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Security Returns during Ex-Dividend Period

Khamis Hamed Al-Yahyaee^{a*}

^a Sultan Qaboos University, College of Economics and Political Science, P.O.Box 20, P.C. 123, Muscat, Sultanate of Oman

Abstract

This paper examines the security returns during ex-dividend period for firms listed on the Muscat Securities Market (MSM). We find stock dividends elicit a significant stock market response. In addition, the abnormal return seems not to be confined to the ex-day in Oman. In particular, the positive abnormal return extends for seven days after the stock dividend ex-day. We also find that larger firms in Oman prefer a higher trading range.

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1. Introduction

Stock dividends are a puzzling corporate behavior. In theory, stock distributions are cosmetic operations aimed at dividing the corporate pie into more pieces with no change in the total firm value. Stock dividends increase the number of shares outstanding but do not influence the total or proportionate wealth of shareholders. In the absence of any significant event, the ex-dividend stock price should be the previous day's closing price divided by one plus the percentage stock dividend. As stock dividends do not affect the real activities of the firm, they are considered theoretically as irrelevant decisions.

However, several empirical studies in the U.S. report that stock dividends provoke abnormal returns on the ex-day. For example, Woolridge (1983) documents that opening prices on the ex-day are 0.55 percent higher than theoretical prices for stock dividends by firms listed in the New York Stock Exchange (NYSE). Likewise, Grinblatt et al. (1984)

* Corresponding author. Tel.: +96824141833 ; fax: +96824414043 .

E-mail address: yahyai@squ.edu.om

find that, in the period from 1967 to 1976, their sample of stocks realized two-day abnormal returns of 2.10 percent around stock dividend ex-days for firms listed on the NYSE or American Stock Exchange. More recently, Al-Yahyaee (2014c) examines the stock dividend ex-day effect in Oman and find the abnormal return on the ex-day is 3.93% with a t-statistic of 14.38.

Existing explanations offered to explain the stock dividend ex-day effect in the U.S. are based on market microstructure. For instance, Woolridge (1983) suggests as US stock prices change in multiples of \$0.125, stock prices cannot adjust perfectly on the announcement day, especially for small stock dividends. Woolridge (1983) documents a stronger announcement effect for small stock dividends compared with large ones. He shows that small stock dividends create more odd lots compared with large stock dividends, and small stock dividends have more fractional shares that are paid in cash and are taxable. In a similar vein, Dubofsky (1992) indicates that abnormal returns on the stock dividend ex-day are affected by the stock exchange rules requiring specialists to adjust outstanding limit buy orders, but not limit sell orders. He finds that reduced limit buy order prices that are not multiples of \$0.125 are rounded down to the next tick. This causes an unusually wide bid-ask spread that can explain the stock dividend ex-day effect. Angel (1997) proposes the market maker hypothesis where companies strive for an optimal tick size. If there is a fixed tick size, as is common in the United States, a firm's management can move tick sizes relative to the stock price to desired levels through stock dividends. Schultz (2000) suggests that high tick size makes market making more profitable, which in turn is likely to boost liquidity. His findings support the view that stock distributions enhance the incentive to promote a stock.

One way to determine whether the stock dividend ex-day effect is a product of features peculiar to the U.S. is to examine the occurrence of this effect in different trading environments. Hence, the objective of this paper is to examine the stock dividend ex-day effect in Oman. This paper is similar in spirit to Al-Yahyaee (2014c). However, we use longer time period in this paper.

This paper examines stock dividend ex-day effect in Oman, which is of interest for several reasons. First, the Omani stock market is organized in such a way that the market microstructure explanations given for the stock dividends in the U.S. can be ruled out (Al-Yahyaee, 2014a). For example, there is an additional fee for odd lot transactions in the U.S., resulting in odd lots having higher transaction costs compared to round lots. In Oman, there is no odd lot fee and transaction costs are the same for odd and round lots (Al-Yahyaee, 2014b). In the U.S., fractional shares are distributed in cash and are taxable. In Oman, there are no taxes on fractional shares (Al-Yahyaee, 2014c). Furthermore, specialists determine the bid-ask spreads for the stocks that trade in U.S. stock exchanges. Oman does not have any market makers setting bid-ask spreads (Al-Yahyaee, 2013). In Oman, individual orders are executed through price auctions and preferences are given to higher bids and lower offers. Moreover, in the US, outstanding limit buy orders are automatically adjusted downward by the dividend amount rounded to the next lower tick size. In Oman, the MSM does not have an ex-dividend day limit order adjustment mechanism like that in U.S. markets (Al-Yahyaee, 2014c). Specifically, limit orders are not automatically adjusted by the MSM on the ex-dividend days. Consequently, Dubofsky's (1992) argument that the ex-day effect is due to the widening of bid-ask spreads as a result of stock exchange rules regarding the adjustment of limit orders on the ex-day may not apply in Oman. In the same vein, the absence of market makers in Oman suggests that the market maker hypothesis of Angel (1997) and Schultz (2000) cannot explain the motives that drives firms to distribute stock dividends in Oman.

Our research provides a number of interesting results on stock dividend ex-day effect in Oman. First, we find that there are positive abnormal returns on Omani stock dividend ex-days. These results are consistent with those reported by Al-Yahyaee (2014a). Second, we also find that firms distributing stock dividends have higher stock prices than firms that are in the same industries but do not distribute stock dividends. Third, we find that the positive abnormal returns are positively related to stock price increases in the pre-announcement period and to stock dividend percentages. Fourth, we find that larger firms in Oman prefer a higher trading range. These evidences suggest that stock dividends in Oman might be used to reduce stock prices. These results are consistent with those reported by Al-Yahyaee (2014c).

The remainder of the paper is organized as follows. Section 2 develops testable hypotheses. Section 3 provides a brief review of the institutional settings in Oman and discusses the specific data sources used in this paper. Section 4 contains the empirical results. Section 5 states our main conclusions.

2. Testable Hypotheses

Examination of the stock dividend ex-day effect in Oman is a fruitful empirical exercise since it has many characteristics that are different from the U.S. markets. This may suggest that the market factors which have been used to explain the ex-day effect in the U.S. may not have a significant influence in Oman. For example, in the U.S., tick size is an important driver of ex-day effect. For many years, the tick size in the U.S. was one-eighth and later reduced to one-sixteenth which is sizable relative to the small quarterly dividend, contributing to the ex-day effect. The tick size for a stock in Oman is 0.001 Rial Omani (One Omani Rial is equal to 1000 Baisa). This tick size is small relative to the size of dividend which reduces the importance of tick size as a driver of the stock dividend ex-day effect.

Moreover, there is an additional fee for odd lot transactions in the U.S. resulting in odd lots having higher transaction costs compared to round lots. In Oman, there is no odd lot fee and transaction costs are the same for odd and round lots. In the U.S., fractional shares are distributed in cash and are taxable. In Oman, there are no taxes on fractional shares.

Furthermore, specialists determine the bid-ask spreads for the stocks that trade in the U.S. stock exchanges. Oman does not have any market makers setting bid-ask spreads (Al-Yahyaee, 2013). In Oman, individual orders are executed through price auctions and preferences are given to higher bids and lower offers. Furthermore, limit orders though allowed are rarely used in Oman. Consequently, Dubofsky's (1992) argument that the ex-day effect is due to widening of bid-ask spreads as a result of stock exchange rules of adjustment of limit orders on the ex-day may not apply in Oman.

In the same vein, Angel (1997) and Schultz (2000) argue that the size of the relative bid-ask spread is important for the incentives of the market maker to promote the stock. Consequently, stock dividends can increase the relative bid-ask spread, whereby the market maker will be more active in promoting the stock, leading to a positive stock market effect. The absence of market makers in Oman precludes this explanation for the stock dividend ex-day effect.

If the stock dividend ex-day effect is due to market characteristics of the U.S. market, such as discrete price changes, higher transaction costs on odd lots, and adjustments of limit buy orders on the ex-day, then there should not be any ex-day effect for Omani stock dividends. If there is an ex-day effect for Omani stock dividends, it will indicate that the ex-day effect is probably due to stock dividends themselves rather than being driven by market factors (Al-Yahyaee, 2014c). Henceforth, we test the null hypothesis that there is no significant ex-day effect for stock dividends in Oman.

3. Oman stock market: Institutional aspects

3.1. Trading rules and practices

Oman is a small, free market economy with a stable social, political, and economic system; low taxation rates; steady economic growth; low inflation; a manageable level of external debt; fairly liberal investment laws; a sustainable level of budget deficit; and no controls over capital movements. In Oman, firms are subject to a market economy discipline comparable with Western firms (Al-Yahyaee et al., 2010).

Investors in the MSM can place buy and sell orders electronically through an exchange trading system that was computerized in 1997 (Al-Yahyaee, 2006). This trading system is provided by the MSM and allows for two main trading strategies. Orders can be submitted for immediate execution (market orders) or placed into the order book of the trading system (limit orders). Trading in the market is conducted by stockbrokers who cannot trade on their own account, meaning that they have no role in setting cum- and ex-day prices (Al-Yahyaee et al., 2011). Orders are initiated from brokerage firms through computer terminals in their offices or on the exchange floor. Investors intending to buy or sell stocks execute their transactions through these brokerage firms, which charge them transaction fees or a commission.

Article (57) of the Executive Regulation of the Capital Market Authority (CMA) Law requires that the minimum fee charged by a brokerage firm is 0.4% and the maximum fee is 0.75%. Brokerage firms in Oman charge different commission fees to different investors depending on the size of the trade and the type of investor. On average, brokerage companies charge investors approximately 0.175% of the value of the traded shares in brokerage fees, less than the minimum prescribed by the CMA Law.

Because Oman is a petroleum-producing country, taxes play a minor role in generating income for the economy (Al-Yahyaee et al., 2008). As a result, shareholders are not subject to any taxes on dividends. Likewise, there are no taxes on capital gains. The only tax is the 12% flat tax rate on corporate income, making Oman's taxing system one of the simplest in the world.

3.2. Data

The sample consists of all Omani stocks that distribute stock dividends between January 1, 1997 and August 31, 2014. All stock dividends and their cum-dates and ex-dates are obtained from the Muscat Clearing and Depository Company Database. The MSM provided us with stock price data and the MSM index during the study period.

We focus only on stock dividend distributions in this sample period. To avoid potentially confounding effects of other announcements, a concern first raised by Miller and Scholes (1982), an ex-day is excluded if it coincides with other corporate events such as cash dividends, stock splits and rights issue. Moreover, if a security did not trade on its ex-dividend day, then that observation is eliminated from the sample. Following Al-Yahyaee (2014c), we delete any case with more than one stock dividend distribution during a year so that the results are not influenced by multiple stock dividends. Furthermore, we exclude stocks that do not have returns data beginning at least three months before the announcement date to prevent the announcement abnormal returns from being affected by the market impact of initial public offerings or new listings. The final sample contains 309 stock dividend distributions that meet all the above criteria.

3.3. Methodology

To test for the significance of abnormal returns on the stock dividend ex-day, we follow Al-Yahyaee (2014c) and compute abnormal returns based on parameters from the following market model over an estimation period from day $t-270$ through day $t-21$:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}, \quad (1)$$

where R_{it} is the rate of return of stock i on event day t and R_{mt} is the rate of return of the market index on event day t .

The abnormal return on event day t is the difference between the actual return on that day and expected return based on the market model (1):

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}) \quad (2)$$

The cumulative mean abnormal return for event days $t_1 - t_2$ (CAR_{it}) is computed by adding the mean abnormal returns for these days as follows:

$$CAR_{it} = \sum_{t=t_1}^{t_2} AR_{it} \quad (3)$$

4. Empirical Results

In this study, we test the null hypothesis that there is no significant ex-day effect for stock dividends in Oman.

Table 1. Stock Dividend Ex-Days Abnormal Returns (AR)

Event Day	AR (%)	t-stat
-5	-0.312	-1.104
-4	-0.091	-0.989
-3	-0.135	-0.728

-2	-0.561	-0.458
-1	-0.743	-0.462
0	4.024***	16.594
1	3.195***	2.634
2	3.001***	3.934
3	1.967**	1.988
4	0.499	1.036
5	0.634	1.714

Notes: The AR is the average of abnormal returns across all stock dividends. The *t*-statistics are calculated using the adjustment method in Brown and Warner (1985). Percent Pos indicates the proportion of positive abnormal returns. Here ***, **, and * indicate statistical significance at the 1 percent, 5 percent, and 10 percent, respectively.

Table 1 presents the daily mean abnormal returns and the *t*-statistics. The results indicate that the abnormal returns before the ex-day are uniformly negative. That is, on each of the 10 days before the ex-day, there is a decline in the abnormal returns. Interestingly, abnormal returns are statistically insignificant in the all ten days prior to the ex-day. On the other hand, the abnormal return is positive and significant on the ex-day. Specifically, the abnormal return on the ex-day is 4.02% with a *t*-statistic of 16.59. The amount of the ex-day abnormal return (4.02%) is much higher compared with the abnormal returns of 0.95 percent and 1.09 percent found in the U.S. by Woolridge (1983) and Grinblatt et al. (1984), respectively. In addition, the abnormal return seems not to be confined to the ex-day in Oman. In particular, the positive abnormal return extends for seven days after the ex-day. This is consistent with the results reported by Dhatt et al. (1994) for Japan where they find that there is a significant abnormal return for several days following the ex-day. These results indicate large positive abnormal returns for stock dividend in Oman, which is consistent with those reported by Al-Yahyaee (2014c).

Table 2. Classification of Ex-Days by Stock Dividend Percent (SD): Abnormal Returns (AR)

Event Day	SD ≤ 10%		10% < SD ≤ 20%		20% < SD	
	AR (%)	t-stat	AR (%)	t-stat	AR (%)	t-stat
-5	-0.452	-1.007	-0.986	-0.961	-0.758	-0.958
-4	-0.921	-0.504	-0.481	-0.834	-0.462	-0.475
-3	-0.132	-0.965	-0.542	-0.421	-0.851	-1.008
-2	-0.396	-0.749	-0.741	-0.958	-0.463	-0.537
-1	-0.742	-0.483	-0.695	-0.441	-0.964	-0.842
0	3.953***	11.629	2.042***	10.482	3.743***	15.007
1	1.452***	3.552	0.953***	2.658	1.828**	2.306
2	1.853***	2.943	1.441	0.749	1.496***	2.855
3	1.006**	2.417	0.851*	1.775	1.635***	2.659
4	0.901*	1.885	0.746*	1.953	1.476*	1.890
5	0.862***	3.062	0.954*	1.883	0.684**	1.974

Notes: The AR is the average of abnormal returns across all stock dividends. The *t*-statistics are calculated using the adjustment method in Brown and Warner (1985). Here ***, **, and * indicate statistical significance at the 1 percent, 5 percent, and 10 percent, respectively.

Having documented the positive market reaction to stock dividends on the ex-day in Oman, we next examine whether there is an association between the size of dividend and abnormal returns. To do that, we follow Al-Yahyaee (2014c) and divide the sample into stock dividend size groups which are set to ensure that there is a reasonable number in each group. The results in Table 2 show that the ex-dividend day abnormal returns are significant at the one percent level for all stock dividend size groups. Similar to Al-Yahyaee (2014c), we find that the largest stock dividends have the highest abnormal return.

Overall, the results in Table 2 demonstrate that stocks that distribute large dividends have higher abnormal returns. In order to control for industry factors, we follow Al-Yahyaee (2014c) and compare the sample of stock-dividend distributing (SDIV) firms to all firms that are in the same industries but do not distribute stock dividends in the corresponding years. We use total assets in millions of Omani Rials (ASSETS), stock price in Omani Rials (PRICE), and ratio of book value of equity to market value of equity (BMVE) in our comparison. To test for significance differences between the two groups, we use Wilcoxon rank sum test which requires only a symmetric distribution.

The results in Table 3 show that the stock-dividend distributing firms are similar in size to the control firms. This suggests that the comparisons are not affected by size differences between the two groups. However, the stock-dividend distributing firms have higher stock prices than control firms which suggest that stock dividends might be aimed at reducing the stock price. While the stock price of stock-dividend distributing firms remain higher than those of control firms even after the stock dividend, the difference in mean stock prices declines by more than 80% between the year before and the year after the stock dividend distribution, from 0.196 to 0.161. These results indicate that stock dividends seem to reduce the degree by which stock prices exceed industry norms. The results also show that the SDIV firms have a higher BMVE in the year before and year of the stock dividend. This may suggest that these stocks suffer from relatively weak valuations so stock dividends may be used to signal undervaluation of the stock.

Table 3. Sample Characteristics of Stock-Dividend Distributing Firms (SDIV) and Control Firms

Variable	SDIV Year	Sample Size	Mean Values		Wilcoxon z-stat
			SDIV firms	Control firms	
ASSET	-1	209	9.68	8.79	-0.96
	0	216	9.74	9.66	-0.48
	1	228	9.83	9.92	0.82
PRICE	-1	209	1.838	1.642	6.07***
	0	216	1.572	1.495	5.61***
	1	228	1.498	1.337	2.46**
BMVE	-1	209	1.437	1.394	6.81***
	0	216	1.301	1.283	1.93*
	1	228	1.186	1.041	1.09

Notes: SDIV is stock-dividend distributing firms. ASSET is total assets in million Omani Rials. PRICE is stock price in Omani Rials. BMVE is the ratio of book value of equity to market value of equity. Here ***, **, and * indicate statistical significance at the 1 percent, 5 percent, and 10 percent, respectively.

5. Conclusion

This paper examines the security returns during ex-dividend period for firms listed on the Muscat Securities Market. We find positive abnormal returns on stock ex-dividend days. The presence of abnormal returns on stock dividends ex-days in Oman, in spite of market characteristics which are quite different from the U.S., demonstrate that the ex-day effect is probably related to stock dividends themselves rather than being driven by market factors. We also find that stock dividend distributing firms have higher stock prices than control firms that are in the same industries but do not distribute stock dividends. Furthermore, we find that larger firms in Oman prefer a higher trading range. Overall, the results of this study is similar to those reported by Al-Yahyaee (2014c) though we utilized here a longer time period.

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