EFFECT OF DIVIDEND ANNOUNCEMENT ON SHAREHOLDERS' VALUE: EVIDENCE FROM SAUDI ARABIAN STOCK EXCHANGE

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ABSTRACT

Literature suggests that dividend has no impact on shareholders value in the absence of taxes and market imperfections. Hence, companies invest excess funds in positive net present value projects instead of paying out as dividends. Literature also suggests that market valuation of stocks depends on the expected future dividends. If company pays out all earnings, funds for future investment will decrease and dividend may not increase in the future. Moreover, when dividend is taxable, paying more cash would increase the shareholders tax liability. Despite, companies often pay cash dividends to the shareholders possibly to signal any information about the future earnings prospects. Our empirical results based on 178 announcements of dividends between 2001 and 2005 in Saudi Arabia, a non-tax economy, showed that investors lost 2.20 percent of market value after the dividend announcement, although the lost value is recovered from the cash dividend received, and they earned 7 percent of net cash return after recovering the loss of market value. Sub-sample analyses showed that announcement of dividend increase may not signal any good information, while the announcements of dividend decrease and dividend initiation (first-time dividend) may contain information, although the information signal of the dividend initiation is somewhat weaker.

JEL: G14, G15, and G35

INTRODUCTION

The goal of corporate entities is to maximize the value of shareholders' investment in the firm. Managers pursue this goal through their investment and financing decisions. Investment decisions involve with selection of positive net present value projects while financing decisions involve with selection of a capital structure that would minimize the cost of capital of firm. Apart from the investment and financing decisions, managers need to decide on regular basis whether to payout the earning to shareholders, reducing the agency problem (Jensen and Meckling, 1976). However, the question remains whether paying out of earnings would essentially create value for the shareholders or not. A dividend payment provides cash flow to the shareholders but reduces firm's recourses for investment. This dilemma is a myth in the finance literature, but it was suggested that dividend policy has no impact on shareholders' value in an ideal economy without taxes although in reality the announcement of dividend payments showed significant market reactions in different countries.

A negative market reaction resulting in value decline is argued to be the effect of taxes, while a positive market reaction resulting in value increase is considered to be the effect of information signaled by the dividend announcement. It is understandable that if dividend income is taxable then investors would not prefer to increase their taxes liability by receiving cash return from their corporations. Given the investors' tax clientele, public corporations may like to payout surplus cash to their investors in order to signal that corporation has availed all the available investment opportunities, indicating better operating performance in the future. The existing evidence (presented in the next section) shows both positive and negative effects of dividend announcement on the shareholders' value in different markets. In this paper, we suggest that tax-induced dividend effect on share value should not exist in a non-tax economy like

Saudi Arabia (more discussion later). However, dividend may be important to the investors in Saudi Arabia due to its informational effect.

An empirical study, with a sample of 178 dividend announcements by 28 Saudi Arabian companies over a period from 2001 to 2005, showed that Cumulative Abnormal Return (CAR) increased before the announcement of dividends but the value increase did not sustain in the ex-announcement/ex-dividend periods. Investors lost about 2.20 percent of market value over a period of 61days starting from the day -30 to the day +30 relative to the announcement of dividend. However, the lost value is recovered from the cash dividend yield and investors earned about 7 percent of net cash returns after making up the capital lost in the market. Since Saudi Arabia is a non-tax country, the loss of market value in the ex-announcement/ex-dividend period cannot be considered as the reflection of tax effect. On the other hand the net cash gain from the dividend income, though cannot be directly attributed to the information hypothesis, but at least suggests that companies had adequate free cash to payout given the investment projects in hand.

The sub-sample analyses however showed that 69 dividend increasing stocks depict a market value loss of 1.68 percent over the ex-announcement/ex-dividend periods, hence it was concluded that announcement of dividend increase do not signal positive information about the future earnings and cash flows. Nonetheless, it is likely the dividend increasing companies had at least adequate free cash flows to pay dividends, and investors earned about 10 percent of net cash returns. On the other hand the 29 dividend decreasing stocks depict that the investors' incur about 4.19 of value loss after dividend announcements but the dividend income has marginally recovered the lost market value, leaving no significant return from the dividend payments. Hence, it was suggested that dividend decrease might have signaled the possible weak operating performance in the future. The 12 companies who initiated the dividends showed that investors gained only 1.77 percent of market value after the announcements of dividends and ex-dividend day price corrections, although investors earned about 13.74 percent of total returns including the cash divided received. Hence, it was suggested dividend initiating stocks may carry some positive information though the information signal is somewhat weak.

The rest of this paper is organized as follows: in the next section the literature review is presented. In the subsequent four sections, we respectively describe the Saudi Arabian stock market, research methodology, samples characteristics and empirical findings. Finally the conclusion is given in the last section.

LITERATURE REVIEW

A great deal of theoretical and empirical research on dividend effects has been done over the last several decades. Theoretically, cash dividend means giving reward to the shareholders that is something they already own in the company; hence this will be offset by the decline in stock value (Porterfield, 1959 and 1965). In an ideal world (without taxes and restrictions) therefore dividend payments would have no impact on the shareholders' value (Miller and Modigliani, 1961). It was further showed that the irrelevancy of dividend policy holds even after dropping the assumption of ideal economy. In a real world, however a change in the dividend policy is often followed by change in the market value of stocks. The economic argument for investor' preference to dividend income was offered by Graham-Dodd (1951). Subsequently, Walter (1956) and Gordon (1959 and 1962) forwarded the dividend relevancy idea, which has been formalized into a theory, postulating that current stock price would reflect the present value of all expected dividend payments in the future. Most recently researchers proceed a step further to consider the dividend payout as another asset pricing variable (Boudoukh et. al., 2007).

Other researchers made efforts to further understand the dividend controversy. Among them, Brennan (1970 and 1973), Litzenberger and Ramaswamy (1979 and 1980) showed that it is not optimal for the

investors to receive dividends if their marginal tax rate is greater than zero, and investors' after-tax expected rate of return (discount rate) depends on the dividend yield and systematic risk. In this regard, Black and Scholes (1974) argued however that tax effect is not uniform for all investors, because different investors are subject to different tax rates depending on the level of their wealth and income. This leads to an idea that at least dividend might have some effect on the share prices that is induced by taxes, and investors, subject to their personal tax rates, may prefer to have less cash dividend if it is taxable (Pye, 1972). Hence, stock prices tend to decline after announcement of dividend increase. Recently Dhaliwal et al (2005) found that dividend yield has impact on the cost of equity of firms, hence share value may be affected. In this paper we, however, suggest that tax-induced dividend effect on share value should not exist in a non-tax economy like Saudi Arabia where investors' cash income are not taxable.

Although literatures tend to suggest that dividend per-se does not have any effect on shareholders' value, the empirical studies showed mixed evidence, using the data from the US, Japan and Singapore markets. A number of studies found that stock price has a significant positive relationship with the dividend payment [Gordon (1959), Ogden (1994), Stevens and Jose (1989), Kato and Loewenstein (1995), Ariff and Finn (1986), and Lee (1995)], while others found a negative relationship [Loughlin (1989) and Easton and Sinclair (1989)]. A negative relationship between dividend announcement and stock returns is expected due to tax effect, but researchers tended to relate the positive relationship between the stock returns and dividend announcement with the information effect of dividend. The dividend information hypothesis postulates that cash dividend carries information regarding the future cash flows of firm that is to be reflected in the market price of stock after announcement of dividend, particularly when dividend increases [Bhattacharya (1979) Bar-Yosef and Huffman (1986) and Yoon and Starks (1995)].

Finally, it is largely accepted that dividend per-se has no impact on the shareholders' value in an ideal economy; although in a real world, dividend announcement is important to the shareholders because of its tax and information effects. The present evidence on dividend effects available in the literature is from the markets where the corporate and investors' income are subject to income taxes. No evidence is yet known from a country where the corporate and investors' income are tax-free. We have such a unique economy that is Saudi Arabia, which largely remains out of the academic knowledge. The new evidence from this market would enhance the body of knowledge on the dividend effects on shareholders' value.

The Saudi Stock Market

Establishment of the first public company in Saudi Arabia goes back to the third decade of the 20th century, but the first stock trading started much later after substantial increase in the number of public companies. In the year 1984, a Royal decree was promulgated for stock trading through local banks under the supervision of The Saudi Arabian Monetary Agency (SAMA). In the year 1990, the first electronic integrated system, known as ESIS, was introduced for settlements and clearing, and launching of new TADAWUL system in October 2001 with its cutting-edge technology added new dimensions to trading system.

Since then the Saudi Arabian stock market has grown leaps and bound along with the growth of national economy, and now become by far the largest market in the Middle East with a total market capitalization of US$435 billion and 70 listed companies as of April 2005. It represents about 47 percent of the total capitalization of the Arab stock markets and about 53 percent of the Gulf Cooperation Council (GCC) stocks markets. According to the World Federation of Stock Exchanges, the Saudi equity market ranks 16th out of the 50 largest equity markets in the world in terms of capitalization and 12th in terms of the amount of value traded. The growth in the equity market has been very much boosted by the government's ongoing privatization program as well as by a sharp increase in the number of companies looking to the market for capital.

Although the Saudi Arabian stock market is the major market in the Middle East and Gulf region, no significant empirical work on this market is found in the academic literature. This market draws our special interest because the individuals and corporations in Saudi Arabia need not to pay income taxes. However, they pay 'zakat' (a religious compulsory charity collected by the government) at a fixed rate based on the total surplus cash and inventory of tradable goods remaining in hand at least for one year. The details on zakat calculation can be found in http://www.zakat.gov.sa.

The tax effect of dividend payments is well known and documented in the literature. Let us now try to understand the zakat effect of dividend. We have to consider a few points to understand the zakat effects of dividend. For example, zakat is not a charge against the current gross profit (like income tax); rather it is calculated based on the net current assets value or the liquid wealth held for a minimum of period of one year. The previous year's balance sheet is taken as the basis of zakat payable for the current year. Hence the amount of zakat is known at the start of current financial year, so this is considered as a fixed cost. The corporations and individuals are separately charged zakat at a same rate of 2.5 percent based on their current wealth fulfilling one year maturity. Therefore, due to zakat, the investors neither immediately benefit nor lose any amount from extra dividend income. The zakat at individual level is charged at a flat rate of 2.5 percent irrespective of the level of investors' wealth, so there should not have a zakat-clientele effect of dividend (similar to tax-clientele effect of dividend).

Since the amount of zakat payable is not a claim on the current income like taxes, the shareholders' value cannot be increased by savings zakat. If corporations invest more in the fixed assets in order to reduce zakat payable, the shareholders are not benefited because increases in the market value of shares will in turn increase the zakat payable at personal level. Most importantly, the zakat is a compulsory charity by the God's order to the mankind hence no God believing investor would try to benefit from saving the charity that is made compulsory. In conclusion, although Saudi Arabian companies and investors pay zakat, the shareholders' wealth should not be affected by mere changing the corporate dividend policy, given that other factors are not changed. Therefore, this market provides us an opportunity to examine the effect of dividend announcements in non-tax economy. We believe that evidence from this market would enrich the body of academic knowledge on corporate dividend.

METHODOLOGY

We apply event study methodology to examine the impact of dividend announcement on shareholders' value, and use two measures of returns: (i) daily market-adjusted abnormal return (MAAR) and (ii) daily cumulative abnormal return (CAR). MAAR indicates the relative daily percentage price change in the dividend paying stocks compared to the change in average market price. We use TADAWUL all-share price index (TASI) as the proxy for average market price in

$$\mathrm{MAAR_{it}} = \mathrm{R_{it}} - \mathrm{R_{mt}} \qquad (1)$$

Saudi Arabia. MAAR is calculated as follows:

Where:

$MAAR_{it}$ is the market adjusted abnormal return for security i over time t

R_{it} is the time t return on security i, calculated as $(P_{it} - P_{it-1})/P_{it-1}$. Where, P_{it} is the market closing price of stock i on day t. P_{it-1} is the market closing price of stock i on day t-1.

R_{mt} is the time t return on the TADAWUL all-share index (TSI) calculated as $(I_t - I_{t-1})/I_{t-1}$. Where, I_{it} is the market index on day t. I_{t-1} is the market index on day t-1.

The market adjusted abnormal return (MAAR) shows the change in individual stock's value due to the dividend announcement. As the percentage change in market index (average market price) is deducted, the remainder gives us the unsystematic portion of the value change, which is specific to that particular stock resulting from its dividend announcement. MAAR is calculated over a period starting from day –30 to day +30 relative to the dividend announcement day (0-day). It should be noted that risk adjusted abnormal return using Fama and French (1993) variables may be more acceptable but due to non availability of required data we are not able to calculate the expected returns based on the Fama and French (1993) model. Nonetheless, the market-adjusted abnormal return would at least help us to know the behavior of dividend paying stocks compared to the movements in the average market prices.

The second measure used is cumulative abnormal returns (CAR), which measures the investors' total return over a period starting from well before the announcement of dividend to well after the dividend announcement day. Some researchers however argued that cumulative abnormal return (CAR) may be upward bias and suggested to use buy-and-hold return (BHR) approach. We will check the differences of results using two measurements. If the difference is not significant, then we will accept the CAR as the valid measure for this study. This is because we consider that CAR may better capture the information leakage before and after the dividend announcement and price movements around the period. We use a 61-day window period staring from -30-day to +30-day relative to the dividend announcement day (0-day). CAR is computed as follows:

$$CAR_t = \sum_{t=1}^{t=j} MAAR_t \qquad (2)$$

Where, CAR_t is cumulative abnormal return, $MAAR_t$ as defined above, j denotes the day -30 through day +30.

Finally, we will use parametric test to determine the statistical significance of market adjusted average abnormal return of dividend paying stocks over the window period (day -30 to day +30 relative to dividend announcement). The t-statistics for $MAAR_t$ were calculated cross-sectionally by using the standard deviation of abnormal returns. For CAR_t, we apply t-test suggested by Brown and Warner (1980) to test the statistical significance of the cumulative abnormal returns.

Sample Descriptions

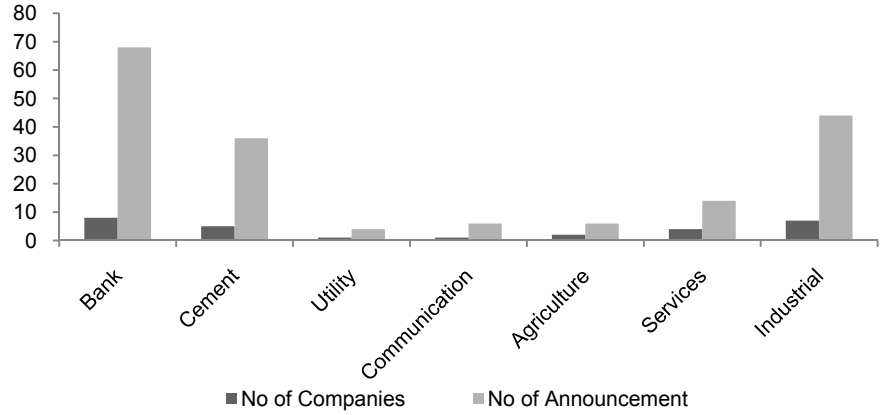
The sample includes a total of 28 companies listed on the Saudi Arabian stock market who made 178 announcements of dividends between January 2001 and December 2005. The relevant data are collected from the company announcements files available at the Saudi stock market in Riyadh. We consider the period of sample as the growth period after formation of Saudi stock market, as market has expanded with maximum number of new listings and dividend announcements from the old companies along with rapid expansion of Saudi economy due to significant increase in the oil prices. Announcements of dividends before 2001 were far less frequent, while after a long period of growth between 2001 and 2005, the market experienced major price corrections in early 2006. A breakdown of the sample companies, announcements, and average dividends according to industrial sectors is given below in Table 1, Figure 1 and Figure 2.

Table 1: Distribution of Companies Announcing Dividend during 2001-2005

Sector	Number of Companies	Number of Announcements	Average Dividend (%)	Maximum Dividend (%)	Minimum Dividend (%)
Bank	8	68	10.35	35.00	3.00
Cement	5	36	13.42	22.00	3.00
Utility	1	4	3.63	4.00	3.50
Communication	1	6	12.20	14.00	7.00
Agriculture	2	6	3.31	10.00	2.50
Services	4	14	2.00	11.39	22.00
Industrial	7	44	3.00	6.59	17.00
Total	28	178	9.26 (SD=5.29)		

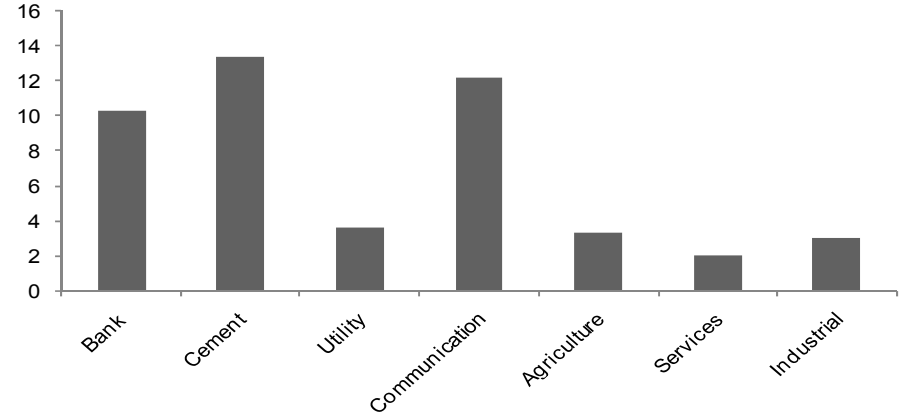
Table shows the distribution of 28 companies listed on Saudi Arabian Stock Exchange making a total of 178 announcements of dividend payments during 2001-2005. The sample covers about 38 percent of the total market in terms of companies listed, and 93 percent in terms of

Figure 1: Number of Companies and Announcements of Dividends in each Sector



This figure shows a comparison between the number of companies and total number of dividend announcements made by the companies under different sectors in Saudi Arabian stock market over the sample period from 2001-2005.

Figure 2: Average Dividend % in Different Sectors



This figure shows the extent of average of cash dividend (%) paid by the companies under different sectors of Saudi Arabian stock market over the sample period from 2001-2005.

The table and figures above show that the highest average dividend of 13.42 percent was paid in the cement sector, followed by 12.20 percent in the communication sector and 10.35 percent in the banking sector. The single highest dividend of 35 percent was announced in the banking sector, while the lowest dividend of 2 percent in the service sector. The average dividend was 9.25 percent with a standard deviation of 5.29 percent. As for the announcements of dividends, a total of 68 announcements were made by the eight banks followed by 44 announcements by the seven manufacturing companies from the industrial sector. The five cement companies made a total of 36 announcements, while the remaining 30 announcements came from the services, utility, communications, and agricultural sectors.

Overall, the sample set covers about 38 percent of the total market in terms of the number of companies, and 93 percent in terms of the number of announcements. As for the companies not included in the sample set are mostly the new companies listed in the recent years, and majority of them did not declare dividends till the samples were collected. All in all, it seems that the empirical findings based on the samples selected may reasonably reflect the effects of dividends on shareholders value in Saudi stock market.

EMPIRICAL FINDINGS AND ANALYSES

Market Adjusted Abnormal Returns

Findings reported in Table 2 shows that average market adjusted abnormal return (MAAR) on the day of dividend announcement was only 0.05 percent, which was not statistically significant. This could be due to the fact that the information of dividend payment often leaks out to the market a few days before the announcement made by the company. Hence, the announcement of dividend normally carries no surprise to the market. Therefore, evidence shows that MAARs on the five trading days immediately before the announcement of dividend were much higher than that on the day of announcement, suggesting that market tends to react earlier than the actual announcement of dividend.

Table also shows that period before the day -5 of dividend announcement, MAAR randomly varied from 0.25 percent to -0.02 percent, though none of them are found to be statistically significant. Therefore, evidence tends to confirm that market reacts a few days before the announcement of dividend is made. During the immediate post-announcement period (from day +1 to +5), the market price significantly falls and posts negative return on all the trading days. The downward pressure on the market price indeed continue even after the day +5 though there were some occasional positive returns during the period from the day +6 to day +15. Overall, MAAR results suggest that the effect of dividend announcement is not very significant in Saudi stock market. Shareholders gain nearly one percent of value over the five days period before announcement of dividend but lose the gained value over the next five days period following the announcement.

If we look at the average MAARs over a wider window (-day 30 to +day30), as it appears in Figure 3, a pattern of MAAR behavior is lightly noticeable that majority of MAARs over the 30 days prior to the announcement of dividends are positive, while the majority of those over the 30 days after the announcement are negative. However, the parametric t-test reveals that none of daily MAAR over window period is statically significant except those on day+5,+4, +3 -2, -3,and -5. The sub-sample tests for the different industries also depict the similar results, suggesting that dividend announcements in Saudi Arabia may not have strong effect on the shareholders' value. We investigate into this matter by analyzing the cumulative abnormal returns below.

Table 2: Average Market-Adjusted Abnormal Return (MAAR)

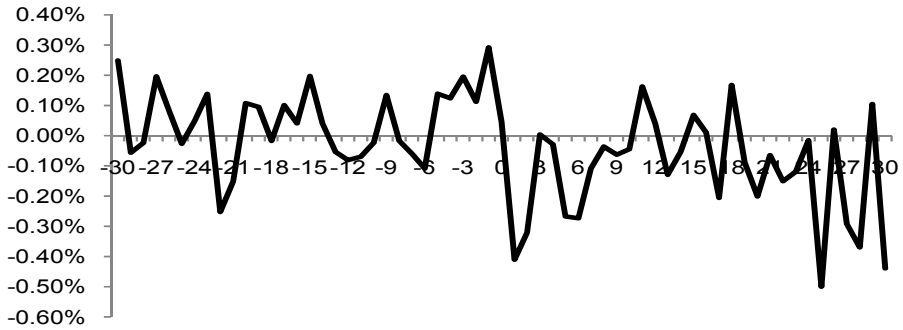
Day relative to dividend announcement	Average MAAR (%)
-15	0.20
-14	0.04
-13	-0.05
-12	-0.08
-11	-0.07
-10	-0.02
-9	0.13
-8	-0.02
-7	-0.06
-6	-0.11
-5	0.14
-4	0.12
-3	0.20
-2	0.11
-1	0.29
0	**0.05**
1	-0.41
2	-0.32
3	0.00
4	-0.03
5	-0.27
6	-0.27
7	-0.11
8	-0.04
9	-0.06
10	-0.05
11	0.16
12	0.04
13	-0.13
14	-0.05
15	0.07

Days around the announcement of dividends

Average MAAR around the announcement of dividends

This table reports the average market-adjusted abnormal return (MAAR) for dividend paying stocks around the time of 178 dividend announcements over a window period from day-15 to day +15 relative to dividend announcement The MAAR is calculated as event relative day return less the market return calculated based on TADAWUL all share price index (TSI) of Saudi stock market. The MAAR for longer window period from day -30 to +30 can be found the Figure 3.

Figure 3: Average Market-Adjusted Abnormal Returns (MAAR)



This figure depicts the changes in average market adjusted abnormal returns (%) over a window period starting from day -30 to day +30 relative to 178 dividend announcements. The MAAR is calculated as event relative day return less the market return calculated based on TADAWUL all share price index (TSI) of Saudi Arabian stock market.

Cumulative Abnormal Returns

Results in Table 3 and Figure 4 show that investors do not gain value from dividend announcement. Evidence depicts that CAR had risen from 0.25 percent on day -30 to a level of 1.4 percent on the day of

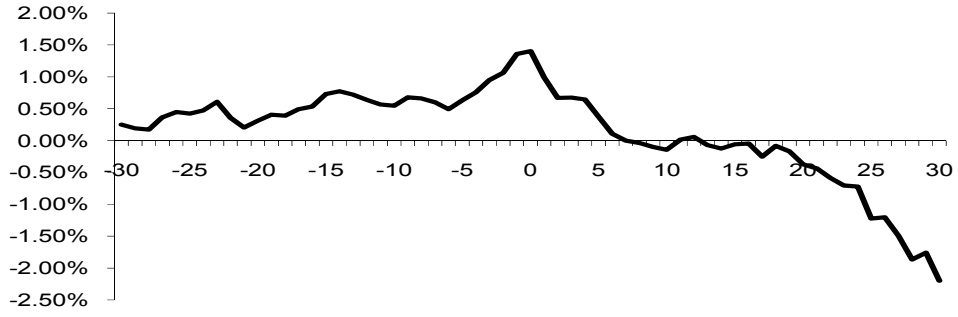
dividend announcement. But the gained market value was lost over the next 30 days after dividend announcement, as CAR dropped to –2.20 percent on the day 30. The results tend to suggest that investors may have overreacted to the dividend announcement; and apparently gain no value in the market from the dividend announcements as measured over a period of 61 days covering the pre and post dividend announcement dates.

Table 3: Cumulative Abnormal Returns (CAR) of Dividend Paying Stocks

Event Days	CAR
-30	0.25
-25	0.42*
-20	0.31
-15	0.73*
-14	0.77
-13	0.72
-12	0.64
-11	0.57**
-10	0.54
-9	0.68
-8	0.66
-7	0.60
-6	0.49
-5	0.63
-4	0.75**
-3	0.95*
-2	1.06*
-1	1.35**
0	1.40*
1	0.99*
2	0.67*
3	0.67*
4	0.65*
5	0.38
6	0.10*
7	0.00***
8	-0.04
9	-0.10
10	-0.15
11	0.01
12	0.06
13	-0.07
14	-0.13
15	-0.06*
20	-0.37
25	-1.22**
30	-2.20**
Average Cash Dividend (From Table 1)	9.26%***
Investors' Net Gain over 61 days	7.01%***

This table reports the cumulative abnormal return (CAR) for dividend paying stocks in Saudi Arabian stock market around the time of 178 dividend announcements over a window period from day-30 to day +30 relative to dividend announcement. CAR is calculated as $CAR_j = \sum_{t=1}^{t=j} MAAR_t$ Where, CARt is cumulative abnormal return, MAARt as defined earlier, j denotes the day -30 through day +30. Asterisks ***, **, and * indicate the level of significance respectively at 1 percent, 5 percent and 10 percent level.

Figure 4: Cumulative Abnormal Returns (CAR)



This figure depicts the changes in cumulative abnormal returns (%) over a window period starting from day -30 to day +30 relative to 178 dividend announcements in Saudi Arabian Stock market. CAR is calculated as $CAR_t = \sum_{t=1}^{t=j} MAAR_t$ *Where,* CAR_t *is cumulative abnormal return,*$MAAR_t$ *as defined earlier, j denotes the day -30 through day +30.*

Findings show that investors lost more market value in the post-announcement period than the value gained in the pre-announcement period, but the amount of lost value seemed recovered from the cash dividend received. The average cash dividend was about 9.26 percent (from Table1) while the loss in market value was about 2.25 percent over the period starting from the day-30 to day +30 relative to the announcement of dividend. Hence investors earned an average net cash return of about 7 percent from the dividend received. Apparently, the ex-announcement/ex-dividend market value loss is consistent with the tax-effect argument, but Saudi Arabia is a tax-free country hence we rule out the loss of market value is due to tax effect. Rather, it could be a reflection of price correction following market overreactions to the announcements of dividend in a less efficient market. It is also difficult for us to fully attribute the net return from cash dividend received to the information hypothesis. If the dividend announcements give signal any positive information about the future earnings and cash flows then the average price should not have dropped significantly within a week after the announcement (CAR by the day+7 is 0.00 percent). It rather seems that market could have overreacted to the dividend anticipation, and prices are corrected over a week after the actual announcement of divided. The CAR did not change much during the period from day +8 to day +22, but it dropped to -2.20 percent over the following 8 days, reflecting the ex-dividend effect. Samples show that the listed companies who declared dividend during the period of study have transferred the declared dividend to the investors' bank accounts within 23 working days after the announcement date.

In Saudi Arabia, the market authority ranks the listed companies based on their dividend payments, taking into consideration that the good companies with adequate free cash flow can pay dividend. Hence, companies may like to retain their good standing by paying dividends. According to M&M theory dividend per se should not have any impact on the shareholders' value in the absence of taxes, but the companies may like to pay dividend due to its information effect. Hence, in Saudi Arabia, a tax free economy, if companies pay dividend that should be for signaling information to the investors, but when the regulatory authority puts a kind of indirect pressure on the companies to pay dividends, investors may become confused about the purpose of dividend announcement. Therefore, we made an attempt to further investigate the dividend information effect by splitting the samples into three groups: announcements of dividend increase, dividend decrease, and dividend initiation (first-time dividend).

Sub-sample Analyses

The results presented in Table 4 depicts that there are a total of 69 announcements reveal divided increase from the last year's level, 29 announcements reveal decrease in dividend, and 12 companies initiate their

first dividend since their market listing. The day +30 CAR for the dividend increasing stocks was -1.68 percent, while it was -4.19 percent for the dividend decreasing stocks and 1.77 percent for the dividend initiating (first-time dividend) stocks. The day +30 CARs for three sub-samples as above are statistically significant.

Table 4: Sub-sample Analysis of Cumulative Abnormal Returns (CAR) for Dividend Increase, Dividend Decrease, and Dividend Initiation

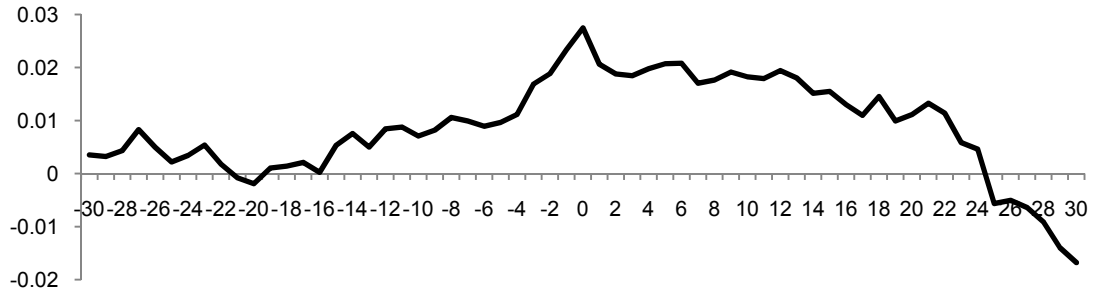
Event Days	Dividend Increase (N=69)	Dividend Decrease (N=39)	Dividend Initiating (N=12)
-30	0.35	0.71**	0.08
-25	0.22*	0.14	0.67
-20	-0.19	0.57***	1.67
-15	0.53*	0.11	2.38*
-14	0.76*	0.32*	2.32
-13	0.50	0.36	3.27
-12	0.85	0.03	2.57***
-11	0.88**	-0.27	2.71**
-10	0.71	-0.16***	2.02**
-9	0.82	-0.67	2.73*
-8	1.06*	-0.97*	3.29
-7	0.99	-0.74	3.23*
-6	0.89**	-1.79***	2.96*
-5	0.97	-1.32**	4.16***
-4	1.11*	-1.25**	3.30**
-3	1.69**	-1.08	4.06***
-2	1.89***	-0.81	4.08***
-1	2.34**	-0.22	3.81**
0	2.75**	-0.76	3.51*
1	2.06**	-1.42**	2.35**
2	1.88*	-2.67***	2.00
3	1.85**	-2.51***	1.90*
4	1.98**	-2.29***	2.40**
5	2.07***	-3.26**	1.76
6	2.08***	-3.50*	2.01*
7	1.71	-3.33***	1.80
8	1.76*	-3.82*	1.46
9	1.91*	-3.81***	1.97**
10	1.83*	-3.72*	2.10*
11	1.79	-3.20**	2.56*
12	1.94*	-3.67	2.78
13	1.81	-3.63	2.69***
14	1.51	-3.21***	3.12*
15	1.55	-2.97**	2.99
20	1.11**	-3.83*	3.42*
25	-0.56***	-3.09***	2.40
30	-1.68**	-4.19***	1.77
Average Dividend	11.68**	5.09***	11.95***
Investors' Net Gain	10.00***	0.90*	13.72**

*This table reports the cumulative abnormal return (CAR) for three sub-samples over a window period from day-30 to day +30 relative to the dividend announcement day. In 69 announcements, corporations increased the current dividends from the level of last dividend. In 39 announcements, corporations decreased the current dividend from the level of last dividend, while 12 companies initiated dividend payment for the first time during 2001-2005. The samples of dividend increase and decrease are sorted based on the criteria that the current dividend is at least 20 percent different from the last dividend (either 20 percent higher or lower than the last year's dividend). Asterisks ***, **, and * indicate the level of significance respectively at 1 percent, 5 percent and 10 percent level.*

The average dividends were 11.68 percent, 5.09 percent and 11.95 percent respectively for dividend increasing, dividend decreasing, and dividend initiating stocks. After taking into the consideration of both the cash dividend return and capital gain (CAR) investors earned about 10 percent return from the dividend increasing stocks, less than one percent return from the dividend decreasing stocks, and 13.72 percent from the dividend initiating stocks. The results show that investors on average gain significantly higher return only from the stocks that declared dividend increase and also from those initiated dividends

after their listing on the stock exchange. In order to ascertain the possible information effects of dividend we can examine the behavior of CARs for the three sub-samples presented in Figures 5 through 7

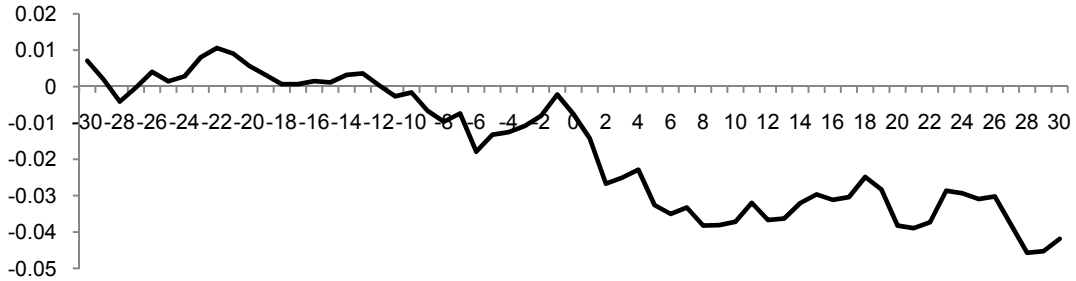
Figure 5: Cumulative Abnormal Returns (CAR) of Dividend Increasing Stocks



This figure shows the changes in cumulative abnormal return (CAR) over a window period from day -30 to day +30 relative to dividend announcement for stocks announcing dividend increase (N=69) in Saudi Arabian stock market during the period 2001-2005.

Figure 5 shows that CAR of the 69 dividend increasing stocks started to increase from the day -21 and reached to its peak on the day 0 (announcement date) when the CAR stood at 2.75 percent. Afterwards, the CAR falls slowly till the day +21 followed by a sharp drop after the ex-dividend day and the CAR become negative (-1.68%) by the day +30. Hence it is apparently difficult for us to attribute CAR of the dividend increasing stocks as the reflection of any positive information about future growth in earning. Rather the evidence depicts some kind of abnormal returns due to possible market overreaction and profit booking by the active short-term traders. However, since the investors earn about 10 returns from cash dividend after adjusting the CAR loss, we can possibly assume that companies are at least able to generate adequate free cash to payout.

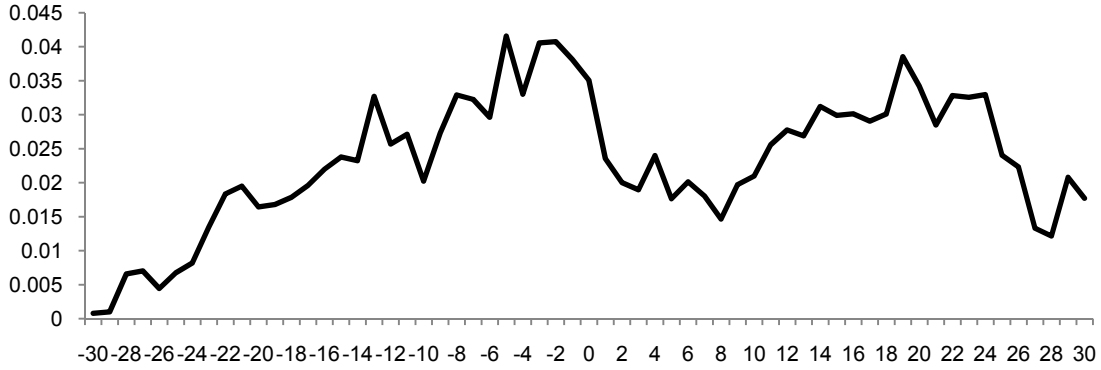
Figure 6: Cumulative Abnormal Returns (CAR) of Dividend Decreasing Stocks



This figure shows the changes in cumulative abnormal return (CAR) over a window period from day -30 to day +30 relative to dividend announcement for stocks announcing dividend decrease (N=29) in Saudi Arabian stock market during the period 2001-2005.

Figure 6 shows that CAR of 29 dividend decreasing stocks started to fall from the day -11. A sharp drop of CAR is detected immediately after the day of dividend announcement (day 0) and another significant decline in CAR occurred after the day +21 (approximate ex-dividend time). Finally investors lost about 4.19 percent of market value by the day +30. The general behavior of CAR for these dividend decreasing companies may signal about the possible decline in future earnings, as we see that prices not corrected upward sometimes after the dividend announcement. Nonetheless, investors marginally recovered the lost value from the cash divided received.

Figure 7: Cumulative Abnormal Returns (CAR) of Dividend Initiating Stocks



This figure shows the changes in cumulative abnormal return (CAR) over a window period from day -30 to day +30 relative to dividend announcement for stocks announcing of dividend initiation (first time dividend announcement after listing on exchange) (N=12) in Saudi Arabia during the period 2001-2005.

Figure 7 shows that the average CAR of 12 dividend initiating stock started to increase from the day +29 and increased steadily until the actual announcement of dividend initiation. The CAR reached to its peak at 4.08 percent level on the day -2 and temporarily dropped to 1.46 percent over the next eight days and again reached to 3.42 percent level on the day +20 (prior to the ex-dividend day) before it finally settled at 1.77 percent level by the day +30. The general behavior of the average CAR of 12 dividend initiating stocks tends to indicate that market takes the announcement of dividend initiation as positive news though investors seemed not fully clear about the information hence abnormal fluctuations of returns observed during the post-announcement period.

CONCLUSIONS

It was suggested that dividend payments have no impact on the shareholders' value in the absence of taxes and other market imperfections. A dividend payment provides cash flow to the shareholders but it reduces firm's recourses for investment. Hence, firms should not pay dividend if they have any positive net present value project in hand. On the other hand, the valuation of stock depends on the expected future dividends. If company pays out all the earnings to shareholders, funds for future investment will decrease and dividend may not increase in the future. Therefore, dividend payout should not be desirable provided that companies can better invest their funds. Moreover, cash dividend is not desirable if investors need to pay taxes on their dividend income. Given the valid reasons for not paying dividends, an announcement of dividend payments may carry some information for the market and stock prices may be adjusted accordingly.

We have investigated the dividend effects on the shareholders' value in Saudi Arabia, a country where the business corporations and investors need not to pay income taxes to the government. If the famous M&M theory of dividend irrelevancy works in reality then the Saudi Arabia, being a tax-free economy, may be considered as a suitable market for examining the dividend effects, the evidence from a non-tax economy will enrich the existing body of knowledge on corporate dividend. Based on a sample of 178 announcement of dividend during January 2001 and December 2005, we found that investors do not gain value in Saudi Arabian market from the announcement of dividend. Over the period starting from 30 days prior to the dividend announcement to 30 days after the announcement, investors lost about 2.20 percent of stock value. Although the loss in market value was fully recovered from the dividend income received, and earned about 7 percent of net cash return. We made efforts to screen the samples into three sub-groups: dividend increase, dividend decrease, and dividend initiation (first-time dividend).

The results show that investors lost about 1.68 percent of market value in the 69 dividend increasing stocks hence we cannot conclude that dividend increase do provide any positive signal about the future growth of cash flow. Nonetheless, we could suggest that these companies are able to generate adequate free cash to payout. Investors in the 29 dividend decreasing stocks lost about 4.19 percent of market value over the test period and did not earn any significant cash returns from dividends after adjusting the value lost in the market, hence we concluded that dividend decrease gives a signal of low future cash flow. On the other hand, investors earned about 1.77 of market value from the 12 dividend initiating stocks and earned a total of about 13.72 percent of returns including the cash dividend. However, we observe an abnormal fluctuation of value during the post-announcement period; hence we concluded that although investors take the dividend initiation as a signal of positive information, yet they are not fully clear about the nature of information.

Finally, the evidence from Saudi market tends to be consistent with the M&M theory of dividend irrelevancy and its information effect; although the information effect is somewhat weaker in this market. While the evidence of dividend effects from a non-tax economy supposed to carry academic significance, the regulators, corporate policy makers, and the investors also can benefit in a way that dividends in this market may not properly signal the future cash flow of the company.

REFERENCES

Ariff, M. and Finn, F. J. (1986) "Announcement Effects and Market Efficiency in a Thin Market: An Empirical Application to the Singapore Equity Market", Asia Pacific Journal of Management, Vol. 6, p. 243-267.

Bar-Yosef, S. and Huffman, L. (1986) "The Information Content of Dividends: A Signalling Approach", Journal of Financial and Quantitative Analysis, Vol. 21 (1), p. 47-58.

Bhattacharya, S. (1979) "Imperfect Information, Dividend Policy, and 'the bird in the hand" Fallacy", The Bell Journal of Economics, Vol. 10 (1), p. 259-270.

Black, F. and Scholes, M. (1974) "The Effect of Dividend Yield and Dividend Policy on Common Stock Prices and Returns", Journal of Financial Economics, Vol. 1, p. 1-22.

Brennan, M. J. (1970) "Taxes Market Valuation and Corporate Financial Policy", National Tax Journal, Vol. 26, p. 1115-1121.

Brown, S.J. and Warner, J.B. (1980) "Measuring Securities Price Performance", Journal of Financial Economics, Vol. 8, p. 205-258.

Boudoukh, J., Michaely, R., Richardson, M., and Roberts, M. (2007), "On the Importance of Measuring Payout Yields: Implications for Empirical Asset Pricing, "The Journal of Finance, Vol. 62(2), p. 877-915.

Dhaliwal, D., Krull, L., Li, O. Z., and Moser, W. (2005), "Dividend Taxes and Implied Cost of Equity Capital, "Journal of Accounting Research", Vol. 43(5), p. 675-708.

Easton, S. A. and Sinclair, N. A. (1989), "The Impact of Unexpected Earnings and Dividends on Abnormal Returns to Equity", Accounting & Finance, Vol. 29, p. 1-19.

Fama, E.F. and French, K.R. (1993) "Common risk factor in the returns on stocks and bonds", Journal of Financial Economics Vol. 33, p. 3-56.

Gordon, M. J. (1959) "Dividend, Earning, and Stock Prices", The Review of Economics and Statistics, Vol. 41, p. 99-105.

Gordon, M. J. (1962) "The Savings Investment and Valuation of a Corporation", The Review of Economics and Statistics, Vol. 44, p. 37-51.

Graham, R. E. and Dodd, P. (1951) "Security Analysis", McGraw-Hill Book Co.

Jensen, M. and Meckling, W. (1976) "Theory of Firm: Managerial Behaviour, Agency Cost, and Ownership Structure", Journal of Financial Economics, Vol. 3, p. 306-360.

Lee, B. S. (1995) "The Response of Stock Prices to Permanent and Temporary Shocks to Dividends", Journal of Financial and Quantitative Analysis, Vol. 30, p. 1-22.

Litzenberger, R. H. and Ramaswamy, K. (1979) "The Effects of Personal Taxes and Dividends on Capital Asset Prices", Journal of Financial Economics, Vol. 7, p. 163-195.

Litzenberger, R. H. and Ramaswamy, K. (1980) "Dividend, Short Selling Restrictions, and Tax-Induced Clientele and Market Equilibrium", The Journal of Finance Vol. 35, p. 469-485.

Loughlin P. H. (1982), "The Effect of Dividend Policy on Changes in Stockholders' Wealth", A PhD Thesis, Graduate School of Saint Louis University, USA.

Kato, K. and Loewenstein, U. (1995) "The Ex-Dividend-Day Behavior of Stock Prices: The Case of Japan", The Review of Financial Studies, Vol. 8, p. 816-847.

Miller, M. H., and Modigliani, F. (1961) "Dividend Policy, Growth and The Valuation of Shares", The Journal of Business, Vol. 34, p. 411-433.

Porterfield, J. T. S. (1959) "Dividend, Dilution, and Delusion", Harvard Business Review, Vol. 37, p. 56-61.

Porterfield, J. T. S. (1965) "Investment Decisions and Capital Costs", Englewood Cliffs, N.J., Prentice-Hall.

Pye, G. (1972) "Preferential Tax Treatment of Capital Gains, Optimal Dividend Policy, and Capital Budgeting", The Quarterly Journal of Economics, Vol. 86, p. 226-242.

Ogden, J. P. (1994) "A Dividend Payment Effect in Stock Returns", Financial Review, Vol. 29, p. 345-369.

Stevens, J. L. and Jose, M. L. (1992) "The Effect of Dividend Payout, Stability, and Smoothing on Firm Value", Journal of Accounting Auditing & Finance, Vol. 7, p. 195-216.

Walter, J. E. (1956) "Dividend Polices and Common Stock Prices", The Journal of Finance, 16, p. 29-41.

Yoon, P. S. and Starks, L. T. (1995) "Signaling, Investment Opportunities, and Dividend Announcements", The Review of Financial Studies, Vol. 8, p. 995-1018

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ACKNOWLEDGEMENT

We gratefully acknowledge the data support from the Saudi Stock Exchange, and processing help from Mr. Abdulmosen Al-hakbani of Prince Sultan University. The paper is benefited from the suggestions and comments provided by colleagues at the Global Conference on Business and Finance, Hawaii, 2008.