# The Effect of Dividend Announcement: Evidence from the Emerging Market

Chiu-Ping Wang\*

Department of Business Administration, National Chung Hsing University

250 Kuo Kuang Rd., Taichung 402, Taiwan R.O.C.

Email: cpwang22@gmail.com

<sup>\*</sup> Corresponding author: Chiu-Ping Wang, Department of Business Administration, National Chung Hsing University, Taichung, Taiwan, Email: cpwang22@gmail.com. The author would like to thank Professor Chia-Pin Chen for valuable comments and insightful opinions. All errors are solely mine.

#### Abstract

This study employs event study method on dividend announcements from the companies listed on China stock market. Our study collected data from 2006 to 2012 and separated sample by dividend forms. The results indicated that dividend announcement depicts positive impact on stock return at the time of announcement as well as immediately after such announcements. Especially in the sample of stock dividend announcement, there was a positive reaction after the dividend announcement, however, there was a significant negative relation between dividend announcement and the stock return in the sample of cash dividend. Additionally, we also separated sample into pre-crisis and post-crisis periods. The results found that dividend announcement reflects positive impact on stock return after announcements

Keywords: Dividend announcement, Event study, Information content, Price reaction,

Market efficiency

JEL Classification: G14, D82, G35

# 1. Introduction

Dividend policy is the strategies that the earnings of company be paid to shareholders by specific rate, or retained earnings as reinvestment funds. Managers must consider which dividend policy will maximize shareholder's wealth, they must focus on that how much of firm's income are required for investment, and also need to think of the impact of their decision on stock price. Dividend policy decision is complex, but how to use the dividend policy to maximize the value of the company is an important issue for the company managers. Furthermore, dividend policy is important for investors too, because investors regard dividends not only as the source of income but also the way to estimate company from investment view. If the dividends increase will bring the message that future earnings will increase, conversely, it means the earnings will be reduced in the future if the dividends reduce (Miller and Modigliani, 1961).

Dividends would be treated as a proxy for estimated future earning and the proxy relationship could declare the outcome of the related cross-sectional studies if fleeting and permanent components are within earning figures, and if dividends payout depends on the previous data (Lintner, 1956; Miller and Modigliani, 1961). Therefore, when managers want to convey positive news about their company, they would give signal to outsider shareholders that may be in the form of dividend increase, in order

to cause an increase in the stock prices (Gordon, 1959). Investors may prefer present dividend more than future capital gains because the future situation is uncertain and they want to avoid risk. Thus even if the internal rate of return and the required rate of return be equivalent, there is a direct relationship between dividend policy and market value of share (Gordon, 1962). However, Diamond (1967) reported a negative association between growth of company and preference of dividend, and only weak evidence that investors prefer dividends to future capital gain. Amihud and Murgia (1997) investigated the stock price response to dividend announcement, they found that dividend changes would be a signal of future prospect of companies.

Managers would communicate with investors by dividend policy, and the stock price will reflect the information content of company dividends declared. In general, the stock price will reflect the information to the market before shareholders' meeting if the dividend higher than investors expected. The researches (Pettit, 1972; Asquith and Mullins, 1983; Amihud and Murgia, 1997) on dividend announcement effect indicated that dividends have information content, and also have significant cumulative abnormal returns. Stock prices positively affected by dividend announcement, and it generates positive signals about current and future cash flows of company when dividend increase. Moreover, Bhattacharya's (1979) study found that despite the tax disadvantage of paying dividends, companies are likely to pay

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dividends as a signaling tool that conveys the future cash expectations. Aharony and Swary (1980) employed the different methodologies from which has been used before by the dividend expectation model and three subsets of dividend changes. Additionally, they assumed that there is no leakage of information prior to the announcement days, and considered the timing of dividend and earning announcements in which earning announcements go before and follow dividend announcements.

Miller and Scholes (1982) examined the relation on predicted dividend yield for stocks that announced their dividends prior to the ex-month versus during the ex-month. The evidence supported their proposition that the dividend yield effects are attributable to the information effect. Asquith and Mullins (1983) found that a positive abnormal return for a period of two days after announcement, and a significant positive impact on the excess returns over the day of dividend announcement. John and Williams (1985) showed that there is a significantly higher mean excess return over the event period and rejected the null hypothesis, higher return of security to the high risk in the same event period. Miller and Rock (1985) demonstrated that dividend can result in market price reaction, which comes from information asymmetry between managers and investors.

The main objective of corporate managers is to maximize the shareholders value.

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Under this perspective, managers have to evaluate the investment projects that have positive net present value while making investment decisions, and they have to decide the capital structure of company which can minimize the cost of capital while making financing decisions. On the other hand, market efficiency depends upon timely and freely availability of information which means investors can't earn abnormal returns from the market if publicly available information be used. Fama, Fisher, Jensen and Roll (1969) demonstrated that the market uses the announcement of a split to re-evaluate the stream of expected income from the shares. The results support to the conclusion that the stock market is efficient in the sense that stock prices adjust very rapidly to new information.

Pettit (1972) proposed that the validity of efficient market hypothesis by estimating the speed and accuracy, indicators adjust to the information embedded in announcement of dividends. The quick reaction is derived from a substantial change in dividend and vice versa by quarterly data. In recent years, Chen, Firth and Gao (2002) examined the information content of dividend announcements. Stock dividends attenuate the earnings signal, they have a small association with stock returns. In contrast, cash dividends have little impact on the earnings signal, and it has no discernible association with stock returns. The impact of information disclosure that relating to dividend, earning announcements have been extensively investigated, but to estimate the impact of such information on stock prices in different time periods still an importance issue.

Dividends are usually distributed in the form of regular cash or additional stock, and its payment pattern depends on company's dividend policy. Holding cash can expand the plant or make other investment decisions for companies, and distributing stock will expand the capital, impact the profit and make the stock price decrease for companies. In China, most of all are growing and medium-sized enterprises, companies distribute cash or cash and stock dividends simultaneously for attract investors. The purposes of this paper are to investigate the dividend announcement effect on the stock return in China stock market and to examine whether it reveals a leakage of information and the existence of abnormal return before or after dividend announcement. In addition, this paper also compares whether the dividend announcement having consistent features before and after the global financial crisis of 2008. The rest of the paper is organized as follows. The next section discusses the experimental design for examining those issues. The paper's results and robust test are presented in sections 3 and 4. Finally, we summarize the results and present our conclusions in section 5.

# 2. Methodology

#### 2.1 Sample construction

This study collected the announcements of cash and stock dividends to investigate the effect of dividend announcement on stock return, and all companies whose stocks are listed on the Shanghai and Shenzhen Stock Exchanges. After eliminating the ineligible companies, the sample size is reduced to 4586 companies. Our study is based upon a sample of 350 firms which declared only stock dividend and 2300 firms which declared only cash dividend in Shanghai Stock Exchange, moreover, a sample of 125 firms which declared only stock dividend and 1811 firms which declared only cash dividend in Shenzhen Stock Exchange for the period from 2006 to 2012. We defined day '0' as the day of a hypothetical event which is dividend announcement for a given security. Following Brown and Warner (1985), this study uses a maximum of 250 daily return observations for the period around its respective event, starting at day -244 and ending at day +5 relative to the event. The estimation period is the first 239 days in this period (-244 through -6), and the event period is the following 11 days (-5 through +5).

In order to investment the dividend announcement effects in pre-crisis and post-crisis periods, we defined the event date is when Lehman Brothers applied for bankruptcy protection, on September 15, 2008. Finally, this study calculated

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cumulative abnormal returns (CAR) by ordinary least squares (OLS) model, which measures the investors' total return over a period starting from well before the announcement of dividend to well after the dividend announcement day.

#### **3. Empirical Results**

The resulting dataset of dividend announcement is described in Table 1. With 4111 out of 4586 sample transactions, the companies who distribute cash dividend make the largest contribution to our study. Out of our samples, highest number of companies announced dividend is the year of 2012, and lowest number of companies announced dividend is the year of 2006 both in Shenzhen and Shanghai stock markets. On the other hand, the highest number of stock dividend is the year of 2011, and highest number of cash dividend is the year of 2012 in China stock market.

Insert Table 1 about here

To investigate the dividend announcement effect in Shanghai stock market, Table 2 presents the abnormal returns estimated by OLS. Companies from the sample of cash dividend have significantly negative abnormal returns from t=-4 to t=0, they have more negative abnormal returns on t=-1 than other days. However, companies from the sample of stock dividend have significantly positive abnormal returns from t=0 to t=4. The market reacts positively to the dividend announcement as the investors believed the declared dividend as positive signal of future optimum earning. In Shanghai, the reaction of stock dividend announcement is more positively than cash dividend. Results reveal a leakage of information in a short period before the cash dividend announcement, and it can be viewed as a short-term reaction linked to the event before the announcement. On the other hand, the results reveal a leakage of information in a short period after the stock dividend announcement, and it can be viewed as a short-term reaction linked to the event after the announcement.

Insert Table 2 about here

In order to investigate the dividend announcement effect in China, we also collected the data of dividend announcement from Shenzhen stock exchange. Table 3 presents the abnormal returns in Shenzhen stock market. Companies from the sample of stock dividend have significantly positive abnormal returns from t=0 to t=4, they have more positive abnormal returns on t=2 than the other days. But companies from the sample of cash dividend have significantly negative abnormal returns from t=-3 to

t=1. The market reacts to the dividend announcement positively as the investors believed the declared dividend as positive signal of future optimum earning, especially declared stock dividend. It reveals a leakage of information in a short period before the cash dividend announcement; moreover, the results reveal a leakage of information in a short period after the stock dividend announcement.

Insert Table 3 about here

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Finally, our study investigated the dividend announcement effect from pre-crisis and post-crisis periods in Table 4. We separate the sample into the pre-crisis and post-crisis periods, the pre-crisis period is from 2006 to 2008 and the post-crisis period is from 2009 to 2012. Panel A in table 4 presents the abnormal returns in Shanghai. The bankruptcy announcement of Lehman Brothers presents a different impact in pre-crisis and the post-crisis periods. The results showed significantly positive abnormal returns of 0.46% to 0.31% from t=0 to t=4 for the full sample in pre-crisis period, and significantly negative abnormal returns of -0.18% to -0.13%from t=-4 to t=0 for the full sample in post-crisis period, respectively. Companies of cash dividend from the sample of pre-crisis period have significantly positive abnormal returns from t=0 to t=3, but companies from the sample of post-crisis period have significantly negative abnormal returns from t=-3 to t=1. Companies that distributed stock dividend have significantly positive abnormal returns from t=0 to t=4 in the pre-crisis period, but different from other forms of dividends, they also have significantly positive abnormal returns from t=0 to t=4 in the post-crisis period. Therefore, the market reacts more positively to the stock dividend announcement as the investors believed the declared stock dividend as positive signal of future optimum earning. The results reveal a leakage of information in a short period after the dividend announcement in the pre-crisis period, but it reveals a leakage of information before the dividend announcement in the post-crisis period. Moreover, only the results of stock dividend sample reveal a leakage of information after the dividend announcement both in the pre-crisis and post-crisis periods.

Insert Table 4 about here

Panel B in table 4 presents the abnormal returns in Shenzhen. The results showed significantly positive abnormal returns of 0.50% to 0.83% from t=1 to t=5 for the full sample in pre-crisis period, and significantly negative abnormal returns of -0.32% to -0.37% from t=-3 to t=2 for the full sample in post-crisis period, respectively. Companies that distributed cash dividend have significantly positive abnormal returns

from t=2 to t=5 in the pre-crisis period, however, they have significantly negative abnormal returns from t=-3 to t=4 in the post-crisis period. On the other hand, Companies that distributed stock dividend from the sample of pre-crisis period have significantly positive abnormal returns from t=0 to t=5, and they have significantly positive abnormal returns from t=0 to t=4 in the post-crisis period, too. We also find that companies that declared stock dividend reflect positive impact, the reaction of pre-crisis period is more positively than post-crisis period, the investors believed the declared dividend as positive signal of future optimum earning. From the sample of Shenzhen, there was a positive relation between dividend announcement and stock return in pre-crisis period, but there was a negative relation between dividend announcement and stock return in post-crisis period.

#### 5. Robustness

This research has performed robustness checks to examine whether dividend announcement can affect the stock return. The findings of mean adjusted returns and market adjusted returns models confirmed the results in our study, there will be an impact on the stock return when the company announces dividend in most sub-samples and sub-periods. Additionally, we also use the different pre-crisis and post-crisis periods, the pre-crisis period is from 2006 to 2007 and post-crisis period is from 2009 to 2010, to examine whether dividend announcement can affect the stock return. In general, the results in most sub-samples and sub-periods are consistent with the results in our study. The findings indicated a reasonable robustness that dividend announcement can significantly affect the stock return in China stock market.

# 6. Conclusion

This study investigated the dividend announcement effect on stock return and examined whether announcement convey any information to the market of China. Using the event study on event window surrounding the day of dividend announcement, we found a significant positive reaction between stock dividend announcement and stock return, but it was a significant negative relation between cash dividend announcement and the stock return in Shanghai stock market. Our result of stock dividend sample was obtained from a day posterior to the event that leads us to a strong form of efficiency where as an improbable leakage of information from the insider information of the companies. In addition, the study found a positive reaction to the stock dividend announcement, but there was a significant negative relation between cash dividend announcement and stock return in Shenzhen stock market. The result of cash dividend sample was obtained from a day anterior to the event, and this leads us to a semi strong form of efficiency where as a probable leakage of information from the insider information of the companies.

More importantly, our study investigated the dividend announcement effect on pre-crisis and post-crisis periods. It has been found that there are some events, whose the abnormal return were negative on the dividend announcement date but became positive immediately after the dividend announcement date. From the samples of stock dividend announcement in China, there was a positive reaction after the dividend announcement in pre-crisis period, and it was a significant positive relation after dividend announcement in post-crisis period. Our findings of cash dividend announcement in post-crisis period which obtained from a day anterior to the event, and this leads us to a semi strong form of efficiency where as a probable leakage of information from the insider information of the companies, no matter in Shanghai or Shenzhen stock markets. Overall results indicate that dividend distribution is relevant to future price determination.

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# Table 1 Sample Overview

The sample consists of firms in Shanghai and Shenzhen stock exchanges from 2006 to 2012, which divided into only cash dividend, only stock dividend groups. Sample of all dividends means cash dividend plus stock dividend. Figures in table are sample size, and "All Dividends" is the sum of sample size. The table reports the sample summary statistics year by year.

	Shanghai			Shenzhen		
Year	Stock	Cash	All	Stock	Cash	All
	Dividend	Dividend	Dividends	Dividend	Dividend	Dividends
2006	17	238	255	18	116	134
2007	33	315	348	10	170	180
2008	45	282	327	26	167	193
2009	15	335	350	11	254	265
2010	28	326	354	12	260	272
2011	111	363	474	31	318	349
2012	101	441	542	17	526	543
Total	350	2300	2650	125	1811	1936

## Table 2 Cumulative Abnormal Returns in Shanghai Stock Exchange

This table shows the result of the estimated OLS regression model following Brown and Warner (1985) method. The table reports the coefficients of the event window (-5 day to +5 day). The coefficients represent the cumulative abnormal returns of portfolio in Shanghai. Figures in table are examined by t-test. Superscripts \*\*\* and \*\* indicate statistical significance at the 1% and 5% levels, respectively.

Day	Cash dividend	Stock dividend	
-5	-0.0032	-0.1562	
-4	-0.1356**	-0.2546	
-3	-0.2120***	-0.2637	
-2	-0.2781***	-0.2834	
1	-0.3056***	-0.1279	
0	-0.1471**	1.5685***	
1	-0.0628	1.6197***	
2	-0.0509	1.8386***	
3	-0.1001	1.7862***	
4	-0.1702	2.1325***	
5	-0.1833	0.7489	

# Table 3 Cumulative Abnormal Returns in Shenzhen Stock Exchange

This table shows the result of the estimated OLS regression model following Brown and Warner (1985) method. The table reports the coefficients of the event window (-5 day to +5 day). The coefficients represent the cumulative abnormal returns of portfolio in Shenzhen. Figures in table are examined by t-test. Superscripts \*\*\* and \*\* indicate statistical significance at the 1% and 5% levels, respectively.

Day	Cash dividend	Stock dividend	
-5	-0.0078	-0.0358	
-4	-0.1783	-0.0291	
-3	-0.3640***	-0.1636	
-2	-0.3836***	-0.1284	
-1	-0.4739***	0.1569	
0	-0.3465**	2.5734***	
1	-0.3586**	2.7881***	
2	-0.2351	2.8351***	
3	-0.1189	2.7184***	
4	-0.1334	2.1990***	
5	-0.2253	1.4491	

Table 4 Cumulative Abnormal Returns in the Pre-crisis and Post-crisis Periods

This table shows the result of the estimated OLS regression model following Brown and Warner (1985) method. The table reports the coefficients of the event window (-5 day to +5 day). The coefficients represent the abnormal returns of portfolio in China stock market. Figures in table are examined by t-test. Superscripts \*\*\* and \*\* indicate statistical significance at the 1% and 5% levels, respectively.

Panel A:	The	samp	e of	Shanghai
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	Pre-crisis			Post-crisis		
Day	All	Cash	Stock	All	Cash	Stock
	Dividends	Dividend	Dividend	Dividends	Dividend	Dividend
-5	0.0421	0.0686	-0.1678	-0.0459	-0.0683	-0.1477
-4	-0.0914	-0.0539	-0.2407	-0.1937***	-0.0979	-0.2218
-3	-0.1592	-0.0981	-0.4926	-0.2591***	-0.2536***	-0.1869
-2	-0.2619	-0.1076	-0.5061	-0.2944***	-0.3129***	-0.1352
-1	-0.1460	-0.1353	-0.2391	-0.3502***	-0.3790***	-0.0937
0	0.4562***	0.2913**	2.8602***	-0.1509**	-0.3324***	1.0819***
1	0.6091***	0.3571**	2.9303***	-0.0982	-0.3106***	1.1643****
2	0.6248****	0.3685**	2.6973***	-0.0357	-0.1794	1.5218***
3	0.7036***	0.5097***	2.5947***	0.0908	-0.0659	1.6804***
4	0.4008**	0.0528	2.5213***	0.0326	-0.1030	1.8910***
5	0.1385	0.0429	1.2019	-0.1014	-0.1478	0.5276

	Pre-crisis			Post-crisis		
Day	All	Cash	Stock	All	Cash	Stock
	Dividends	Dividend	Dividend	Dividends	Dividend	Dividend
-5	-0.0542	-0.0716	0.0905	0.0082	0.0511	-0.1246
-4	-0.1891	-0.2186	0.0297	-0.1465	-0.1546	-0.2033
-3	-0.4233	-0.4039	0.0261	-0.3257***	-0.3216***	-0.2310
-2	-0.2617	-0.3519	0.0570	-0.4193***	-0.4310***	-0.1762
-1	-0.3475	-0.3460	-0.2687	-0.4574***	-0.5082***	0.4859
0	0.1217	-0.0601	3.0847**	-0.3395**	-0.4795***	2.1591***
1	0.5903**	0.0539	4.1432***	-0.3468**	-0.4907***	1.8747***
2	0.8789***	0.4058**	4.7894***	-0.3516**	-0.4354**	1.4163***
3	0.9596***	0.5193***	4.5986***	-0.2175	-0.2138	1.5287***
4	0.9928***	0.5702***	3.8772***	-0.1982	-0.1799	0.9260**
5	0.8672***	0.5657***	3.0909**	-0.1891	-0.1843	0.1335

Table 4 Cumulative Abnormal Returns in the Pre-crisis and Post-crisis Periods (cont.)

Panel B: The sample of Shenzhen

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