overview of the results followed by an evaluation of what these results imply from a shareholder's viewpoint.

Our investigation of pure bonus issues in Malaysia over the six year period 1990-95 yielded the following results. We find abnormal price behaviour around announcement date. Most of this was in the form of a build up in prices *before* announcement. The most significant price increases were in the 15 day period just before announcement, with a peak on the following day. We find no change in daily price volatility, daily trading volume nor any wealth effect. Bonus issuing stocks had superior performance in the year preceding the announcement and continued to have excess returns in the year following. We find no evidence that differences in the bonus ratio has any impact on excess returns.

What does all of these mean to a shareholder? For ease of illustration, let us assume that an investor buys a stock that subsequently announces a BSI, one year before announcement and holds it for a year following announcement[17]. Would he have fared any better as a result of the bonus issuance? Our investigation of CARs show that the significant build up before announcement does not carry through. Since it is temporary, unless sold in the period immediately following announcement, he stands to gain little. Since liquidity is unchanged, he has no benefit of reduced liquidity risk. The unchanged daily volatility implies no reduction in total risk either. The best evidence of whether this investor gains from the bonus issue comes from our test of wealth effect. Clearly, the result shows no net gain following bonus ex-date. How does this tally with our finding of superior performance before and after announcement? This is not inconsistent with our other results. The stock had above normal returns before announcement because it must have had strong profit growth record to get regulatory approval. Furthermore, since approval is premised

[17] *Note: This corresponds with the period of our study for each bonus issuing stock.*

on the SC's conviction that the company is a *"growth company"* with *good potential for future profit growth,* subsequent good performance is to be expected. In such a setting, the company would have performed well *regardless* of bonus issue. Since the stock earned above average returns both before and after announcement, he would have earned excess returns over his two year holding period. However, he would have had these same returns even if the stock did not have a bonus.

Why then do Malaysian companies undertake BSI? Clearly, the cited reason that they want to provide a non cash reward to shareholders does not hold, for we find no wealth effect nor other benefits to the shareholder. That they want to move stock price to an optimal range doesn't seem to work either since daily Ringgit trading volume is unchanged post bonus. Could signalling be the objective of BSIs? We feel this could be a logical reason. In an environment where corporate announcements of forecast profits and future growth is not given much credence, a BSI could be the means to signal good future prospects. Yet, it would be an expensive way to signal. Further research, covering a longer time span and using 'control' companies is needed to identify if signalling is indeed the objective, what happens to false signallers and to overcome the self-selection problem with a sample of pure BSI stocks [18].

A final question remains to be answered. If the shareholder gets no benefit as the result of a BSI and the issuing company does not see any reduction in its stock volatility nor increases in its stock volatility nor increases in its stock trading volume, who then benefits? It appears that it is neither the shareholder nor issuing company. Based on our results and in the absence of any evidence to the contrary, we are inclined to accept Neoh's (1991) argument that BSIs may be beneficial only to insiders who take advantage of the temporary pre-announcement build up in prices.

---

[18] *Given the regulatory framework, companies receiving approval would by definition be good profit growth companies. Using a control group of companies with similar fundamentals but which did not undertake BSI could further clarify the issue.*

REFERENCES

1. Aggarwal R. and Chen S.N., "Stock Splits and Return Volatility", *Akron Business and Economic Review*, Vol. 30, No. 4, (Fall 1989), pp. 89-99.

2. Arbel A. and Swanson G., "The Role of Information in Stock Split Announcement Effects", *Quarterly Journal of Business and Economics*, Vol. 32, No. 2, (Spring 1993), pp. 14 - 25.

3. Baker H.K. and Powell G.E., "Further Evidence on Managerial Motives for Stock Splits", *Quarterly Journal of Business and Economics*, Vol. 32, No. 3, (Summer 1993), pp. 20-3).

4. Bishara H.I., "Stock Splits, Stock Returns and Trading Benefits on Canadian Stock Markets", *Akron Business and Economic Review*, Vol. 19, No. 2, (Fall 1988), pp. 57-65.

5. Brennan M. and Copeland T., "Beta Changes around Stock Splits: A Note", *Journal of Finance*, 43, (Sept. 1988), pp. 1009-1013.

6. Copeland T., "Liquid Changes Following Stock Splits", *Journal of Finance*, 34, (March 1979), pp. 115-141.

7. Copeland T., "The Evidence Against Stock Splits" in *The Revolution in Corporate Finance, 2nd Edition*, Blackwell Publishers, (1992), pp.12-16.

8. Doran D.T., "Stock Splits and False Signalling Cost Within A Management Reputation Framework", *Journal of Applied Business Research*, Vol. II, No.3, pp.115-126.

9. Doran D.T., "Tests of the Earnings Signalling and Attention Directing Hypotheses Using Analyst Forecasts and Revisions", *Journal of Accounting, Auditing & Finance*, ..., pp411-422.

10. Fama E., Fischer L., Jensen M. and Roll, "The Adjustment of Stock Prices to New Information", *International Economic Review*, 10 (Feb. 1969), pp. 1-21.

11. Grinblatt M., Masulis R. and Titman S., "The Valuation Effects of Stock Splits and Stock Dividends", *Journal of Financial Economics*, 13 (Dec.1984), pp. 461-490.

12. Han K.C., "The Effect of Reverse Splits on the Liquidity of the Stock", *Journal of Financial and Quantitative Analysis*, Vol. 30, No. 1, (March 1995), pp. 159-169.

13. Kimmell S.L. and Marquette P., "Stock Splits and Stock Dividends (Management Motivation and Market Response", *Akron Business and Economic Review*, Vol. 22, No. 3, (Fall 1991), pp. 20-33.

14. Lakonishok J. and Lev B., "Stock Splits and Stock Dividends: Why, Who and When", *Journal of Finance*, Vol. 42, No. 4, (Sept. 1987), pp. 913-932.

15. Lamoureux C.G. and Poon P., "The Market Reaction to Stock Splits", *The Journal of Finance*, Vol. XLII, No.5, (Dec.1987), pp. 1347-1370.

16. Neoh S.K., "Why Bonus Issues Do Not Increase the Value of a Share" and "The Perils of Chasing Bonuses", Chapters 18, 19, in *Stock Market Investment in Malaysia and Singapore*,

(1991), Berita Publishing, pp. 210-230.

17. Ohlson J. and Penmen S., "Volatility Increases Subsequent to Stock Splits: An Empirical Aberration", *Journal of Financial Economics*, 14 (June 1985), pp. 251-266.

18. Shamser M. and Annuar N., "Bonus Issues and Market Reaction: Is it favourably perceived?", *Capital Markets Review*, Vol. I, No.2, (1993), pp.67-81.

19. Sheikh A., "Stock Splits, Volatility Increases and Implied Volatilities", *Journal of Finance*, 44 (Dec. 1989), pp. 1361-1372.

20. Wiggins J.B., "Beta Changes around Stock Splits Revisited", *Journal of Financial and Quantitative Analysis*, Vol. 27, No. 4, (Dec.1992), pp.631-640.