Impacts of Dividend Changes on Wealth of Shareholders, a Case of the Karachi Stock Exchange

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# Abstract

The dividend decisions is one of the most important decision in the corporate finance and the management needs to know about the impacts of their different dividend policy change decisions on the shareholders wealth. A large number of studies support the signaling hypothesis however the results from the emerging economies contradicts with the signaling hypothesis of the dividends. This study analyze the stock market reaction to 77 dividend change announcements of the companies listed at the Karachi stock exchange for the period of four years starting from first June 2004 and ending on July 31st 2007.

Using the parametric and non-parametric tests for the significance of the abnormal returns surrounding the dividend change announcements the study found that there are significant positive returns pre the announcements and the returns on the dividend announcement date are in line with the signaling hypothesis however the returns in the post event windows are insignificant which tend to contradicts with the signaling hypothesis of the dividend changes. The overall result supports the findings from the emerging markets that the markets do not show strong reaction to the dividend changes and is in contradiction with the results for most of the develop markets of the world although there is a little reaction on the day of the announcement however the overall results of the study contradicts with the signaling hypothesis of the dividends changes at the KSE 100 and states very negligible market reaction to the dividend changes.

## Introduction

For long the dividend has been one of the prevailing quests among the financial horizons. Dividend is not an obligation on the company but still it is observed that most of the companies pay large amount of dividends to their shareholders. Some of the recent studies in the area like the studies by(Yilmaz & Selcuk, 2010)also provide empirical support for the signaling hypothesis of the dividend changes and implies that there is a positive relationship between dividend changes and shareholder`s wealth.

Most of the earlier studies use the event study methodology to investigate the stock market reaction to the dividend change announcements. The work done by (Nissim & Ziv, 2001) provides empirical support for the information content of the dividend changes. However some of the recent the work done by (Nobanee, Hadad, Alshattarat, & Alshattarat, 2009), and the study by (Uddin, 2003), contradicts with the signaling hypothesis and found that investors loose value post the dividend increase. The result shows that although the results for the dividend changes tend to support the signaling hypothesis of the dividend changes however the results for few of the emerging markets and markets where ownership structure is change from that of the developed countries tend to contradict with the signaling hypothesis and the signaling model of (Bhattacharya, 1979). Most of these studies used the parametric t test for the statistical significance of the abnormal returns in the event windows but these test are based on the assumption that the distribution of the ABR is normal however in real life it is not always the case with the distribution of the ABR.

The Pakistani stock exchange is an emerging market and is growing at a significant rate and the Karachi stock exchange is the main stock exchange of Pakistan. This study examines the impacts of dividend changes on shareholders wealth, through event study methodology using the parametric t test for abnormal returns proposed by(Brown &Warner, 1985) along with the non-parametric Wilcox-on signed ranked test. The study investigate the dividend announcements for the KSE100 firms for the period of four years and observe its impact on shareholder`s wealth post the dividend announcement in a developing economy like Pakistan where the ownership structure is more concentrated in contrast to the developing economies around the globe . The study expects a positive relationship between dividend changes and shareholder`s wealth. The research is conducted for the period from 1st June 2005 to 31st July 2008 for Companies listed at the Karachi stock exchange and which are included in the KSE100 index. The results of the study are applicable to the emerging economies and the economies where the ownership structure is more concentrated.

The study is organized as the first chapter i.e. the current chapter is the introduction to the area chapter 2 is the literature review, chapter 3 is theoretical frame and methodology and chapter 4 and 5 presents the discussion of the results and conclusion respectively.

## Rational and Significance

Although inconclusive about the fact that how the dividend changes impacts the shareholder`s wealth but still the dividend decision is one of the important decision in the corporate finance. Management needs to know whether the dividend change can be used to reduce the agency cost thereby generating positive impacts on shareholder`s wealth. In Pakistan there has been very little work done on the area of the stock market reactions to the dividend announcements and there is a need to investigate the area that do the market reacts in accordance with the signaling hypothesis for the dividend policy changes.

## Objectives of the Study

The purpose of the study is to determine the stock market reaction to dividend policy changes and to find the preferences of the investors for the different dividend policy at the KSE .The results would aid the management in making rationale judgment about the impacts of dividend decisions on their stockholder`s wealth and if the results shows insignificant results for the dividend policy changes then management should not be very concerned about the policy and can invest the extra funds in positive NPV projects

1. To provide evidence for the investor`s reaction to the dividend increase announcements.
2. To provide evidence for the investor`s reaction to dividend decrease announcements.
3. To provide further Support for the signaling hypothesis or information content of the dividend announcements.

# Literature Review

(Yilmaz & Selcuk, 2010)investigated the reaction of the shareholders to the dividend announcments at the Istanbul stock exchange.They observed the reaction of a sample of 184 observation and found that their are positive statastically significant abnormal returns for dividend increasing firms and the returns for the dividend decreasing firms are negatively significant. The result supports the signaling hypothesis of the dividend announcments. (Akbar & Baig, 2010)In their investigation about the existence of the semi strong form of market efficiency at the KSE 100 index examined 129 dividend announcements for 79 companies listed at the Karachi stock exchange. They found that there are statistically significant AABR for the dividend announcements including all the cash, stocks and a cash and stock dividend simultaneous announcement, which supports the relevancy of the dividend announcements, the significance of the AABR implies the inefficiency of the semi strong form of market efficiency.

In an investigation to identify the determinants of the payout for the companies listed at the KSE, (Ahmed & javid, 2009) used the data of1830 observation of 320 firms for the period of 2001-2006. They used the payout as the dependent variable and regressed it against different explanatory variables like earnings, ownership structure, financial leverage, investment opportunities and a few more, however in regards to our interest they found that there is a positive relationship between the earnings and the payout for the firms which implies that the firm increases the payout when the earnings are good. Recently (Hanlon, Mayers, & Shevlin, 2006) in an examination of the association between the current year i.e. the year of the announcement stock return and the future earnings response coefficient (FERC) found that the dividends announcements provides signals about the future earnings of the firm. In their empirical results they found that there are positive and statistically significant FERC for firms that announce dividends relative to the firm who do not declare dividends. Their result supports the cash flow signaling hypothesis of the dividend announcements. An empirical study by (Uddin, 2003) at the Dhaka stock exchange also provided negative significant returns and the shareholders lost about 20% of the value in-20 to +20 days of the dividends announcements which imposes the tax relevancy of the dividends announcements and is contrary to the signaling hypothesis. One can have no clear idea about the dividends announcements and stock returns but generally it is perceived that the investor takes a perception about the future of the firm from the dividends announcements as the stock prices stands for all the future cash flow discounted to present at the appropriate cost of capital. ? A study by (Sharma, 2001) investigated the motives in the background of the dividend initiation in an attempt to answer the question that do optimism of the management about the future of the firm initiates the dividends or is it the past performance which initiates the dividend stream? They analyzed the performance of the dividend initiating firm for ten year before and after the dividend initiation for 530US firms for the period of 1989-1999. From their result they proposed that the dividend initiation do not significantly signals about the future profitability of the firm as there are no significant increase in the profitability of the firms who start the dividend stream on the other hand there is a significant relationship between the past performance and the initiation of the dividends.

Companies whose earnings start stabilizing for the last few years start the dividend stream which means that the dividend initiation signals about the decrease in risk of the profitability of the dividend initiating firms. They also found that the management announces the dividend initiation in the year in which their earnings and other profitability measures are strong.(Nissim & Ziv, 2001) used a sample of 100,666 announcments to investigate about the future earnings and the prifitability of the firms subsequent to the dividend announcments in their results they found that there are positive earning increase in the subsequent two yaers of the announcment for the firms having an incraese in thier dividend. Controling for other factors and observing the future abnormal earning changes subsequent to the dividend announcments found that there are significant abnormal earning post the dividend announcments for dividend increasing firms and there result strongly supports the signaling hypothesis of dividend announcments.(Ryan, Beslay, & Lee, 2000) in their study for the NASDAQ listed firms used a sample of all NASDQ dividend innitiation and omission announcments from 1976 to 1991,they used cross sectional regression analysis and event study methodology to analyze the investor`s reaction to the dividend omission and initiation announcments from both of their model they found that there are consistent reaction with the signaling hypothesis for the dividend omission or initiation announcments.

(Dewenter & Warther, 1998)In their study compared the dividend policies of the U.S and Japanese firm, they used a sample of 420 U.S firms and 194 Japanese firm and analyzed the investor`s reaction to the dividend policies of these firm. In their result they found that due to the structural differences of the U.S and Japanese firms there is less information asymmetry in the Japanese firms and for the reason there is less stronger reaction by the investors to the dividend initiation or omission of these firms as compared to the changes in the dividend polices of the U.S firm where the reaction is more strong due to the greater information asymmetry in these firms. Also they found that the Japanese firms are less reluctant to change their dividend policies as compared to the U.S firms as the management expect less prominent reaction by the investor`s to the changes. These findings supports the signaling hypothesis of the dividend announcements as proposed by (Bhattacharya, 1979) which implies that management uses the dividend announcements to signal the private information and the investor`s react to these signals and also this study provide the fact that the 5reaction to the changes is strong in case of greater information asymmetry.

The literature presented above do not provide a conclusive evidence about the dividends myth the results are somewhat mixed but generally the it is assumed that the stock market react in the same direction with the dividend change and most of the empirical evidence from the developed country supports the signaling hypothesis of the dividends which implies that the wealth of the shareholders increases as there is an increase in the payout ratio of the company and there is negative stock market reaction to the dividend decrease announcements of the company. The literature also suggests that the earning changes are not often directly related with the dividend changes and the changes mainly tell about the current or past earning increase instead of future earnings performance. Then earlier studies on the information content of the dividend changes implies that there is a very little significant relationship between the dividend changes and the changes in earnings and profitability of the company. However most of these studies are conducted in the developed markets of the world the results from some emerging markets contradicts with the signaling hypothesis of the dividends. Furthermore in the previous literature only parametric test to test the significance are used which may results in robust results. In Pakistan there has been very little work done in this field.

## Hypotheses

The study will investigate relevance of the dividend change with the wealth of the shareholder. We will investigate that weather the investors react positively to the dividend changes and these changes really tell something about the subsequent earnings of the firm, the alternative hypothesis are as follow,

$H\_{1}$ : There are positive market reactions surrounding the dividend increase announcements.

$H\_{2}$ : There are negative market reactions surrounding the dividend decrease announcements.

# Methodology

The study is to explain the prevailing context surrounding the dividend announcements. The study uses the event study methodology to analyze the reaction of the investor to the dividend announcement. The event study methodology analyze the abnormal returns post and pre the announcements by selecting an event window. This study uses an event window of 31 days starting from day -15 and ending on day 15 the date of the announcement is day 0.

## Data and Sample

The period of the study is from 1st June 2005 to July 31st 2008. The population of our study consists of all the companies included in the KSE 100 index as at is used as a proxy for the market so the companies included in them are representative of the whole market as it has a representation from all the sectors of the KSE. The sample is selected based on certain criteria first the sample would include only those companies which were included in the KSE100 during the study period and also these companies have at least one dividend announcements during the study period. The financial companies in the KSE100 are excluded from the sample. Observation for the dividend announcements of these companies is collected and then on the basis of the change from the previous level of dividends the sample is then categorized into the dividend increasing and dividend decreasing firms, the no change observation are excluded from the sample and also the dividend change announcement which has change less than 10%.

**{Dividend increase:** $D\_{t1}>D\_{t0}$**; Dividend decrease:** $D\_{t1}<D\_{t0}$**}**

The dividend announcement data for the period 2004 to 2007 is collected from the official website of the Karachi stock exchange. The historical stock prices data is also collected from the Karachi stock exchange website.

There are 129 yearly dividend announcements for the period from 2004 to 2007 out of these dividend announcements after excluding the dividend change announcements for the financial firms included in the KSE100 index is and the firms which have change less than the 10% from the previous level of earnings. The final sample consists of 76 dividend change announcements for 65 companies for the period from 2004 to 2007. The final sample is categorized in the dividend increase and the dividend decrease sample and there are 43 observations for the dividend increase announcements and 33 observations for the dividend decrease announcements.

## Variables

The variables under the study are dividend changes and shareholder`s wealth. The abnormal returns are used as a proxy for the shareholder`s wealth.

**DIVIDEND CHANGES**

**ABNORMAL RETURNS**

**Dependent variable**

**Independent variable**

The study uses the event study methodology and the Jensen’s alpha market model to calculate the abnormal returns post the dividend announcements.

## Procedure

The study analyze the abnormal performance of the companies for a window of 31 days surrounding the dividend announcement relative to the announcement day which is day zero ABR and CAAR are calculated for the period of 31 days in total. The abnormal returns are calculated as follow.

$$AR\_{j,t}=R\_{j,t}-E(R\_{j,t})$$

Where AR is the abnormal returns for the company j at time t, R is the actual returns for company j at time t, and E(R) represent the expected returns for the given stock j on day t and is calculated through the market model which is;

$$E\left(R\right)\_{j,t}= α+ β\_{\left(RM\right)}$$

The market model regress the security returns against the market returns for a specific period of time and gives the value of the constant and the β coefficients which are the intercept and slope parameters of the market model. Forty days backs market returns and security returns are used to calculate the parameters of the market model ending on day -16 and starting from day -56 relative to the dividend announcements which is the estimation window of the event study. These parameters are then used to calculate the expected returns or the risk adjusted returns in the event window of 31 days surrounding the dividend announcements starting from day -15 and ending on day 15 with day zero as the announcement day.The proxy for the market in our case is the KSE100 index and the daily return for the market can be calculated as follow

$$^{(Rm\_{t\_{1}-}Rm\_{t} )}/\_{Rm\_{t}}$$

Where R$m\_{t}$ is the yesterday`s closing returns of the KSE100 and R$m\_{t1}$ is the closing returns for the market portfolio at the day of the calculation

 The actual realized returns for a security on a given day are calculated as

$$^{ Ri= (I\_{t1}-I\_{t0)}}/\_{I\_{t0}}$$

Where Ri is the actual or the realized returns of the security and $I\_{t1}$ is the share price at the close of the day for which the returns are being calculated and $I\_{t0}$ is the stock price at the close of yesterday trading.

Parametric t test as proposed by (BROWN & WARNER, 1985) will be performed to test the null hypothesis that the mean abnormal returns are equal to zero which would imply that that the dividend change do not convey any signal to the market. Along with the simple t test the Wilcox-on ranked test will also be used. To test the hypothesis that the mean abnormal returns are zero the study will aggregate the abnormal returns cross sectional across securities and use the t test. After finding the abnormal returns for each observation on a given day we would find the average of these abnormal returns on that day which will stands for the market adjusted average abnormal returns(MAABR) of all the observation for a given day t pre or post the dividend announcements.

$$MAAR= \sum\_{T}^{N}AR\_{j,t}$$

Where ∑$AR\_{J,t}$ represent the summation of abnormal returns of all the observation on a given day t and N stands for the number of observations. The study then uses the parametric tests suggested by (brown and Warner) There t test for the null hypothesis is performed as follow at a 5% level of significance. To test the hypothesis of zero abnormal returns on day t the following t test is used

$$^{t = MAAR\_{T}}/\_{σ\_{t}\sqrt{N }}$$

Where MAAR is the average abnormal returns for the cross sections of the company on day t and N is the number of companies in the sample and $σ\_{t}$stands for the cross-sectional standard deviation of the abnormal returns on day t. $σ\_{t}$is calculated as the square of the cross sectional mean standard deviation of the abnormal returns of the cross section of the companies on a given day t and is calculated as follow,

$$σ\_{t}= \left[\sum\_{j}^{N}AR\_{j,t}^{2}-\frac{1}{N}\left(\sum\_{j}^{N}AR\_{T,j}\right)^{2}\right]^{^{1}/\_{2}}$$

Where AR is the same is explained above and the and n is the number of observation in the sample the cross sectional standard deviation for each of the day relative to the dividend announcements are calculated in the same way for all the days and the mean abnormal returns are then divided on this value to get the test statistics for the abnormal returns on each of the day relative to the dividend change announcements.

The abnormal returns will also be aggregated along time. The study calculates the daily cumulative abnormal returns for each of the day surrounding the dividend announcements date. (CAR) cumulative abnormal returns for a period of (-15 to 0) for (0 to +15), (-2 to+2) and (0 to 5) days are also calculated. The car is calculated as the summation of MAABR for a period of j days on day t

$$CAR\_{t1,t =}\sum\_{T-1}^{T}AR\_{j,t}$$

To test the hypothesis that the CAAR on most of the days in the event window relative to the dividend announcements are statistically different from zero the following equation is used

$$t = \frac{CAR\_{t1,t}}{σ\_{t}\sqrt{N}}$$

Where the t stands for the t statistics and the $σ\_{t}$ represents the cross sectional standard deviation of the two days cumulative abnormal returns for the cross section of the N observation and is calculated as follows

$$σ\_{t} = \left[\left(\sum\_{T-1}^{T}\left(AABR\_{T}-\frac{CAR\_{T,T-1}}{n}\right)^{2}\right)/ n\right]^{^{1}/\_{2}}$$

Where CAAR is the cumulative abnormal returns from day t to t-1 on day t and the AABR represents the same abnormal return as was explained above in the first part of the study and stands for the number of observations of abnormal returns for calculating the CAAR.

# Results and Discussion

Data for the dividend announcement is collected from the official website of the Karachi stock exchange for the period of four years from 2004 to 2007. There are 129 dividend announcements in the period of the study out of these 129 dividend announcements the announcements for which the data of the share prices is not available are excluded from the sample also the financial firms announcements are excluded from the sample. The final sample consist of 77 dividend announcements which consist of 43 increase announcements and 33 decrease announcements the dividend change announcements which were less than 10% are also excluded from the sample. Table - 1 show the descriptive statistics of the dividend change samples the maximum increase for the sample is that of 5.36 and the maximum change for the decreasing sample is that of .1 the mean changes for increasing and decreasing sample are 100% and 40% respectively.

Table 1: Descriptive Statistics

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **N** | **Minimum** | **Maximum** | **Mean** | **Std. Deviation** |
| **DIVINCREASE** | 43 | .10 | 5.36 | 1.0128 | 1.41462 |
| **DIVDECREASE** | 33 | -1.00 | -.10 | -.4294 | .26755 |
| **Valid N (list wise)** | 33 |  |  |  |  |

## Dividend Increase Announcements

Table - 2 shows the daily abnormal returns of a sample of 43 dividend increase announcement for 31 days surrounding the dividend change announcements. The first column of the table shows the day relative to the dividend increase announcements. Column 2 shows the ABR for day t. Third and fourth column shows the test statistics for simple t test and Wilcox-on signed ranked test respectively for the different level of significance.

### ABR for Dividend Increase Announcements

The results shows that the ABR for day-11,-6 and -5 are positive and statistically significant the ABR on day zero which is the dividend announcement is not statistically different from zero and for most of the days post the dividend increase announcements the ABR are not statistically significant. The results of the ABR for the dividend increase announcements suggest very little and insignificant abnormal returns for the dividend increase announcements and implies that the market do not react very strongly to the dividend increase announcements and the returns are almost negligible on the different days relative to the dividend announcement. Although the ABR on few days pre the announcement are positive and significant but post the announcement day there is very little evidence of market reaction to the change. Thus rejecting the alternate hypothesis that there are positive abnormal returns surrounding the dividend increase announcement and accepting the null hypothesis of the study that the abnormal returns are insignificant? The result of the ABR tends to contradict with the signaling hypothesis of the dividend. The following page shows the table of ABR and CAAR for the dividend increasing firms of a sample of 43 dividend increase announcements.

Table 2: ABR and CAAR for Dividend Increasing Firms

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **DAYS** | **AABR** | **STDEV** | **T VALUE** | **Z VALUES** | **CAAR** | **STDEV** | **T VALUES** | **Z VALUES** |
| DAY-15 | 0 | 0.02 | 0.17 | -0.32 | 0 | 0.02 | 0.51 | -0.78 |
| DAY-14 | 0 | 0.02 | 0.6 | -0.79 | 0.01 | 0.03 | **1.67\*** | **-1.63\*** |
| DAY-13 | 0.01 | 0.03 | 1.43 | -1.54 | 0.01 | 0.04 | 1.47 | -1.45 |
| DAY-12 | 0 | 0.02 | 0.64 | -0.56 | 0.01 | 0.03 | **2.86\*\*** | **-3.01\*\*** |
| DAY-11 | 0.01 | 0.02 | **3.37\*\*** | **-3.08\*\*** | 0.02 | 0.03 | **3.88\*\*** | **-3.94\*\*** |
| DAY-10 | 0 | 0.02 | 1.21 | **-3.08\*\*** | 0 | 0.03 | 0.94 | -0.63 |
| DAY-9 | 0 | 0.02 | -0.07 | 0 | 0 | 0.03 | -0.05 | -0.08 |
| DAY-8 | 0 | 0.02 | -0.33 | -0.15 | 0 | 0.03 | 0.9 | -0.41 |
| DAY-7 | 0.01 | 0.02 | 1.47 | 0.22 | 0.01 | 0.03 | **2.8\*\*** | **-2.66\*\*** |
| DAY-6 | 0.01 | 0.02 | **1.97\*\*** | -1.23 | 0.01 | 0.03 | 1.41 | -1.39 |
| DAY-5 | 0 | 0.02 | **-2.07\*\*** | **-3.08\*\*** | 0.01 | 0.03 | 0.95 | -1.03 |
| DAY-4 | 0 | 0.02 | 0.83 | -0.11 | 0.01 | 0.04 | 1.4 | -1.06 |
| DAY-3 | 0 | 0.03 | 0.6 | -0.52 | 0.01 | 0.04 | 0.83 | -0.7 |
| DAY-2 | 0 | 0.02 | 0.61 | -0.53 | 0 | 0.04 | -0.32 | -0.31 |
| DAY-1 | -0.01 | 0.03 | -1.33 | -0.5 | 0 | 0.04 | -0.04 | -0.03 |
| DAY-0 | 0 | 0.03 | 0.95 | -1.19 | 0.01 | 0.04 | **2.01\*\*** | **-2.19\*\*** |
| DAY + 1 | 0.01 | 0.02 | 1.39 | -0.9 | 0.01 | 0.03 | 1.48 | -1.43 |
| DAY + 2 | 0 | 0.02 | 0.49 | -1.37 | 0.01 | 0.04 | 1.23 | -0.65 |
| DAY + 3 | 0 | 0.02 | 1.02 | -0.08 | 0.01 | 0.04 | 0.87 | -0.82 |
| DAY + 4 | 0 | 0.02 | 0.22 | 0.56 | 0.01 | 0.04 | 0.89 | -0.71 |
| DAY + 5 | 0 | 0.02 | 1.01 | -0.17 | 0 | 0.04 | -0.09 | -0.62 |
| DAY + 6 | -0.01 | 0.05 | -0.81 | -0.9 | 0 | 0.05 | -0.53 | -0.02 |
| DAY + 7 | 0 | 0.02 | 0.31 | 0 | 0 | 0.05 | 0.09 | -0.39 |
| DAY + 8 | 0 | 0.02 | -0.33 | -0.33 | 0 | 0.04 | -0.37 | -0.22 |
| DAY + 9 | 0 | 0.03 | -0.4 | -0.45 | 0 | 0.03 | 0.28 | -0.35 |
| DAY + 10 | 0 | 0.02 | 0.76 | 0.46 | 0 | 0.03 | 0.13 | -0.63 |
| DAY + 11 | 0 | 0.02 | -0.73 | -0.85 | 0 | 0.02 | -0.43 | -0.33 |
| DAY + 12 | 0 | 0.02 | -0.15 | -0.72 | 0 | 0.03 | 0.95 | -0.78 |
| DAY + 13 | 0 | 0.02 | 0.86 | -0.8 | 0.01 | 0.03 | 1.39 | -1.04 |
| DAY + 14 | 0 | 0.02 | 0.89 | -0.68 | -0.01 | 0.03 | -0.42 | -1.09 |
| DAY + 15 | 0 | 0.07 | -0.94 | -0.18 | 0 | 0.08 | 0 | 0.09 |
| CAR |   |   |   |   |   |   |   |   |
| CAR(-15,0) |   |   |   |   | 0.05 | 0.004234 | **2.66\*\*** | **-1.95\*\*** |
| CAR(0,15) |   |   |   |   | 0.01 | 0.004208 | 0.32 | -0.58 |
| CAR(-14,2) |   |   |   |   | 0.01 | 0.004751 | 0.80 | 0.00 |
| CAR(0,5) |   |   |   |   | 0.02 | 0.0021079 | **3.34\*\*** | **-1.70\*** |

* \*\* \*\*\* represents significance at the 1%, 5% and 10% respectively

### Cumulative Abnormal Returns for Dividend Increasing Sample

Sixth column of table-2 shows the cumulative abnormal returns for the dividend increasing sample and column eight and nine shows the t values and the Wilcox-on ranked test statistics for the CAAR. The result shows that daily cumulative abnormal returns for the dividend increasing firm are significant on day -11, 12, and the shareholders earn a value of 1% for the 2 days periods on these days the CAAR on day -7,-6, 0 and day 1 are positive and statistically significant however the cumulative abnormal returns on most of the days post the dividend change announcements are not statistically different from zero. The cumulative abnormal returns for the alternate windows (CAAR-15,0) are positive and statistically significant which implies that the shareholders gain 5% of value in the 16 days window starting from day -15 to day 0 which are consistent with the daily cumulative abnormal returns in the pre-announcement window. The investors also gains a value of 1% in the event window of five days starting from day-4 to day 2, however for the event windows of 16 days post the dividend change announcement starting from day of the announcement there is not statistically significant value gained by the shareholders.

The overall results of the cumulative abnormal returns suggest that the market receive information about the dividend declaration in well before the announcements date and the shareholders gain value in the 15 days window pre the dividend announcement the shareholders also gains value in the 5 days window surrounding the announcement date however the post announcement period does not suggest any significant value gain as was in the case of the ABR for the dividend increase sample.

The combined results of the abnormal returns and the cumulative abnormal returns in parts tend to support the positive market reaction of the dividend increase announcements however the overall results accepts the null hypothesis that the cumulative abnormal returns on most of the days are not statistically different from zero.

Graph 1: Daily Two Days Cumulative Returns for Dividend Increasing Firms

Graph 1 shows the distribution of cumulative abnormal returns for a window of +-15 days surrounding the dividend change announcement which is day zero for a total of 31 days starting from day-15. The graph shows that the cumulative abnormal returns are positive and is, maximum on day -10, one day before the dividend increase announcements the returns are negative however on the day of the announcement which is day zero the cumulative abnormal returns shows a significant jump in the returns but except day zero day 2 and 3 the CAAR are either too small and not statistically different from zero. The first part of the graph in the pre event window and two days post the event support the signaling hypothesis however the latter half contradicts.

## Dividend Decrease Announcements

The dividend decrees sample consists of 33 companies which have a decrease in their dividends from the previous year dividends.

### Abnormal Returns for Dividend Decreasing Firms

Table.3 shows the abnormal returns and the AAR for the dividend decreasing sample of 33 companies. The second column shows the mean abnormal returns for the different days relative to the dividend decrease announcements date.

The results for the ABR on the different event days shows that the market react positively in the pre event window and earns an abnormal returns of 1% on day -15,-14 ,-11, and days -9, -6,-5,-2,-1 and these returns are statistically significant at the 5% and 1% level of significance which implies that in the pre event window the shareholders gain value as was in the case of the dividend increase announcements however these results in the pre event window for the dividend decreasing firms contradicts with the signaling hypothesis as it require a market reaction consistent with the dividend change. The ABR on the day 1 relative to the dividend announcement are negative and statistically significant and implies that the shareholder wealth of 1% is lost on the dividend announcement date and the shareholder`s also loses a value of 1% on the day 2 relative to the dividend announcements which is in line with the signaling hypothesis however the gain is for a very short time as on most of the other days post the dividend decrease announcements are either positive are not statistically different from zero the results of the ABR for the dividend decrease announcements suggests that there is not a very significant value loss in the event days surrounding the dividend decrease announcements thus overall results for the event window are not significant to support the signaling hypothesis of the dividend and the results reveals that there is not a significant loss.

The results in the pre event window of the returns are positive and significant which tends to support the fact that the market receives information about the dividend declaration however the direction of the change is not anticipated by the market as they react positively to both.

Table.3: Abnormal Returns and CAAR for Dividend Decreasing Firms

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DAYS | AABR | STDEV | t value | ZVALUE | CAAR | STDEV | t values | Z VALUES |
| DAY-15 | 0.01 | 0.03 | **1.76\*** | -1.22 | 0.02 | 0.03 | **4.0\*\*** | 1.08 |
| DAY-14 | 0.01 | 0.03 | **3.43\*\*** | **-3.1\*\*** | 0.01 | 0.02 | **2.97\*\*** | **-3.46\*\*** |
| DAY-13 | 0.01 | 0.02 | 1.32 | -0.26 | 0.00 | 0.03 | 0.84 | **-2.51\*\*** |
| DAY-12 | 0.01 | 0.02 | 1.36 | **-3.1\*\*** | 0.01 | 0.03 | 1.25 | -0.64 |
| DAY-11 | 0.01 | 0.02 | **1.83\*\*** | -1.22 | 0.00 | 0.03 | 0.79 | -1.03 |
| DAY-10 | 0.001 | 0.02 | -0.92 | **-1.91\*\*** | -0.01 | 0.03 | -**2.06\*\*** | -0.44 |
| DAY-9 | -0.01 | 0.02 | **-2.26\*\*** | -1.15 | -0.01 | 0.03 | -1.55 | **-1.86\*\*** |
| DAY-8 | 0.001 | 0.03 | **2.18\*\*** | **-2.1\*\*** | 0.00 | 0.03 | 0.32 | -1.52 |
| DAY-7 | 0 | 0.03 | 0.77 | -0.35 | 0.01 | 0.04 | **1.97\*\*** | -0.49 |
| DAY-6 | 0.01 | 0.03 | **2.04\*\*** | -0.72 | 0.01 | 0.04 | **2.25\*\*** | **-1.84\*\*** |
| DAY-5 | 0.01 | 0.03 | 1.76\* | **-1.93\*\*** | 0.00 | 0.04 | 0.69 | -2.22 |
| DAY-4 | 0.001 | 0.02 | **-1.88\*\*** | -**1.95\*\*** | 0.00 | 0.04 | -0.76 | -1.04 |
| DAY-3 | 0 | 0.03 | -0.12 | -**1.95\*\*** | 0.01 | 0.04 | 1.00 | -0.60 |
| DAY-2 | 0.01 | 0.02 | **2.26\*\*** | 0 | 0.01 | 0.04 | 1.21 | -1.35 |
| DAY-1 | 0.01 | 0.03 | 1.29 | **-2.23\*\*** | 0.00 | 0.05 | -0.13 | -1.51 |
| DAY-0 | 0 | 0.03 | -0.15 | -1.2 | -0.01 | 0.04 | -1.43 | -0.05 |
| DAY + 1 | -0.01 | 0.03 | -**2.12\*\*** | -0.16 | -0.02 | 0.05 | -**2.66\*\*** | -1.24 |
| DAY + 2 | -0.01 | 0.03 | -1.19 | **-2.16\*\*** | 0.00 | 0.04 | -0.27 | -2.42 |
| DAY + 3 | 0.001 | 0.03 | 0.76 | -1.09 | 0.00 | 0.05 | 0.21 | -0.04 |
| DAY + 4 | 0.001 | 0.02 | 0.4 | -1.31 | 0.00 | 0.03 | 0.28 | -0.69 |
| DAY + 5 | 0.001 | 0.03 | 0.69 | -0.15 | 0.00 | 0.04 | -0.35 | -0.10 |
| DAY + 6 | 0.001 | 0.02 | -1.07 | -0.76 | 0.00 | 0.04 | -1.07 | -0.10 |
| DAY + 7 | 0.001 | 0.02 | -0.62 | -1.36 | 0.00 | 0.04 | -0.62 | -1.36 |
| DAY + 8 | 0.001 | 0.03 | -0.28 | -0.48 | 0.00 | 0.03 | -0.28 | -0.48 |
| DAY + 9 | 0.01 | 0.03 | **2.57\*\*** | -0.17 | 0.01 | 0.04 | **2.57\*\*** | -0.17 |
| DAY + 10 | 0.001 | 0.02 | -0.41 | -0.21 | 0.00 | 0.03 | **-2.41\*\*** | **-2.22\*\*** |
| DAY + 11 | 0.001 | 0.02 | -1.18 | -1.07 | 0.00 | 0.04 | -1.18 | -1.07 |
| DAY + 12 | 0.001 | 0.02 | 0.79 | -0.75 | 0.00 | 0.04 | 0.79 | -0.75 |
| DAY + 13 | 0.001 | 0.03 | 1.2 | -0.07 | 0.00 | 0.05 | 1.20 | -1.33 |
| DAY + 14 | 0.001 | 0.04 | -0.24 | -1.33 | 0.00 | 0.07 | -0.24 | -0.34 |
| DAY + 15 | -0.01 | 0.06 | -1 | -0.34 | -0.01 | 0.10 | -1.00 | -0.24 |
| CAAAR |   |   |   |   |   |   |   |   |
| CAR(-15,0) |   |   |   |   | 0.02 | 0.01 | **2.70\*\*** | **-1.71\*** |
| CAR(0,15) |   |   |   |   | -0.03 | 0.01 | -0.81 | -0.82 |
| CAR(-14,2) |   |   |   |   | -0.02 | 0.01 | -1.00 | -1.00 |
| CAR(0,5) |   |   |   |   | -0.03 | 0.01 | **-2.45\*\*** | **-1.73\*** |

\*, \*\*, \*\*\* represents significance at the 1%, 5% and 10% respectively

### Cumulative Abnormal Returns

The cumulative abnormal returns for the dividend decreasing firms, also supports the results of the average abnormal returns. Column six of table 2 shows the average daily cumulative abnormal returns for different days relative to the dividend change announcements column eight and nine shows the significance of the results at the 5% level of significance. Except the cumulative abnormal returns on day-15,-14 -13,-10,-9,-7 and -6 for which the CAAR for most of the days are positive and significant the returns on most of the other days in the pre event window are either not significant enough or of negligible magnitude to be considered different from zero. The stock market reaction in most of the pre event window suggest that the stock market reacts favorably in the pre event window which implies that the dividend declaration information leaks in the market well before the day of official declaration at the Karachi stock exchange however this reaction is not in line with the signaling hypothesis for the dividend decreasing firms. The stock market reaction is however more strong in the case of the decreasing firms then the increasing sample however the reaction suggests that the investors has no idea about the change in the dividends although they reacts favorably to the announcements date in the prevent window

 In the post event window the results are not statistically different from zero as was the results for the daily cumulative abnormal returns of the dividend increase announcements the 2 days cumulative abnormal returns on day 1 relative to the dividend announcement are significant suggesting that the shareholders losses a value of 2% post the announcements however except day1 and day 9 on most of the other days relative to the dividend announcements post the announcement are not statistically different from zero which implies that the market does not react strongly and in consistent pattern with the dividend decrease announcements.

The cumulative abnormal returns (CAAR-15.0) is also positive and statistically significant implying that the shareholders gains a value of 2% in the 26 days period starting from day-15 and ending on day zero of the dividend decrease announcements.

The CAAR0,5 are also significant at the 5% level o significance and suggests that the investors losses a value of 2% in an event window of five days post the dividend decrease announcements these results are consistent with the signaling hypothesis of the dividend however these returns are very small for an event window of 5 days and the returns for a longer period considered are not statistically different from zero as the results for (CAAR 0,15) shows that the returns for the sixteen days window are not statistically different from zero.

Graph 2 shows the cumulative abnormal returns of the sample of 33 companies for 31 days surrounding the dividend decrease announcement.

Graph.2: Cumulative Abnormal Returns for Dividend Decreasing Firms

The graph shows that the cumulative abnormal results for most of the days in the pre event window are positive except on day -9. And -8 this pattern of the cumulative abnormal returns contradicts with the signaling hypothesis of the dividend. The cumulative abnormal returns also shows significant downward shift on day 0.1 and 2 however for most of the other days the cumulative abnormal returns are either insignificant or they are positive both of these patterns contradicts with the signaling hypothesis of the dividend. The overall graph of the CAAR for the 31 days window tends to support the results derived from the test of the CAAR.

The results of the event studies suggest that the market starts building few days before the dividend change announcements and for both of the samples the returns in the pre event windows of the announcements are positive and statistically significant which implies that the market revive information about the announcements a few days before the announcement the market also reacts consistently with the signaling hypothesis on day zero and day 1 post the dividend announcements, however the results for most of the other days relative to the dividend announcements post the dividend announcement are insignificant for both the dividend increasing and the dividend decreasing firms which tends to rejects the signaling hypothesis of the dividend announcements. The market reacts in the consistent direction with the dividend changes however these results are very negligible thus the results in parts tend to support the signaling hypothesis but however the reaction is very short lived and very negligible so the overall results of the study rejects the hypothesis of the study that the market reacts consistently to the dividend changes as supposed by the signaling hypothesis. The positive returns in the pre event study windows of the dividend changes implies that the market reacts favorably to the dividend change announcements however the reaction is very short lived and is not consistent with the signaling hypothesis of the dividends. And when we considered the returns on the long horizons in the study the results are then do not support the signaling hypothesis and is more in line with the irrelevancy hypothesis of the dividend changes.

The ownership structure of the Pakistani firms is somewhat different from the structure of the developed economies which implies that the shareholders are well aware of the future performance of the company.

# Conclusion

The signalling hypothesis of the dividend changes suggests that the managements of the company increases the dividend when they have an optimistic view of the future and decrease the dividends when they see a weak future ahead for as proposed by(Merton & Rock, 1985) and for this reason the dividend increase announcements has positive impacts on the wealth of the shareholders and the decrease has a negative impacts on the wealth of the shareholders. However these results were mainly significant in the developed economies of the world and the growing economies mostly shows insignificant or very negligible results for the dividend change announcement as proposed by the study of (Uddin, 2003) from an emerging market Bangladesh.

This study analysed a sample of 76 dividend change announcements and the results tends to reject the signalling hypothesis of the dividend change announcements and are consistent with the results of (Dewenter & Warther, 1998) which suggest that due to the difference in the ownership structure of the companies in the emerging nations from the ownership structure of the companies in the developed nations of the world the markets in these countries do not react very strongly to the dividend change announcements.

The results for the ABR and CAAR for most of the days in the event windows of the dividend change announcements for both the dividend decrease and the dividend increase announcements are not statistically different from zero and the overall results for the returns of both the samples are not statistically significant which rejects the signalling hypothesis of the dividend changes however the results provide some interesting insights to the study the returns in the pre event windows for both the sample are positive and significant which implies that the market favourably reacts to the dividend announcements however this reaction is not consistent with the signalling hypothesis the investors seems to prefer the dividends and thus supporting the “Bird in hand fallacy” however the market do not take any signal about the change in the dividends and the dividend change information is not received by the market before the dividend declaration date. These results suggest that the market captures information about the dividend decrease and dividend increase announcements in the event day before the dividend announcement and the returns are significant

The ABR and the CAAR on day zero and +1 are consistent with the signalling hypothesis however these returns are very negligible and short lived thus it cannot strongly support the signalling hypothesis of the dividend changes. The overall results of the study disagree with the signalling hypothesis and shows that the market do not react strongly to the dividend changes.

The overall results of the ABR and the CAAR shows that CAR (t1, t2)on most of the days are not statistically different from zero and these results supports the other studies of the emerging markets which contradicts with the signalling hypothesis of the dividend changes.

## Recommendations

The results of the study suggest that due to the change in the ownership structure in the Pakistani economy most of the investors do not react strongly to the dividend change announcements.

Therefore it is suggested that the management should not be very reluctant in changing the dividend policy as these changes are not going to have a significant impact on the wealth of the shareholders and the management of the company should invest more of the funds for the positive NPV projects rather than declaring large amount of dividends as such increasing dividend policy will not have a significant impacts on the wealth of the shareholders.

The results of the study also recommend that the market receive the information of the dividend declaration a few days before the announcements of the dividends the regulatory authority and the management of the company should avoid these leakage of information into the stock market before the dividend declaration in order to reduce the agency cost f the company.

Further work should be done in the area of information content of the dividend changes at the KSE and there is need to investigate the relationship between the future profitability and the earning performance of the company to determine management perceptions in the change decisions.

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# References

Ahmed, H., & javid, A. Y. (2009). The determinants of dividend policy in Pakistan. *International Research Journal of Finance and Economics.* (29), 110-125.

Akbar, M., & Baig, H. H. (2010). The reaction of stock prices to dividend announcments and market effeciency in pakistan. *The Lahore Journal of Economics., 15 : 1*, 103-125.

Benartzi, S., Michely, R., & Thraler, R. (1997). Do changes in dividend signal the future or past? *The Journal of Finance., 52* (3), 1007-1034.

Bhattacharya, S. (1979). “Imperfect Information, Dividend Policy, and ‘the bird in the hand’ Fallacy”. *The Accounting Review, 10*, 259-270.

Brook, Y., Charlton, J. W., & Hendershott, R. J. (1998). Do firms use dividends to signal large future cash flow? *Financial Management., 27* (3), 46-57.

Brooks, F. H. (1984). Two Agency Cost Explanation Of Dividends. *The American Ecnomic Review, 74* (4), 650-659.

BROWN, S. J., & WARNER, J. B. (1985). USING DAILY STOCK RETURNS. The case of event studies. *Journal of Financial Economics, 14*, 3-31.

Dewenter, K. L., & Warther, V. A. (1998). Dividends, Asymmetric Information,and Agency Conflicts: Evidence from a Comparison of the Dividend Policies of Japanese and U.S. Firms. *The Journal of Finance, 53* (3), 879-904.

Gordon, J. M. (1959). Dividends, earnings and stock prices. *The Review of Economics and Statistics., 41* (2), 99-105.

Hanlon, M., Mayers, J., & Shevlin, T. (2006, january 16). The Information content of dividends. *Draft* .

Jensen, M. C. (1986). Agency cost of free cash flow,corporate finance, and takeovers. *American Economic Association, 76* (2), 323-329.

Kurniawan, B., Ali, S., & Febrianto, R. (2005). Post dividend announcment performane of listed companies in indonesia. A test of dividend signal hypothesis. *SNA, 3*, pp. 23-36.

Lang, L. H., & Litzenberger, R. H. (1989). Dividend announcments cashflow signaling vs free cashflow hypothesis? *Journal of Financial ECNOMICS, 24*, 181-191.

Litner, J. (1956). Distribution of Incomes of corporations among dividends, retained Earnings and Taxes. *American Economic Review, 46* (2), 97-113.

Merton, M., & Rock, K. (1985). Dividend policy under asymmetric information. *Journal of Finance, 40* (4), 1031–1051.

Miller, H. M., & Modigilani, F. (1961). Dividend policy, growth, and valuation of shares. *The Journal of Businss, 34* (4), 411-433.

Nissim, D., & Ziv, A. (2001). Dividend changes and future profitability. *The Journal of Finance, 56* (6), 2111-2133.

Nobanee, H., Hadad, A. E., Alshattarat, W. K., & Alshattarat, H. K. (2009). An analysis of the Informational content of dividend change. *Middle Eastern Finance and Economics* (5).

Ryan, P. A., Beslay, S., & Lee, H. W. (2000). An empirical analysis of reactiopn to dividend policy changes for NASDAQ firms. *Journal of Financial and Strategic Decisions, 13* (1).

Sant, R., & Cowan, A. R. (1994). Do dividends signal earnings? The case of omitted dividends. *Journal of Banking and Finance, 18* (6), 1113-1133.

Sharma, S. (2001, December 10). Do dividend Initiations signal Firm prosperity? *Preliminary Draft* , pp. 31-33.

Uddin, M. H. (2003, november 22). Effect of dividend announcement on shareholders’ Value. *First draft* , pp. 4-14.

Yilmaz, A. A., & Selcuk, E. E. (2010). Information content of Dividends: evidence from Istanbul. *International Business Research, 3* (3), 126-132.