

THE EX-DIVIDEND EFFECT FOR REPORTED LISTED COMPANIES IN TAIWAN

Hai-Ching Liu¹, Ying-Fen Fu^{2*}, Min-Chang Chang³, Hui-Cheng Tsai⁴

¹Associate Professor, Department of Finance, Southern Taiwan University of Science and Technology, Taiwan

^{2*}Associate Professor, Department of Finance, Tainan University of Technology, Taiwan

³Assistant Professor, Department of Finance, Southern Taiwan University of Science and Technology, Taiwan

⁴Assistant Professor, Department of Finance, Southern Taiwan University of Science and Technology, Taiwan

Abstract

Past literature shows that investors use mental account when they are facing dividend distribution. That is, investors focus on dividend distribution and irrationally ignore the tradeoff of dividend payment and price decrease. The dividend is thus deemed as bonus to investors. Furthermore, investors tend to buy ex-dividend stocks after the ex-dividend day due to the expectation of price recovery. The buying forces around the ex-dividend day persistently push the price. After the ex-dividend, investors gradually become rational. The stocks thus are priced based on the fundamentals. The overprice of stocks due to the ex-dividend events may consequently decrease. Past literature regarding ex-dividend focuses on the announcement effect and ex-dividend effect on the ex-dividend day. The contribution of this project is to combine the issues of ex-dividend and media coverage to investigate whether the investing behavior bias of investors is strengthened after the coverage of ex-dividend news by media. Past literature has confirmed that investors refer to the media coverage when they are making stock picking decisions. However, the past literature did not further investigate the reaction of investors to the ex-dividend news. This study fills the gap of the literature to combine these two issues, which may provide a reference for investors when they are making investing decisions.

Keywords

Ex-dividend, Investor behavior, Momentum effect, Media coverage

1. Introduction

In recent years, investors have increasingly focused on the distribution of company dividends. According to Google search trend statistics, the number of searches for the keyword "dividend" in Taiwan has generally shown an upward trend since 2004, when there were 75 searches. By 2020, the number of searches reached 655, and by mid-November 2021, the number of searches for "dividend" on Google had already reached 736. This indicates that investors are paying more and more attention to stock ex-dividend information. The media has also been keen to report on stocks that are about to go ex-dividend¹. During this period, information related to ex-dividends, such as dividend value, dividend recovery, cash dividend yield, and time deposit concept stocks, frequently appears in the media. As a result, investors are reminded that the peak season for ex-dividends is approaching.

Baker and Wurgler (2004) pointed out that dividend payments are a response to investors' demand for dividends, indicating that dividend distribution holds a significant place in investors' minds. Scholars Brealey and Myers (2002) have listed dividends as one of the ten unresolved issues in finance. Much of the past literature on dividends has focused on the information content of companies' dividend policies (Miller and Modigliani, 1961; Ross, 1977; Miller and Rock, 1985; Brady, Faulkner, and Heinrich, 2018) or the announcement effect on ex-

¹ For example, on August 31, 2021, Times Information reported that CSC filled its dividend immediately at the market opening. On July 22, 2021, Cnyes reported that Foxconn completed its dividend fill within just 38 minutes on the ex-dividend date. On June 17, 2021, Cnyes reported that TSMC successfully filled its dividend on the first day of the ex-dividend period. The report also noted that since TSMC adopted quarterly dividend payments, it has completed the fill each time, with four out of eight instances taking only one day to achieve this.

dividend date or announcement date (Kalay and Lowenstein, 1986; Banker, Das, and Datar, 1993; Hsu, Wu, and Huang, 2009). Among these, the ex-dividend effect is closely related to investors' investment behavior.

Regarding investor behavior, Fama (1970) proposed the Efficient Market Hypothesis (EMH), which is based on the premise that investors are rational. Under this assumption, market information can be fully and quickly reflected in stock prices. Concerning investors' behavior related to ex-dividends, Miller and Modigliani (1961) put forward the Dividend Irrelevance Theory. According to their hypothesis, rational investors pursue value maximization and consider all sources of money to be equivalent. Therefore, for investors, the cash flow generated by dividend payments is no different from the cash flow generated by selling part of their holdings. Since investors can create cash flows equivalent to dividend payments themselves, dividend policy does not affect investors' preferences for a stock, and company value is naturally unaffected by dividend policy. Recently, Li (2016) examined the impact of dividend payout ratios on future stock returns and momentum strategies. Li found that the momentum profits of companies not paying dividends were higher than those of companies that did pay dividends. Li attempted to explain this from a rational perspective (Sagi and Seasholes, 2007), suggesting that the absence of dividend payments is due to companies opting for growth opportunities.

The aforementioned literature generally considers investors to be rational, but many scholars believe that investors exhibit irrational behavioral biases when investing. According to MM's Dividend Irrelevance Theory, the ex-dividend process should be a neutral event for investors as it represents a trade-off between dividend payments and a corresponding drop in stock prices. However, numerous empirical studies have found that investors react strongly to dividend payments. Allen and Michaely (1995) found that the market responds positively to dividend increases or initial payments but negatively to dividend cuts or suspensions. Lamont (1998) discovered that stocks with high dividends are predicted to have higher returns. Wursthorn (2019) pointed out that dividends can supplement stock price returns and provide a stable cash flow, helping investors mitigate the worst-case scenarios of market pullbacks. Previous literature has mentioned the phenomenon of investors having separate mental accounts (Thaler, 1980, 1999; Frydman, Hartzmark, and Solomon, 2017). This phenomenon, as described by Hartzmark and Solomon (2019), involves investors perceiving dividends as a "free money" fallacy. Unless the trade-off between price drops and dividend payments is very evident, dividends tend to be seen as a satisfying free income source. Consequently, when measuring returns, investors do not combine dividends and capital gains but focus on one or the other. Additionally, many investors prefer to observe stock prices rather than returns, and they tend to make selling decisions based on past stock price movements rather than returns.

In fact, investor sentiment is also influenced by media reports. Shiller (2000) pointed out that market sentiment is driven by the content of the news. The research by Tetlock (2007) and García (2013) both show that the tone of newspaper columns drives investor sentiment. Ferguson, Philip, Lam, and Guo (2015) found that news stories specific to companies that receive extensive media coverage often have an "attention-grabbing effect," especially for larger companies. Chen and Pantzalis (2013) proposed the media-induced sentiment hypothesis, which suggests that intense media coverage can trigger positive feedback trading. They found that excessive reporting significantly amplifies the deviation of stock prices from their fundamental values. Stocks that are frequently in the news exhibit greater liquidity and more information risk, and the effect of news coverage is particularly significant for overvalued stocks. They observed a positive relationship between news coverage and trading volume, as well as between abnormal news coverage and mispricing. Barber and Odean (2008) pointed out that when companies are in the news, individual investors tend to be net buyers. Ex-dividend and ex-rights are always major events in the Taiwan stock market, and the media often reports on stocks that are about to go ex-dividend. For rational investors, if dividends are merely a trade-off between stock prices and dividend payouts, then reports on dividends should be neutral news (García, 2013). If investors view the absence of dividend payments as a choice by the company to pursue growth opportunities (Ansem, 2009), then dividend payout reports should be seen as negative news. However, if investors are irrational, media reports about a company's dividend payments might trigger their emotions. Considering only the mental accounting of dividends, the stocks reported on before the dividend payout period are likely to experience positive abnormal returns. Moreover, if media reports about ex-dividend enhance investor expectations of dividend coverage, continuous buying activity from investors after the ex-dividend might create positive abnormal returns and achieve full dividend coverage. Therefore, the aim of this study is to explore whether companies that are reported by the media have higher abnormal returns and a greater likelihood of achieving full dividend coverage after the ex-dividend date compared to those that are not reported.

This paper combines the topics of ex-dividend events and media coverage. Its main objective is to observe whether investor behavioral biases are reinforced by media reports. Previous literature has confirmed that investors often rely on media-reported stocks as a crucial basis for their investment decisions (Sirri and Tufano, 1998; Odean, 1999). However, these studies did not specifically examine news related to ex-dividend events. By integrating these two topics, this paper aims to provide a reference for investors when deciding on their investment strategies, thereby contributing to the existing literature.

2. Literature Review

Since the 1960s, scholars have held differing viewpoints on whether the distribution of dividends affects a company's value (stock price). Miller and Modigliani (1961) argued that in a perfect capital market, a company's stock price is related to its investment decisions. If a company's profitability and business risk remain unchanged, the method of earnings distribution does not alter the company's value. This is known as MM's Dividend Irrelevance Theory.

Later, Gordon (1963) considered the psychological state of investors and argued that most investors are risk-averse. He posited that instead of allowing a company to retain earnings for reinvestment and potentially receive larger dividends in the future, investors prefer to receive smaller cash dividends now. Despite the possibility of greater future gains, investors favor the certainty of short-term returns over the uncertainty of future returns. This is known as the Bird-in-the-Hand Theory.

In the 1970s, many scholars relaxed the assumptions of MM's perfect capital market and proposed the Dividend Signaling Hypothesis. Akerlof (1970) and Riley (1979) argued that in real financial markets, management uses dividend announcements to convey information about the company's future operations. During this period, whether dividends are paid and the amount of dividends paid can lead to different abnormal returns for the company's stock (Asquith and Mullins, 1983; Nissim and Ziv, 2001). Empirical results by Fuller and Goldstein (2011) also showed that stocks paying cash dividends are more popular with investors.

Regarding investors' expectations for dividend recovery, Elton and Gruber's (1970) Tax Effect Hypothesis suggests that if the capital gains tax rate is lower than the dividend income tax rate, the price drop on the ex-dividend day will be less than the dividend payout amount. Since Taiwan does not impose a capital gains tax, investors might expect ex-dividend stocks to move towards covering the dividend. Kalay (1982) argued that whether the stock covers the dividend depends mainly on short-term traders. When the expected price drop of an ex-dividend stock is greater than the dividend payout, traders will sell first and buy later; conversely, if the expected price drop is less than the dividend payout, they will buy first and sell later. Taiwanese scholar Lee (1994) proposed the Relative Pricing Hypothesis from the perspective of investor behavior. Lee suggested that compared to pre-dividend prices, a company's stock price after dividends is relatively low. This low price is not only relative to the stock's own price before the dividend but also relative to similar stocks. This attracts investors to buy, leading to a general expectation among Taiwanese investors that dividends will be covered. This relative pricing psychology is irrational but common in the stock market. The hypothesis has also received empirical support.

Based on the insights from recent studies such as Hartzmark and Solomon (2019), investors exhibit irrational investment behaviors when it comes to dividends. Despite dividends being compensated by a corresponding drop in stock price, investors with separate mental accounts may perceive dividends as free income. Research by Huang (2016) on Taiwanese companies from 2012 to 2014 found that approximately 63.8% of companies approached their dividend recovery on ex-dividend days, with about 61.9% still with dividend recovery two days post-ex-dividend. This suggests that stocks tend to exhibit positive abnormal returns around ex-dividend periods. Baker and Wurgler (2004) discussed in their catering theory that stock pricing is not always efficient, with investors' demand for dividend-paying stocks varying over time. Shleifer and Summers (1990) argued that investor psychology plays a crucial role in asset pricing, especially among less rational investors who do not always evaluate risky assets solely based on fundamentals and have shorter investment horizons. Therefore, this paper argues that in the short term, with no changes in fundamentals, stock prices around ex-dividend periods may be influenced by emotional fluctuations of investors with separate mental accounts, leading to abnormal returns. Investors may perceive ex-dividend as a distinct event and buy stocks before the ex-dividend date to capture dividends, potentially causing the stock price to rise before ex-dividend. Considering empirical evidence like that of Mrzyglod and Nowak (2017) on the Warsaw Stock Exchange, where market reactions align with changes in dividends (positive for increases, negative for decreases), it's evident that market responses to dividend announcements are swift and can be influenced by investor sentiment fluctuations, leading to behavioral biases. Therefore, the first issue addressed in this paper explores whether stocks experience positive abnormal returns around ex-dividend periods, influenced by investors' separate mental accounts and emotional fluctuations.

Numerous studies have highlighted that investors have limited attention (Merton, 1987; Hong and Stein, 1999; Hirshleifer and Teoh, 2003; Peng and Xiong, 2006). Media coverage can significantly influence investors' attention (Peng and Xiong, 2006; Peress, 2008; Hirshleifer et al., 2009; Hirshleifer et al., 2011). Ferguson et al. (2015) found that media reports often have an "attention-grabbing effect," while Shiller (2000) pointed out that market sentiment is driven by the content of the news. Vieira (2011) noted that investor sentiment has some impact on the effectiveness of dividend announcements, and investor sentiment will be affected to some extent by the release of news. During the ex-dividend season, there is a substantial amount of media coverage on ex-dividend stocks. According to the "Taiwan News Smart Network" database, in the first half of 2021, the words "ex-dividend," "dividend distribution," or "dividend recovery" appeared 551 times in newspaper headlines. In July 2021, these words appeared 124 times, and in August 2021, they appeared 80 times. Investors' emotions may fluctuate due to media reports on ex-dividends. For investors with the free dividend fallacy, media reports can capture their attention and further amplify emotional interference. Therefore, this paper posits that companies with

media coverage are more likely to achieve dividend recovery. The second topic of this paper will use logistic regression to investigate whether dividend-paying stocks with media coverage have a higher probability of fully covering dividends compared to those without media coverage.

3. Research methods

3.1 Research Data

This study employs an event study methodology to investigate the ex-dividend announcement effects on stocks listed on the Taiwan Stock Exchange, aiming to observe investor behavior and determine whether stocks with media coverage have a higher likelihood of dividend recovery. Liu and Yin (2013) examined the dividend policies of Taiwan's listed companies from 2009 to 2011 and found that these companies predominantly distribute cash dividends. The sample for this study consists of ex-dividend stocks listed on the Taiwan Stock Exchange, covering the period from January 1, 2005, to December 31, 2021. The data frequency is daily, and the data source is the Taiwan Economic Journal (TEJ) database. Information on ex-dividend media coverage is sourced from the "Taiwan News Smart Network" database², using keywords such as "dividend distribution," "ex-dividend," and "dividend recovery" to identify stocks reported on by the media regarding their ex-dividend status.

3.2 Research Method

3.2.1 The Announcement Effect of Ex-Dividend

This study first examines the abnormal returns of ex-dividend stocks before and after the ex-dividend date. Previous studies on abnormal returns around ex-dividend dates primarily use the event study methodology. Therefore, this paper also employs an event study approach to observe whether ex-dividend stocks generate abnormal returns during a specified period surrounding the ex-dividend date. The estimation period is set from 150 days to 30 days before the ex-dividend date, while the event window is defined as 3 days before to 3 days after the ex-dividend trading day. The risk-adjusted model used in this study is the GARCH model, with parameters $\hat{\alpha}_i$ and $\hat{\beta}_i$ estimated using the maximum likelihood method.

$$\text{Expected return } E(R_{i,t}) = \hat{\alpha}_i + \hat{\beta}_i R_{m,t} \quad (1)$$

$$\text{Abnormal return } AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (2)$$

$$\text{Variation of abnormal returns } \text{VAR}(AR_{i,t}) = \text{VAR}(\hat{\alpha}_i) + R_{m,t}^2 \text{VAR}(\hat{\beta}_i) + 2R_{m,t} \text{COV}(\hat{\alpha}_i, \hat{\beta}_i) + \text{VAR}(\varepsilon_{i,t}) \quad (3)$$

Where $R_{i,t}$ represents the original return rate of ex-dividend stocks, and $R_{m,t}$ denotes the return rate of the market return index.

3.2.2 Whether Ex-Dividend Companies that Receive Media Coverage have a Higher Likelihood of Recovering their Dividend

This study will use logistic regression to test whether ex-dividend companies that receive media coverage have a higher likelihood of fully recovering their dividends compared to those that do not receive media coverage. The logistic regression will be estimated using the Maximum Likelihood Estimation (MLE) method. The dependent variable is a binary variable indicating whether the dividend is fully recovered. The model is specified as follows:

$$\text{Pr}(Y_i) = a_1 + b_2 \text{Dre}_i + b_3 \text{Return}_i + b_4 \text{Turn}_i + b_5 \text{Tobinq}_i + b_6 \text{Div}_i + \varepsilon_i \quad (4)$$

$$\text{Pr}(Y_i) = a_1 + b_2 \text{Repo}_i + b_3 \text{Return}_i + b_4 \text{Turn}_i + b_5 \text{Tobinq}_i + b_6 \text{Div}_i + \varepsilon_i \quad (5)$$

In the models, the sample consists of ex-dividend stocks. The dependent variable is a binary variable indicating whether the ex-dividend stock fully recovers its dividend within one week. Specifically, $Y_i = 1$ if the stock fully recovers its dividend within one week, and $Y_i = 0$ if it does not. Here, i represents the i -th ex-dividend event. The media coverage variable is defined as $\text{Dre} = 1$ if the ex-dividend stock received media coverage and $\text{Dre} = 0$ if it did not. Zhang, Yang, and Chen (2014) noted that according to Tversky and Kahneman's (1974) "availability heuristic," the exposure of a company in the media can influence investors' decisions. Therefore, Model (5) includes the variable Repo_i , which represents the frequency of media reports during the period. Additional explanatory variables include Return_i , the weekly return of the ex-dividend stock; Turn_i , the weekly turnover rate of the ex-dividend stock; Div_i , the dividend yield of the ex-dividend stock. Mysaka and Derun (2019) pointed out that various types of investors, despite having different objectives and expectations, use Tobin's Q as a basis for investment decisions. Therefore, this study includes Tobin's Q (Tobinq_i) as explanatory variables. Tobin's

² This database includes 13 newspapers, such as the United Daily News, United Evening News, Economic Daily News, China Times, Industrial and Commercial Times, Liberty Times, Apple Daily, and China Daily News.

Q reflects investors' expectations of the company's future stock price. A high Tobin's Q indicates that investors expect high growth, making the stock more likely to fully recover its dividend. If the coefficients b_2 for D_{re} and $Report_i$ are significantly greater than zero, it would indicate that ex-dividend stocks that received media coverage or had higher reporting frequencies have a higher likelihood of fully recovering their dividends.

4. Empirical Results

4.1 The Announcement Effect of Ex-Dividend

This study first employs the event study method to observe the changes in abnormal returns (AR) around the ex-dividend date. Table 4-1 lists the average abnormal returns (AAR) and average cumulative abnormal returns (ACAR) for three days before and after the event to explore the announcement effect of ex-dividends. It is evident that the AAR and ACAR on the ex-dividend date are significantly positive, indicating a significant announcement effect of ex-dividends. Observing the period before the ex-dividend date (from t-3 to t-1), we find that the AAR on t-3 and t-2 is significantly negative, turning significantly positive on t-1. This may be due to selling pressure as shareholders avoid holding the stock before the ex-dividend date, while buying interest increases on the day before the ex-dividend date due to the hope of dividend recovery, resulting in significantly positive abnormal returns on t-1 and the ex-dividend date (t). However, this phenomenon reverses to significantly negative abnormal returns in the days following the ex-dividend date (from t+1 to t+3). This result is consistent with Shleifer and Summers (1990). Further examination of the ACAR reveals that holding the ex-dividend stock from t-3 to t+3 results in significantly negative cumulative abnormal returns. Therefore, if one purchases the stock before the ex-dividend date, it is recommended to hold it until the ex-dividend date itself to achieve significantly positive cumulative abnormal returns.

Event Periods	Average Abnormal Return (AAR)	Average Cumulated Abnormal Return (ACAR)
-3	-0.279 (-13.015)***	-0.279 (-13.015)***
-2	-0.067 (-3.089)***	-0.346 (-11.336)***
-1	0.122 (2.607)***	-0.224 (-5.974)***
0	0.386 (17.694)***	0.162 (3.733)***
1	-0.105 (-4.771)***	0.058 (1.184)
2	-0.109 (-4.945)***	0.051 (-0.954)
3	-0.072 (-3.283)***	-0.123 (-2.132)**

Table 4-1 The Announcement Effect of Ex-Dividend

Note: The sample in the table comprises all publicly listed companies undergoing ex-dividend events. The data in the table represents the average abnormal returns (AAR) and average cumulative abnormal returns (ACAR) calculated using the event study methodology, with the event date being the ex-dividend date of the stocks. The statistics in parentheses is t-value, and ***, **, * denote significance levels of 1%, 5%, and 10%, respectively.

Table 4-2 categorizes the ex-dividend stocks into two groups: those with no media coverage and those with media coverage. The data shows that for ex-dividend stocks without media coverage, the trend of average abnormal returns (AAR) and average cumulative abnormal returns (ACAR) during the event period is generally consistent with that of the overall ex-dividend stock group. For ex-dividend stocks with media coverage, although the AAR on t-3 and t-2 is also significantly negative, the AAR on the day before the ex-dividend date (t-1) turns into an insignificant positive value. The announcement effect on the ex-dividend date (t0) is most pronounced for stocks with media coverage, with their AAR being more than twice that of the group without media coverage. The abnormal returns in the three days following the ex-dividend date are not significantly different from zero. Overall, compared to ex-dividend stocks without media coverage, those with media coverage exhibit a stronger announcement effect on the event day (ex-dividend date), and their cumulative abnormal returns (ACAR) remain significantly positive up to t+1 day.

Event Period	Ex-Dividend Stocks without Media Coverage		Ex-Dividend Stocks with Media Coverage	
	Average Abnormal Return (AAR)	Average Cumulated Abnormal Return (ACAR)	Average Abnormal Return (AAR)	Average Cumulated Abnormal Return (ACAR)
-3	-0.271 (-12.098)***	-0.271 (-12.098)***	-0.405 (-5.355)***	-0.405 (-5.355)***
-2	-0.058 (-2.585)***	-0.329 (-10.333)***	-0.156 (-2.048)**	-0.561 (-5.221)***
-1	0.123 (5.416)***	-0.206 (-5.265)***	0.105 (1.374)	-0.456 (-3.462)***
0	0.345 (15.143)***	0.139 (3.065)***	0.786 (10.333)***	0.330 (2.166)**
1	-0.108 (-4.713)***	0.031 (0.612)	-0.032 (-0.426)	0.298 (1.745)*
2	-0.111 (-4.836)***	-0.080 (-1.431)	-0.094 (-1.235)	0.204 (1.088)
3	-0.080 (-3.470)***	-0.160 (-2.644)***	0.068 (0.897)	0.272 (1.346)

Table 4-2 The Announcement Effect of Ex-Dividend Stocks with and without Media Coverage

Note: The sample in the table consists of ex-dividend stocks categorized into two groups: those without media coverage and those with media coverage. The data in the table represents the average abnormal returns (AAR) and average cumulative abnormal returns (ACAR) calculated using the event study methodology, with the event date being the ex-dividend date of the stocks. The statistics in parentheses is t-value, and ***, **, * denote significance levels of 1%, 5%, and 10%, respectively.

4.2 The Probability of Dividend Recovery for Companies Covered by the Media

Tables 4-1 and 4-2 show that for the overall ex-dividend companies and those without media coverage, significant positive announcement effects are observed only on the day before and the ex-dividend day, followed by significant negative abnormal returns in the subsequent three days. In contrast, the media coverage group in Table 4-2 demonstrates a strong positive announcement effect on the ex-dividend day, with subsequent performance showing less significance. In this context, whether ex-dividend stocks fully recover may be related to media coverage. Therefore, this study will further adopt logistic regression to investigate whether ex-dividend events covered by the media have a higher probability of dividend recovery. In Model 1 of Table 4-3, the coefficient of Dre is significantly positive, indicating that media coverage of ex-dividend events attracts public attention, potentially increasing the likelihood of dividend recovery. The increased buying activity from investors who fall for the free dividend fallacy (Hartzmark and Solomon, 2019) raises the likelihood of the stock recovering its dividend. In Model 2, the coefficient of Repo, representing the number of times reported, is also significantly positive, suggesting that more frequent media coverage of ex-dividend information correlates with a higher probability of dividend recovery. Observing other control variables, a higher return in the previous period leads to a lower probability of dividend recovery, likely because high returns indicate a stock price already at elevated levels, making it less attractive to investors. The positive coefficient of Turn indicates that ex-dividend stocks favored by investors are more likely to recover the dividends. Divi, representing dividend yield, has a significantly negative coefficient, aligning with intuition—higher dividend yields imply more dividends to be paid out, whereas lower yields suggest easier dividend recovery. Among the control variables, Tobin’s Q (Tobinq) shows a positive coefficient but lacks significance, indicating that investor expectations of company growth do not significantly affect the probability of dividend recovery.

	1.	2.
C	1.804 (0.00)***	1.813 (0.00)***
D _{re}	0.661 (0.00)***	
Repo		0.062 (0.09)*
Return	-0.034 (0.00)***	-0.034 (0.00)***
Turn	0.073 (0.00)***	0.074 (0.00)***

Tobinq	0.00009 (0.81)	0.0003 (0.51)
Divi	-0.679 (0.00)***	-0.672 (0.00)**
N	6007	6007
LR	1921.15	1888.92
MacFadden R ²	0.247	0.242

Table 4-3 The Probability of Dividend Recovery for Companies Covered by the Media

Note: The statistics in the table represents the results of the logistic regression. The sample consists of ex-dividend stocks, with the dependent variable being a binary classification: $Y_i = 1$ indicates that the ex-dividend stock fully recovers its dividend within a week, while $Y_i = 0$ indicates that it does not. $Dre = 1$ represents that the ex-dividend stock has media coverage; Repo represents the number of times it was reported in the sample period; Return is the weekly return of the ex-dividend stock; Turn is the turnover rate of the ex-dividend stock; Divi is the dividend yield of the ex-dividend stock; and Tobinq is the market value of equity and debt divided by the book value of equity and debt. The statistics in the parentheses is p value.* significant at 0.10 level, **significant at 0.05 level, ***significant at 0.01 level.

5. Conclusion

Past literature on dividends has primarily focused on the informational content of dividend policy (Miller and Modigliani, 1961; Ross, 1977; Miller and Rock, 1985; Brady, Faulkner, and Heinrich, 2018) or the announcement effect of ex-dividends (Banker, Das, and Datar, 1993; Hsu, Wu, and Huang, 2009). While recent research has extensively discussed investor behavior (Sirri and Tufano, 1998; Odean, 1999), no studies have yet examined whether media-covered ex-dividend events contain informational content. This study fill the gap in the literature, and the results are as follows:

1. The day before the ex-dividend date and the ex-dividend date itself exhibit a significantly positive announcement effect. Investors can choose to participate by buying the stock the day before the ex-dividend date and selling it on the ex-dividend date to earn a significantly positive abnormal return.
2. Ex-dividend stocks covered by the media show more than double the positive abnormal returns on the ex-dividend date compared to those without media coverage, and they have a higher probability of dividend recovery. Therefore, investors should pay more attention to media reports as a basis for their decision to buy ex-dividend stocks.

For ex-dividend stocks, investors can use the findings of this paper as a reference for making investment decisions. The recommendations provided above encapsulate the implications of this study for investors. For companies, seeking media exposure is a valuable strategy to enhance the likelihood of their stock recovering its dividend.

References

- Allen, F. and Michaely, R. (1995), Dividend Policy. In: Handbook in OR&MS, *Elsevier Science*, Vol. 9, 793-836.
- Ansem, E. (2009), “Dividends and price momentum”, *Journal of Banking & Finance*, Vol. 33, No. 3, 486-494.
- Arkelof, G. A. (1970), “The market for ‘Lemons’, qualitative uncertainty and the market mechanism”, *Quarterly Journal of Economics*, Vol.87, 488-500.
- Asquith, P. and Mullins, D. W. (1983), “The impact of initiating dividend payments on shareholders’ wealth”, *Journal of Business*, Vol. 56, 77-96.
- Baker, M. and Wurgler, J. (2004), “A catering theory of dividends”, *Journal of Finance*, Vol.59, No.3, 1125-1165.
- Banker, R.D., Das, S. and Datar, S. M. (1993), “Complementarity of prior accounting information : The case of stock dividend announcement”, *The Accounting Review*, Vol.68, 1, 28-47.
- Barber, B. and Odean, T. (2008), “All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors,” *Review of Financial Studies*, Vol.21, 785–818.
- Brady, K. P., Faulkner, M. and Heinrich, F. (2018), “Dividend yield, bond yields, and dividend premium”, *Journal of Multidisciplinary Research*, Vol.10, No.1-2, Spring-Summer, 21-34.
- Brealey, R. and Myers, S. (2002), Principles of Corporate Finance, McGraw-Hill Irwin.
- Chang, W. Y., Yang, H. C. and Chen, C. Y. (2014), “The effects of media coverage on financial performance and stock price”, *Review of Securities and Futures Markets*, Vol. 26, No.1, 113-146.
- Chen, C. W. and Pantzalis, C. (2013), “Press coverage and stock price deviation from fundamental value,” *The Journal of Financial Research*, Vol. 37, No. 2, 175–214.
- Elton, E. J. and Gruber, M. J. (1970), “Marginal stockholder tax rates and the clientele effect”, *Review of Economics and Statistics*, Vol. 52, No. 1, 68-74.
- Fama E. F. (1970), “Efficient capital markets: A review of theory and empirical work”, *The Journal of Finance*, Vol. 25, No. 2, 383-417.
- Ferguson, N. J., Philip, D., Lam, H. Y. T. and Guo, J. M. (2015), “Media content and stock returns : The predictive power of press”, *Multinational Finance Journal*, Vol. 19, No. 1, 1-31.
- Frydman, C., Hartzmark, S.M. and Solomon, D.H. (2018), “Rolling mental accounts”, *The Review of Financial Studies*, Vol. 31, No. 1, 362–397.
- Fuller, K. P. and Goldstein, M. A. (2011), “Do dividends matter more in declining markets?”, *Journal of Corporate Finance*, Vol. 17, No. 3, 457-473
- García D. (2013), “Sentiment during Recessions”, *The Journal of Finance*, Vol. 68, No. 3, 1267-1300.
- Gordon, M. J. (1963) “Optimal investment and financing policy,” *Journal of Finance*, Vol. 18, No. 2, 264-272.
- Hartzmark, S. M. and Solomon, D. H. (2019), “The dividend disconnect”, *Journal of Finance*, Vol. 74, No.5, 2153-2199.
- Hirshleifer, D. and Teoh, S. H. (2003), “Limited attention, information disclosure, and financial reporting”, *Journal of Accounting and Economics*, Vol.36, No. 1-3, 337-386.
- Hirshleifer, D., Lim, S. S. and Teoh, S. H. (2009), “Driven to distraction: Extraneous events and underreaction to earnings news”, *The Journal of Finance*, Vol. 64, No.5, 2289-2325.
- Hirshleifer, D., Lim, S. S. and Teoh, S. H. (2011), “Limited investor attention and stock market misreactions to accounting information”, *The Review of Asset Pricing Studies*, Vol. 1, No.1, 35-73.
- Hong, H. and Stein, J. C. (1999), “A unified theory of underreaction, momentum trading and overreaction in asset markets,” *Journal of Finance*, Vol. 54, No. 6, 2143-2184.
- Hsu, H. N. Wu, I. C. and Huang, C. S. (2009), “Estimation of TAIEX's dividend payouts and impacts on the pricing of TAIEX index futures”, *Economic Research*, Vol. 45, No.1, 103-141.
- Kalay, A. (1982), “The ex-dividend day behavior of stock prices: A re-examination of the clientele effect”, *The Journal of Finance*, Vol. 7, No. 4, 1059-1070.
- Kalay, A. and Lowenstein, U. (1986), “The informational content of the timing of dividend announcements”, *Journal of Financial Economics*, Vol. 16, No. 3, 373-388.
- Lamont, O. (1998), “Earnings and expected returns”, *The Journal of Finance*, Vol. 53, 1563-1587.
- Li, C. X. (1994), “After-tax excess return on the ex-right day of stock dividends and the hypothesis of bargain hunting”, *NTU Management Review*, Vol. 5, No.), 41-60.
- Li, G. (2016), “Growth options, dividend payout ratios and stock returns”, *Studies in Economics & Finance*, Vol. 33, No. 4, 638-659.
- Liu, J. C. and Yin, H. C. (2013), “Payout policy and the period between the ex-dividend date and the payment date: An analysis of Taiwan market over 2009-11”, *Journal of Takming University of Science and Technology*, Vol. 37, No. 1, 1-18.
- Merton, R. C. (1987), “A simple model of capital market equilibrium with incomplete information”, *The Journal of Finance*, Vol. 42, No. 3, 483-510.
- Miller, M. and Modigliani, F. (1961), “Dividend policy, growth, and the valuation of shares”, *Journal of Business*, Vol. 34, 411-433.

- Miller, M. H., and Rock, K. (1985), "Dividend policy under asymmetric information", *Journal of Finance*, Vol.40, 1031-1051.
- Mrzyglod, U. and Nowak, S. (2017). "Market reactions to dividends announcements and payouts: empirical evidence from the Warsaw Stock Exchange", *Contemporary Economics*, Warsaw, Vol.11, No. 2, 187-204.
- Mysaka H. and Derun I. (2019), "Corporate financial performance and Tobin's Q in dividend and growth investing," *Contemporary Economics*, Vol.15, No.3, 276-288.
- Nissim, D. and Ziv, A. (2001), "Dividend changes and future profitability", *The Journal of Finance*, Vol. 56, No. 6, 2111-2133.
- Odean, T. (1999), "Do investors trade too much?", *American Economic Review*, Vol. 89, No.5, 1279-1298.
- Peng, L. and Xiong, W. (2006). "Investor attention, overconfidence, and category learning", *Journal of Financial Economics*, Vol. 80, 563–602.
- Peress, J. (2008). "Media coverage and investors' attention to earnings announcements", Working paper, INSEAD.
- Riley, J. (1979). "Information equilibrium", *Econometrica*, 47(March), 331-359.
- Ross, S. (1977), "The determination of financial structure: The incentive-signaling approach", *Bell Journal of Economics*, Vol. 18, 23-40.
- Sagi, J. S. and Seasholes, M. S. (2007), "Firm-specific attributes and the cross-section of momentum", *Journal of Financial Economics*, Vol. 84, No. 52, 389-434.
- Shiller, R. J. (2000), "Irrational exuberance (Princeton University Press, Princeton).
- Shleifer A. and Summers L. H. (1990), "The noise trader approach to finance", *Journal of Economic Perspectives*, Vol. 4, No. 2, 19-33.
- Sirri, E. R. and Tufano, P. (1998), "Costly search and mutual fund flows", *Journal of Finance*, Vol. 53, No. 5, 1589-1622.
- Tetlock, P. C. (2007), "Giving content to investor sentiment: The role of media in the stock market", *Journal of Finance*, Vol. 62, 1139–1168.
- Thaler, R. H. (1980), "Toward a positive theory of consumer choice", *Journal of Economic Behavior and Organization*, Vol.1, 39-60
- Thaler, R. H. (1999), "Mental accounting matters", *Journal of Behavioral Decision Making*, Vol.12, 183-206.
- Tversky, A. and Kahneman, D. (1974), "Judgment under uncertainty: heuristics and biases", *Science*, Vol. 185, 1124-1131.
- Vieira M. (2011), "Investor sentiment and the market reaction to dividend news: European evidence", *Managerial Finance*, Vol. 37, No. 12, 1213–1124
- Wurstron, M. (2019), "Dividends in spotlight as bond yields drop", *Wall Street Journal*, ProQuest Central.